

# Results of the 1996 CQ World-Wide DX CW Contest

BY BOB COX\*, K3EST

If you looked at the sun during the 1996 CQ WW CW contest, your face probably felt a little warmer. The sun, a CQ WW enthusiast, emitted a solar flux of over 100 for the contest. As of this writing that was near the high for the last year! What a terrific contest. Except for 10 meters, sparks were really flying on all bands. After looking at the database, we can say with confidence that there were about 20,000 CW contestants who have mastered the code.

Many contestants decided that if the sun was not going to bring better conditions, they would go to better conditions. They packed their bags and headed to exotic lands. Their activity made for more fun for everyone. Just some of these travelers were VP2EEB, V26LN, C6A/N4RP, C6A/AA6EW, 8P9Z, TI1C, 3E1DX, J87GU, V47KP, VP5EA, KP2A, WP2Z, IG9/IT9GSF, IG9/AC6WE, IG9/I2VXJ, 7X2RO, EA8EA, EA8/DJ1OJ, ED9EA, CT9U, CT3FN, CT9H, FH/F6HWU, 6W1AE, 3V8BB, YM2ZW, XX9X, XZ1N, A61AJ, GU/F5SHQ, CT8T, GI0KOW, KC6VV, V85HG, 9M6NA, P40W, CP6AA, HC8N, 8R1K, 9Y4H, PY0FF, C6A/K3TEJ, C6A/KM9D, ZF2RF, J6DX, V47VJ, FS5PL, 9U5DX, D44BC, 3C5A, CT3/DL5YM, JY8B, HS0AC, LX/DF0BK, KH0DQ, J39A, HH2B, 5V7A, J45T, and C21BH.

## Single Operator High Power

The competition for the number one position in the highly contested high power all band category was fierce. All but two of the top ten finishers were DXpeditions. All the hard work of building a station on Aruba paid off for John, W2GD, the operator at P40W. John managed to find more multipliers than his rivals while maintaining a high QSO rate. The result was the coveted single op crown. Over on the Galapagos Islands Trey, HC8N (N5KO), finished in second place, while Jose, CT1BOH, keyed 9Y4H to third place. A very noteworthy accomplishment was the top ten finish of four zone 7 or 8 stations: 8P9Z (K4BAI), TI1C (N6TJ), 4V2A (9A3A), and 3E1DX (DL5XX).

In hockey you have the hat trick, while in the CQ WW you have the gold microphone/key trick. Repeating his win on SSB, Randy, K5ZD/1, took the USA top slot on CW. This double win has only occurred a few times in the history of the CQ WW. Randy was followed by another YCCCer, W1KM, while N2NT edged out fellow FRCer N2LT for third place.

The competition in Europe was real tough. After the smoke had settled, Dick, N6AA, operating at CT8T edged out fellow zone 14 oper-



An active QRPer, Rogerio, CT1ETT, helped hand out the CT multiplier.

ator GI0NWG, who was keying GI0KOW to second place. With each having selective propagational advantages, it was the number of QSOs that won out in the end. Third place (and first place in zone 15) went to OM8A with OM3RM at the key.

## Single Operator Low Power

Setting a new world record, Uli, DL2HBX, put 3V8BB on the air in big style. Traveling to 3V8 and offering encouragement to the radio club reflects what amateur radio is all about. Thanks to the leadership of the Tunisian ops at 3V8, activity has been outstanding.

The battle for second through fourth place took place in the NE Caribbean. AA3B racked up the number two position from VP2EEB, while VP5EA (WD5N) and WP2Z (K0DEQ) finished third and fourth, respectively.

In Europe, Franc, S59AA, who is always among the top QRPer or low power finishers, ran away from the rest of the pack from his QTH in the suburbs of Ljubljana. And almost due north in zone 15, SP4EEZ edged out G4KIV for second place.

For the third year in a row, it was K2SG on top of the single op, all band, low power USA entries. Tony, with 2.1 meg, edged out N2BA, who had 1.9 meg, by leading Brook in QSOs,

Zones, and Mults. Also noteworthy is that in 1995 K2SG had only 1% unique/bad calls in his log—quite an impressive figure. In 1996, however, Tony did even better, cutting his rate almost in half!

All contestants can learn that it really pays to be accurate. As Tony and others have shown, it does not limit your ability to have the most QSOs in your category. Also, if you have any doubt about what a winning formula is in almost any category, you should look at all the low power results. KN4T, who placed third, had 27 more mults than K2SG, but was short about 350 QSOs. Fourth place went to KM1X (1073 QSOs and 378 mults), while fifth place went to K7SV/4 (898 QSOs and 427 mults). The same pattern continued with WT1O in sixth place (1022 QSOs and 365 mults) and NA2UJ in seventh place (845 QSOs and 386 mults). Clearly, if you're going to spend time doing something during the contest, it had better be making QSOs instead of chasing mults! It's also interesting to note W6JTI (ninth place SOABLP) had the most zones in the category (126).

## QRP

In the QRP category it was ZX2X (PY2OU op.) taking world top honors. Jose had a clean log with only 1% unique/bad calls, which yielded a

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## TROPHY WINNERS AND DONORS

<b>SINGLE OPERATOR</b>	<b>Carib./C.A.</b>
World All Band P40W (Opr. John Crovelli, W2GD)	NP4Z (Oprs. AA5DX, K5GO, KP4BZ, KP3L, NP3A, NP3J)
Donor: Albert Kahn, K4FW—W9IOP Memorial	Donor: North Nevada DX Contest Club
World Low Power 3V8BB (Opr. Ulrich Ann, DL2HBX)	<b>Africa</b>
Donor: Slovenia Contest Club	D44BC (Oprs. D44BC, DK7YY, DL2OAP, DL2OBF, DL3DXX)
Donor: Snake River Contest Club	Donor: CQ Magazine
World Assisted PY0FF (Opr. Ville Hillesmaa, OH2MM)	<b>Asia</b>
Donor: Snake River Contest Club	EX9A (Oprs. EX2M, EX0M, EX8W)
Donor: Steve Merchant, K6AW	
World QRPs ZX2X (Opr. Jose G. Damello, PY2OU)	<b>Europe</b>
Donor: Gene Walsh, N2AA	OT6T (Oprs. ON5UK, DJ4AX, RA3AUU, UT4UZ, RW1AC, RV1AW, ON4UN, ON4MA, ON4JO, ON4AFZ, ON4PO)
U.S.A. Randall Thompson, K5ZD	Donor: K3AO Memorial (Friends of K3AO)
Donor: Frankford Radio Club	
U.S.A. Low Power Anthony De Biasi, K2SG	<b>Oceania</b>
Donor: North Coast Contesters	KH0DQ (Oprs. KH0DQ, JF1SQC, JI3ERV, JK3GAD, JR7OMD)
U.S.A. Zone 3 Kenneth Widelitz, K6LA	Donor: Junichi Tanaka, JH4RHF
Donor: Bill Fisher, W4AN	
U.S.A. Zone 4 David K. McCarty, K5GN	<b>South America</b>
Donor: Dennis O'Connor, K8DO	LU4DRC (Oprs. LU7EE, LW9ETY, LW6EFP, LW1EXU)
Canada Augustus Thomas Samuelson, VO1MP	Donor: Tyler Stewart, K3MM
Donor: Canadian DX Association	
Caribbean/C.A. 8P9Z (Opr. John Laney III, K4BAI)	<b>MULTI-OPERATOR, MULTI-TRANSMITTER</b>
Donor: Chuck Shinn, W7MAP	<b>World</b>
Europe CT8T (Opr. Richard Norton, N6AA)	5V7A (Oprs. KC7V, N7BG, K5VT, K7PN, K7GE, W6RGG, N7MB, G3SXW, GM3YTS, G4FAM)
Donor: Edward Bissell, W3AU	Donor: Doug Zwiebel, KR2Q—K2GL Memorial
Europe Low Power Franc Bogataj, S59AA	<b>World—SSB/CW Combined</b>
Donor: Scott Jones, N3RA & Tim Duffy, K3LR	9A1A: 30,238,989
Africa 3DA0NX (Opr. Koji Tahara, JM1CAX)	Donor: Alpha/Power, Inc.
Donor: Gordon Marshall, W6RR	
Asia Krysztof Darbrowski, A71CW	<b>U.S.A.</b>
Donor: Chuck Shinn, W7MAP	N2RM (Oprs. N2RM, WW2Y, K2WI, N2NC, N2AA, W2REH, WH2Z, N2NU, K2BM)
Japan Satoshi Hara, JH5FXP	Donor: Bob Ferrero, W6RJ—N6RJ Memorial
Donor: Japan Crazy Contesters Club	
Oceania Joerg Puchstein, YB1AQS	<b>Europe</b>
Donor: Peahi Contest Club	9A1A (Oprs. 9A5W, 9A2DQ, 9A9A, 9A6D, 9A3GW, 9A2SD, 9A2TS, 9A2EU, 9A3NR, 9A2R, 9A7R, 9A6A, S51R, 9A9AA, 9A3ZA)
South America HC8N (Opr. Trey Garlough, N5KO)	Donor: Finnish Amateur Radio League
Donor: Venezuela DX Club	
<b>SINGLE OPERATOR, SINGLE BAND</b>	<b>Japan</b>
World—28 MHz Matias Vanni, LU9AUY	JH5ZJS (Oprs. JA5BJC, JA5FDJ, JA5JCC, JH5RXS, JR5JAQ, JR5VHJU)
Donor: Joel Chalmers, KG6DX	Donor: Ryozo Goto, JH3JYS
World—21 MHz Arturo Gargarella, LU6ETB	
Donor: Don Busick, K5AAD—N5JJ Memorial	<b>CONTEST EXPEDITIONS</b>
World—14 MHz ED9EA	World Single Operator
(Opr. Juan Lucas Heredia Del Valle, EA7TL)	XX9X: (Opr. Pertti Simoavaara, OH2PM)
Donor: North Jersey DX Assn.—W2JT Memorial	Donor: Yankee Clipper Contest Club
World—7 MHz IG9/AC6WE (Opr. Andy Melanyin, UA3DPX)	<b>WORLD MULTI-OPERATOR</b>
Donor: Alex M. Kasevich, VP2MM/4	3C5A: (Oprs. N5AW, N6ZZ)
	Donor: Bill Schneider, K2TT
<b>SPECIAL—SINGLE OPERATOR AWARD</b>	
World SSB/CW Combined P40W (Opr. John Crovelli, W2GD)	World SSB/CW Combined
Donor: Hrane Milosevic, YT1AD	P40W (Opr. John Crovelli, W2GD)
	Donor: Chuck Shin, W7MAP
<b>WORLD ALL BAND: UNDER 21 YEARS OLD</b>	
Kim Ostman, OI6KZP	
Donor: Chuck Shin, W7MAP	
<b>CLUB</b>	
World SSB/CW	
Frankford Radio Club: 328,583,151	
Donor: CQ Magazine—W1WY Memorial	
<b>NON-USA SSB/CW</b>	
Bavarian Contest Club: 117,269,123	
Donor: Northern Calif. Contest Club	
N6AUV Memorial	

## TOP SCORES

<b>WORLD</b>		<b>21 MHz</b>		<b>USA</b>		<b>21 MHz</b>		<b>EUROPE</b>		<b>21 MHz</b>	
<b>SINGLE OPERATOR</b>		<b>HIGH POWER</b>		<b>HIGH POWER</b>		<b>21 MHz</b>		<b>SINGLE OPERATOR</b>		<b>HIGH POWER</b>	
<b>HIGH POWER</b>		<b>All Band</b>		<b>All Band</b>		<b>N8II</b>		<b>ON4RU</b>		<b>F5PGP</b>	
<b>All Band</b>		<b>P40W</b>		<b>K5ZD/1</b>		<b>WB4TDH</b>		<b>Z31JA</b>		<b>268,380</b>	
<b>P40W</b>		<b>12,742,731</b>		<b>5,461,830</b>		<b>WA1FCN</b>		<b>249,232</b>		<b>290,971</b>	
<b>HC8N</b>		<b>11,116,880</b>		<b>W1KM</b>		<b>85,239</b>		<b>S5J</b>		<b>204,525</b>	
<b>9Y4H</b>		<b>10,691,370</b>		<b>N2NT</b>		<b>A1C2/C</b>		<b>EA1AK/7</b>		<b>198,170</b>	
<b>8P9Z</b>		<b>.8,650,620</b>		<b>N2LT</b>		<b>60,604</b>		<b>EA7GTF</b>		<b>14 MHz</b>	
<b>T1C</b>		<b>7,346,856</b>		<b>K4AAA</b>		<b>W5ZO</b>		<b>Z39M</b>		<b>417,534</b>	
<b>4V2A</b>		<b>.7,007,128</b>		<b>W2RQ</b>		<b>51,146</b>		<b>YU7BJ</b>		<b>369,600</b>	
<b>3E1DX</b>		<b>5,922,267</b>		<b>K5ZD/1</b>		<b>KD4FAZ</b>		<b>OL7Z</b>		<b>369,624</b>	
<b>8R1K</b>		<b>5,902,848</b>		<b>W1FVN</b>		<b>41,040</b>		<b>ES2RJ</b>		<b>358,028</b>	
<b>A71CW</b>		<b>5,895,043</b>		<b>N2LT</b>		<b>14 MHz</b>		<b>EA2CLU</b>		<b>349,110</b>	
<b>CT8T</b>		<b>5,716,916</b>		<b>K4AAA</b>		<b>YT1AD</b>		<b>S58AL</b>		<b>317,687</b>	
<b>28 MHz</b>		<b>14 MHz</b>		<b>W4286</b>		<b>DJ6QT</b>		<b>Z39M</b>		<b>14 MHz</b>	
<b>LU9AUY</b>		<b>558,846</b>		<b>W1FVN</b>		<b>3,064,320</b>		<b>YU7BJ</b>		<b>417,534</b>	
<b>LU3HIP</b>		<b>547,575</b>		<b>XO7A</b>		<b>G10KOW</b>		<b>OM8A</b>		<b>369,600</b>	
<b>S51AY</b>		<b>547,575</b>		<b>Z39M</b>		<b>5,652,738</b>		<b>G3ZEM</b>		<b>369,624</b>	
<b>W4YV</b>		<b>417,534</b>		<b>VK2APK</b>		<b>N6BV/1</b>		<b>K7ZA</b>		<b>2,938,908</b>	
<b>G0AEV</b>		<b>392,448</b>		<b>YU7BJ</b>		<b>KQ2M/1</b>		<b>K17DM</b>		<b>102,569</b>	
<b>A71CW</b>		<b>369,600</b>		<b>OL7Z</b>		<b>W1WEF</b>		<b>WB2ZMK</b>		<b>49,197</b>	
<b>CT8T</b>		<b>369,624</b>		<b>W6QJI</b>		<b>W6QJI</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>28 MHz</b>		<b>28 MHz</b>		<b>28 MHz</b>		<b>28 MHz</b>		<b>28 MHz</b>		<b>28 MHz</b>	
<b>LU9AUY</b>		<b>98,280</b>		<b>LU1IV</b>		<b>916,776</b>		<b>S51AY</b>		<b>19,500</b>	
<b>LU3HIP</b>		<b>86,268</b>		<b>EA8CN</b>		<b>540,870</b>		<b>G0AEV</b>		<b>7,150</b>	
<b>S51AY</b>		<b>19,500</b>		<b>VK6VZ</b>		<b>407,365</b>		<b>UR7VA</b>		<b>3,078</b>	
<b>W4YV</b>		<b>12,285</b>		<b>H13JH</b>		<b>406,461</b>		<b>UT1IA</b>		<b>2,665</b>	
<b>G0AEV</b>		<b>7,150</b>		<b>PA3AAV</b>		<b>292,410</b>		<b>OK1TW</b>		<b>1,925</b>	
<b>K9OM</b>		<b>5,781</b>		<b>Z32XX</b>		<b>264,550</b>		<b>51,146</b>		<b>28 MHz</b>	
<b>21 MHz</b>		<b>21 MHz</b>		<b>21 MHz</b>		<b>21 MHz</b>		<b>21 MHz</b>		<b>21 MHz</b>	
<b>LU6ETB</b>		<b>1,554,092</b>		<b>Z31JA</b>		<b>186,030</b>		<b>5,716,916</b>		<b>5,716,916</b>	
<b>CX6VM</b>		<b>724,200</b>		<b>IK4WMG</b>		<b>169,440</b>		<b>G10KOW</b>		<b>5,652,738</b>	
<b>TU2MA</b>		<b>469,860</b>		<b>HA8PG</b>		<b>168,700</b>		<b>OM8A</b>		<b>4,601,610</b>	
<b>G3TXF</b>		<b>444,050</b>		<b>OH0MMF</b>		<b>151,619</b>		<b>G4BUO</b>		<b>4,405,296</b>	
<b>JA5DQH</b>		<b>431,210</b>		<b>944RU</b>		<b>148,798</b>		<b>Y17AD</b>		<b>3,786,432</b>	
<b>KC2X/4</b>		<b>391,572</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>3,064,320</b>	
<b>14 MHz</b>		<b>14 MHz</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>ED9EA</b>		<b>1,429,673</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>IG9/IT9GSF</b>		<b>1,096,200</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>9Y4VU</b>		<b>1,009,849</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>CT9U</b>		<b>946,656</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>CE3F</b>		<b>885,360</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>YM2ZW</b>		<b>783,432</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>7 MHz</b>		<b>7 MHz</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>ED9EA</b>		<b>121,408</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>IG9/IT9GSF</b>		<b>121,408</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>9Y4VU</b>		<b>102,600</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>CT9U</b>		<b>946,656</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>CE3F</b>		<b>885,360</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>YM2ZW</b>		<b>783,432</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>7 MHz</b>		<b>7 MHz</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>ED9EA</b>		<b>121,408</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>IG9/IT9GSF</b>		<b>121,408</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>9Y4VU</b>		<b>102,600</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>CT9U</b>		<b>946,656</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>CE3F</b>		<b>885,360</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>YM2ZW</b>		<b>783,432</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>3.5 MHz</b>		<b>3.5 MHz</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>ED9EA</b>		<b>121,408</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>IG9/IT9GSF</b>		<b>121,408</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>9Y4VU</b>		<b>102,600</b>		<b>W1FVN</b>		<b>243,165</b>		<b>YU7AV</b>		<b>2,818,545</b>	
<b>CT9U</b>		<b>946,656</b>									

# 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
P40W	380/15/60	1068/22/84	981/29/93	1475/36/111	1833/34/111	608/23/65
HC8N	334/16/50	711/26/81	1325/34/93	1234/31/101	1855/29/100	485/20/51
9Y4H	218/12/36	768/22/70	1884/32/97	1198/29/82	1870/31/95	484/17/40
8P9Z	311/14/46	751/19/76	1534/26/87	1663/31/101	1395/26/82	479/16/37
T1C	170/15/44	494/24/63	1408/27/84	1100/30/90	1793/33/100	383/16/35
4V2A	229/11/37	534/21/68	1561/23/94	1128/30/91	1651/25/77	190/14/35
3E1DX	153/12/33	317/18/57	1339/25/75	1156/33/99	1790/26/90	105/13/26
8R1K	103/13/34	426/18/68	1118/30/84	966/26/84	1077/25/76	209/16/38
A71CW	272/10/54	434/18/53	966/31/84	1216/31/93	1037/32/101	18/12/4
CT8T	283/16/52	714/21/75	818/24/75	1327/33/101	1356/28/92	86/16/44

## WORLD MULTI-OPERATOR SINGLE TRANSMITTER

J6DX	94/14/57	646/21/82	2118/31/100	1676/32/110	2399/31/107	227/20/40
D44BC	154/13/52	732/20/70	706/24/77	1491/34/103	2245/28/102	156/23/56
N4Z	84/9/36	776/27/94	1794/36/112	1264/35/113	1374/32/117	183/24/64
OT6T	219/32/101	763/32/116	1154/40/150	1363/38/139	873/36/127	69/14/46
K1AR	70/17/64	406/26/104	1071/39/147	1372/38/151	906/34/126	36/16/34
EA6IB	167/18/70	870/26/102	1517/34/127	1355/33/121	1374/36/126	78/18/51

## WORLD MULTI-OPERATOR MULTI-TRANSMITTER

5V7A	507/18/60	1078/21/77	2528/33/109	4254/39/148	3260/37/140	442/19/79
9A1A	1043/22/83	1995/38/127	2598/30/148	2355/40/151	1436/35/140	168/19/59
J39A	313/13/59	1243/23/84	2222/31/106	2366/37/130	2202/33/110	866/20/53
DF0HQ	796/23/93	1518/35/121	2167/39/150	1650/39/132	686/37/125	150/16/47
VE9DH	577/17/63	1108/24/94	1305/32/114	1944/32/126	1420/28/112	61/8/18
LY5A	878/22/83	1776/35/126	1542/35/141	1512/39/136	1043/37/132	241/14/45

final score of just over 750k. Jose used the Index Lab's QRP-Plus hooked to 2 elements on 40; 7 elements on 20, 15, and 10; and a second 4-element Yagi on 10, all mounted on top of an 8 story building.

First place USA (and second place world) again went to AA2U. This was Randy's seventh consecutive USA win on CW—quite an amazing achievement. As usual, Randy had zero (0.0) percent unique/bad calls in his log! Second place USA (and third place world) went to K1RC, while first place Europe and fourth place world QRP honors were taken by UT5UN.

## Assisted

What can you say about assisted from PY0Ville, OH2MM, traveled down to Brazil to visit his relatives and took in the CQ WW CW from the QTH of PY0FF. He took away the world trophy for assisted. The rest of the battles were in the States to see who could not look at their packet screens. As you have learned, QSOs are a big key to a high score. K1NG was piloted by K1IG into second place world and the top score in the US. The power axis of YCCC-FRC-PVRC sure placed a lot of scores in the assisted category.

Roland, DK3GI, really has learned how to do it. He keyed his way to first place in Europe over G4PIQ, who definitely made good use of his special M6T callsign.

## Multi-Single

What a job the crew at J6DX did! They not only took top honors in the highly competitive multi-single category, but set a new North American record in doing so. They sure were in the right spot, as their QSO total demonstrates.

## USA TOP SINGLE OPERATOR ALL BAND

Station	160	80	40	20	15	10
K5ZD/I	166/16/56	335/22/81	712/33/112	1102/34/109	7/21/27/95	25/12/16
W1KM	166/15/56	574/26/83	630/31/96	1040/32/104	729/26/89	14/8/13
V2NT	123/14/52	282/19/75	681/28/98	881/37/111	766/28/113	30/11/21
V2LT	64/12/43	208/18/72	530/32/101	1008/34/102	849/29/103	14/7/8
K4AAA	39/13/29	269/21/67	607/31/81	988/33/109	756/27/100	33/13/26
W2RQ	62/11/35	250/18/72	769/31/97	1041/33/102	663/23/85	6/3/3
K3ZO	51/11/35	399/25/84	620/33/100	953/35/113	429/28/95	25/8/18
N6BV/1	70/12/38	208/21/65	637/29/103	913/29/102	836/25/68	8/7/8
KQ2M	144/15/55	205/20/77	610/30/107	793/29/101	511/24/90	14/8/13
W1WEF	79/15/43	256/19/73	531/28/102	851/35/103	577/25/88	22/10/16

## USA MULTI-OPERATOR SINGLE TRANSMITTER

K1AR	70/17/64	406/26/104	1071/39/147	1372/38/151	906/34/126	36/16/34
K1ZZ	109/14/63	256/21/86	638/36/131	1063/39/146	663/32/124	47/17/38
K8AZ	45/14/42	309/29/100	502/37/144	1163/39/148	737/31/124	41/16/39
K0RF	59/18/28	324/29/83	1033/38/132	1166/38/143	350/31/97	69/14/30
W4WA	65/15/55	228/24/89	680/33/112	1231/36/129	480/31/116	37/17/35
K8LX	61/17/49	147/24/73	679/33/111	992/38/128	617/28/105	61/11/35

## USA MULTI-OPERATOR MULTI-TRANSMITTER

N2RM	366/19/80	803/30/108	1494/40/151	2035/40/155	1412/33/137	137/19/42
W3LPL	213/21/82	953/32/116	1314/39/150	2023/40/158	1134/34/138	135/19/45
K3_R	332/20/75	706/32/111	1251/39/153	1827/40/155	1186/31/134	109/19/46
KC1XX	313/13/77	790/27/112	1119/39/144	1987/39/151	1349/34/131	104/17/37
N3RE	148/13/70	503/27/99	1280/39/148	1979/39/154	1045/31/132	65/16/34
K1KI	306/20/75	541/24/97	1364/37/145	1639/40/155	1120/33/128	61/16/35

Tom's crew outdid themselves with a terrific effort. Third place went to K1ZZ. Dave's crew must have been influenced by his normally very low unique rate, since theirs was less than 2%.

## Multi-Multi

The VooDoo Contest Club continued to put the rest of the world in a trance. They have settled on a "sort of" permanent QTH in 5V7. Their 20 meter QSO total was absolutely outstanding at over 4100 QSOs. The plan is to put 5V7A in many logs again this year.

The second place position went to 9A1A

## TEAM CONTESTING

1. **Neiger's Tigers:** 49,912,140. By CT8T (N6AA), P40W (W2GD), 9Y4H (CT1BOH), HC8N (N5KO), T1C (N6TJ).
2. **Contest Club Finland:** 26,681,235. By 8R1K (AB6NJ), CP6AA (OH0XX), PY0FF (OH2MM), OI6YF, XX9X (OH2PM).
3. **Team Handkey South:** 20,933,295. By K4AAA, 8P9Z (K4BAI), AA4S, N2IC, K5GN.
4. **Team Handkey East:** 19,072,101. By W1KM, K5ZD, N6BV, W9RE, J3/WJ2O.
5. **EU-MIX Team:** 19,319,351. By 3E1DX (DL5XX), 3V8BB (DL2HBX), 4V2A (9A3A).
6. **Team Nippon:** 14,533,501. By 9M6NA (JE1JKL), JH7PKU, V85HG (JO1RUR), 3DA0NX (JM1CAX), 6Y6A (JE3MAS).
7. **Yugoslavian Contest Team #1:** 11,805,886. By YU7AV, YT1AD, YU7BW, YU7CB.
8. **SCC #1:** 10,563,613. By S50A, S51BO, S51FA, S53R, S59AA.
9. **Team International:** 4,163,874. By OH8BQT, VE1GN, K6LA, ZX2X (PY2OU).
10. **Team Tennebama:** 3,831,180. By K4NO, W4PA, K0EJ, K4RO, WO4O.
11. **SCC #2:** 3,497,207. By S50R, S51EA, S57AL, S57U.
12. **Yugoslavian Single Band Team:** 2,363,017. By YU1ZZ, YT1BB, YU7BJ, YT7A.
13. **OH1AF'S Single Band Headbangers:** 1,464,587. By OH1EH, OH1NSJ, OI1AB (OH1NOA), OI1HS, OI1AF (OH1MDR).
14. **Birzai Region Team:** 650,807. By LY3BA, LY3BU, LY3IW, LY3KB, LY3NJM.
15. **Yugoslavian QRP Contest Team:** 526,424. By YU1KN, YU1EA, YU1LM.
16. **Team Monobanders:** 401,661. By K6AW, GM6Z.
17. **SCC #3** 293,083. By S51AY, S57J, S59L.

## CLUB SCORES

### USA

Frankford Radio Club .....	328,583,151
Yankee Clipper Contest Club .....	276,565,298
Potomac Valley Radio Club .....	130,778,491
Northern California Contest Club .....	49,382,025
Southern California Contest Club .....	43,712,359
North Coast Contesters .....	43,667,801
Society Midwest Contesters .....	42,302,523
Central Arizona DX Association .....	32,765,536
Southeast DX Association .....	30,861,712
Southwest Ohio DX Association .....	25,330,097
North Texas Contest Club .....	25,113,734
Willamette Valley DX Club (W7) .....	21,720,534
Mile High DX Association (W0) .....	15,402,845
Mad River Contesters .....	14,442,302
Oklahoma DX Association .....	11,191,897
Northern Alabama DX Club .....	10,654,992
Rochester DX Association .....	10,197,872
Central Texas DX/Contest Club .....	9,826,059
Carolina DX Association .....	9,142,023
Western Washington DX Club .....	8,739,752
North Florida DX Association .....	8,451,345
Minnesota Wireless .....	7,512,389
Clay County DX Association (W4) .....	7,065,307
Florida Contest Group .....	6,648,169
Southern California DX Club .....	5,866,046
Tennessee Contest Group .....	5,808,768
Texas DX Society .....	5,501,619
San Diego DX Club .....	4,564,027
Woodbridge Wireless (W4) .....	4,207,451
Kansas City DX Club .....	3,617,813
Kentucky Contest Group .....	3,495,192
Mother Lode DX/Contest (W6) .....	3,056,802
Hudson Valley Contest & DX (W2) .....	2,810,638
Western NY DX Association .....	2,364,873
Order of Boiled Owls NY .....	2,257,480
Eastern Iowa DX Association .....	1,863,247
Northern Illinois Dx Association .....	1,722,403
Grand Mesa Contesters .....	1,211,717
South Florida DX Association .....	1,106,658
Gloucester ARC (W2) .....	1,103,755
Redwood Empire Dx Association .....	1,043,147
Salt City DX Association (W2) .....	950,685
Mississippi Valley DX/contest .....	893,510
Hicks (W9) .....	875,166
No Dot Dxers (W9) .....	792,778
Northern Shenandoah DX Association .....	651,367
Schenectady ARA .....	623,647
Hanging Judge Contesters .....	589,370
Ca Central Coast DX Club .....	550,744
Northern Arizona DX Association .....	478,231
Roanoke Valley RC (W4) .....	402,343
Central Florida DX Association .....	291,948
Sturdy Mem Hospital (W1) .....	255,886
ARCECS .....	247,007
West Park Radio Ops (W8) .....	246,371
Northrop-Grumman RC (W6) .....	196,644
South Jersey Radio Association .....	152,130
Metro DX Club (W9) .....	149,559
Dayton Area Radio Association .....	73,168

### DX

Bavarian Contest Club .....	117,269,123
Rhein-Ruhr DX Association .....	104,072,682
Contest Club Finland .....	69,055,808
Ukraine Contest Club .....	42,319,177
Marconi Contest Club (I) .....	39,203,250
SP DX Club .....	35,251,700

Croatian DX Club .....	35,010,784
LNDX (F) .....	34,960,092
Slovenian Contest Club .....	33,163,664
YU DX Club .....	31,312,526
Croatian CW Group .....	24,501,770
LYNX (EA) .....	23,852,062
HA DX Club .....	21,758,488
Chiltern DX Club (G) .....	20,718,283
Lithuanian DX Group .....	18,874,920
Low Land Crazy Contesters (PA) .....	18,794,225
Kaunas Technical University (LY) .....	17,138,458
LZ Contest Club .....	14,705,876
GPDX (CT) .....	12,839,453
Rosario (LU) .....	11,039,180
Crimea Contest Club .....	10,570,639
Japan Crazy Contesters .....	10,039,991
Pretoria DX Club .....	8,882,771
Kaliningrad Contest Club .....	7,168,518
Northern Lithuania DX Group .....	6,766,942
East Bavarian DX Association .....	6,205,487
Sao Paolo Contest Group .....	6,150,500
Sarevo Contest Group .....	6,065,499
Kiel Canal Activity Group (DL) .....	5,679,805
Top of Europe Contesters (SM) .....	5,576,422
Cordoba (LU) .....	5,208,594
Taganrog Contest Club (UA6) .....	5,000,914
Kiev Contest Group .....	4,372,953
OZ9EDR: Club .....	4,294,496
Danish DX Group .....	3,757,383
Bavarian DX Group .....	3,371,759
Lyon DX Group (F) .....	3,101,800
Saone et Loire Contest Club (F) .....	3,009,805
Vojvidina Contest Club (YU) .....	2,989,363
British Columbia DX Club .....	2,804,434
GADX (LU) .....	2,794,701
French CQ Gang .....	2,723,532
East Canadian DXA .....	2,497,568
Shizuoka DX Club (JA2) .....	2,497,379
TuPY DX Gang (PY2) .....	2,496,866
Fox Contest Club (YU1) .....	2,244,276
Magic Island Contest Group (PY5) .....	2,112,422
Saipan ARC .....	1,447,712
QRL Kantou (JA1) .....	1,436,940
Koryazhama DX Company (UA1O) .....	1,427,778
SP Contest Club .....	1,413,965
Rostov on Don RC (UA6) .....	1,375,866
Radio Club Uruguay .....	1,261,764
OH3NE: Club .....	1,153,404
RCL (CT) .....	1,085,539
Puerto Rico DX Club .....	1,055,835
Perugia DX Club (I) .....	916,420
UFT (F) .....	899,122
SV2TSL:Club .....	897,795
Cadiz (EA7) .....	864,862
YO4KCA: Club .....	710,661
Southern Germany DX Group .....	663,123
Granada (EA7) .....	644,712
Globus Contest Club (UR5M) .....	614,008
Vologna (UA1Q) .....	598,907
Fukuoka DXA (JA6) .....	503,766
Czech Contest Club .....	495,584
Beemster Contest Club (PA0) .....	495,228
Alicante (EA5) .....	436,794
LU4AA: Club .....	423,013
Sudaca's Contest Gang (LU) .....	410,137
Geo DX Group (DL) .....	373,996
Hamilton ARC (VE3) .....	268,324
SN6O: Club .....	249,590
Amsterdam DX & Contest Group .....	235,556

## TOP SCORES IN MOST ACTIVE ZONES

### Zone 3

K6LA	1,731,660
WZ6Z	1,276,626
N7TT	1,077,359
XK7SZ	877,924
*WA7BNM/6	593,280
K6XX	514,048
W7SE	427,141
K6VX	402,052
WA5VGI/6	337,108
W7ZMD	307,560

### Zone 14

CT8T	5,716,916
GI0KOW	5,652,738
G4BUO	4,405,296
DJ6QT	3,064,320
G3ZEM	3,062,514
G0IVZ	2,646,140
DK8ZB	2,615,620
OZ1LO	2,195,564
EA2IA	1,918,008
OY1CT	1,813,686

### Zone 4

K5GN	3,156,737
W9RE	2,975,280
N2IC/0	2,958,168
K4AB	1,956,864
K5MA	1,928,595
K5YA	1,888,952
K5YAA	1,764,447
KØEJ/4	1,593,651
W4XJ	1,432,698
K9AN	1,342,320

### Zone 15

OM8A	4,601,610
YT1AD	3,786,432
S53R	2,938,908
YU7AV	2,818,645
OH1NOR	2,780,160
S51BO	2,696,872
YU7BW	2,653,717
YL8M	2,486,938
*S59AA	2,281,884
OI6YF	1,927,074

### Zone 5

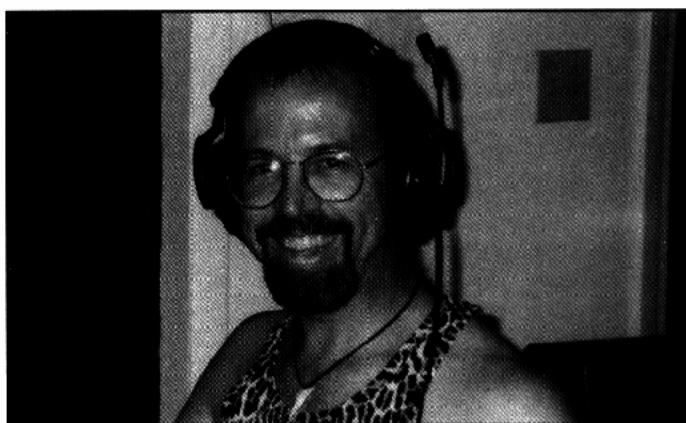
K5ZD/1	5,461,830
W1KM	5,307,695
N2NT	4,794,086
N2LT	4,344,384
K4AAA	4,286,150
W2RQ	4,119,903
K3ZO	4,096,170
N6BV/1	4,045,252
KQ2M/1	3,717,277
W1WEF	3,673,972

### Zone 25

JH5FXP	2,917,488
JH7WKQ	2,203,248
JH7XGN	1,566,291
JA1IDY	1,417,687
JH0FUW	1,323,645
*JE0UXR	960,160
JA1JKG	934,929
JA9CWJ	856,654
*JE3HDD	734,080



Julio, HI3JH, put HI on the map.



VP5EA operated by David, WD5N.

from around the city of Zagreb. The ops of 9A1A are very dedicated to contesting and their score shows it. Third place went to the Yankee Clipper Contest Club DXpedition to J39A.

In Europe the top spot went to the already mentioned 9A1A. Second place was found at the quad farm of DF0HQ located in southeastern Germany. Club station LY5A finished a close third.

The boys from the FRC operating at N2RM's summer cottage took advantage of their skill and QTH to win first in the US. Second place went to Frank's crew at W3LPL, while third traveled out to western PA to the QTH of K3LR.

### Team Contesting

Once again the team organized by Jim, N6TJ, took first place. Look at the scores and you can see that each team member averaged just under 10 million points! Since the overall all band winner had 12+meg points, it is a remarkable job. Well done! However, if Neiger's Tigers had looked over their shoulders, they would have seen a real battle for second through fourth place. Contest Club Finland in its debut took second place honors. An interesting battle took place for third and fourth between two east coast USA teams. Team Handkey South just beat out their brethren from the Team Handkey East.

You don't have to make 10 million points to go for a team. The object is to have fun creating a competition in which the members can come from anywhere on Earth. Some of the teams choose to operate single band, while



Yuri, VE3BMV (left), and Jack, VE1ZZ.

others are QRP only. The goal is to interest others to form a competitive team. Find five contestants and join in!

### Clubs

The battle of the clubs was especially competitive this year. The Frankford Radio Club held on to their crown over stiff competition from the Yankee Clipper Contest Club and a surging Potomac Valley Radio Club. In Europe the seesaw battle between the northern Rhein-Ruhr DX Assn. and the southern Bavarian Contest Club tipped to the south. The BCC took the DX trophy. They were followed by a club that every-

one will be watching in the future—the Contest Club of Finland. These six clubs accounted for over 1 billion points! Quite astounding.

The battle of clubs just below the giants was also quite interesting, with the NCCC edging out the SCCC.

### New Records, Special Mention

The following stations set new world or continental all-time records:

**World** 3.5 EA8EA (OH2KI); LA 3V8BB (DL2HBX); L7 LU1IV (LW9EUJ); L3.5 Z31JA; Q1.8 ES1CW; A1.8 TK5EP.

**USA** LA K2SG; L14 N4MO; L3.5 W1UK; Q7 W0KEA; A14 K4AMC; A1.8 N2QT/4.

**North America** 1.8 CG1ZZ (VE3BMV); LA VP2EEB (AA3B); L14 XO7A (VE7SV); L7 HI3JH; L3.5 W1UK; Q7 W0KEA; A14 K4AMC; A1.8 N2QT/4; MS J6DX.

**Africa** 7IG9/AC6WE (UA3DPX); 3.5 EA8EA (OH2KI); 1.8 EA8ZS; LA 3V8BB (DL2HBX); L7 EA8ZS.

**Asia** L1.8 UA9CI; A1.8 JH4UYB.

**Europe** L14 Z39M (Z31CN); L3.5 Z31JA; L1.8 HA8BE; Q1.8 ES1CW; A21 EA5WU; A14 C31LJ; A1.8 TK5EP.

**Oceania** 3.5 9M6NA (JE1JKL); L14 VK2APK; L3.5 VK6LW; MS KH0DQ.

**South America** All P40W (W2GD); L21 LU7FJ; L7 LU1IV (LW9EUJ); QA ZX2X (PY2OU); Q28 LU9HUP; A14 PY2NQ.

A special mention must be made of the outstanding job done by the multi-multi effort of CY0XX. Their efforts made a lot of people happy. Way over in Myanmar, the single band

efforts of the XZ1N operators (see results) was a great idea. Each took a band and handed out the elusive XZ and zone 26 multipliers.

At the same time as the contest was occurring, another event was happening on C21. OH2BH had invited operators to this remote island for his 50th birthday party and to join in the contest fun. Martti has always been a promoter of ham radio, and he is to be congratulated for the fine score of the C21BH effort.

Thanks to the radio operators on ships. They recently have become more active in the contest. They provided the rare zone 34 in the 1996 contest. If you are on a ship, you can get in the contest. You count for QSO points and the zone through which your ship is sailing.

## Comments

Get It Right! This year we ran across an ever-increasing phenomenon: incorrect packet postings. I operated as a member of the K3LR team last year on CW. On Sunday I had fun as a secondary contest watching people spot *wrong* calls and the band map fill up with bogus callsigns. During the log-checking procedure several of the log checkers noticed that bad callsigns were attracting many people who just worked what they saw on their packet screens—that is, they *never* heard the callsigns they worked. For example, the very active MM5V7A was spotted as HV7A. Fifteen guys all on the same packet cluster put HV7A in their logs! So not only did they get the call wrong, they gave themselves a good multiplier on top of it.

If there is any lesson to be learned from such information, it is that guessing is no way to work a QSO. The bad call/mults can easily be found by the computer and your score will be reduced. If you have any doubt, make sure you copy the call you have worked. Sometimes you have to stick around for a minute or more to get the call, but then you're sure of it.

**Electronic log submission:** This year we received 1056 electronic submissions on CW (disks or e-mails). Although we mentioned the following in the SSB write-up, it bears repeating: Even with that many submissions there were that many again computer paper logs with *no* disk or e-mail log! If you use a computer to generate your log, *please* take the time to send a disk plus a paper summary sheet or e-mail your log. It is cheaper for you to mail a disk than your whole log. E-mailing your log is the cheapest of all! Refer to Rule XI.5 for directions on how to submit a disk.

**CW e-mail log submission <cw@cqww.com>**: You can submit your log via the Internet. E-mail is easier for you and us. For e-mail we require **two files** to be included in your message: (1) A **summary sheet** in plain-text ASCII, and (2) Your **log**, which should be sent in one of two ways—as a plain-text ASCII file (for the most popular programs submit your CT: yourcall.ALL file, TR: yourcall.DAT; other fixed-column ASCII formats are acceptable) or as a binary file (acceptable examples for submission of files for the most popular contest programs; acceptable binary formats are NA: yourcall.QDF; OH2BQS). If you send a binary file, it will have to be encoded for transmission via e-mail. All popular encoding schemes are acceptable, including UUencode, Base64, and BinHex. Your software may automatically encode your log as an attachment.

If you must send the files in separate messages, be sure to put the **mode** and the station

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See Page 75 of CATALOG 8 For more Air Variables!	
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## Thanks

Thanks to the CQ WW log checkers who make sure that the CQ WW remains on the leading edge of log validation. Give a warm round of applause for K1DG, K3UA, K3ZO, K6NA, KR2Q, N2AA, N2NC, N3ED, N3RA, N5NJ, N5TJ, N6ZZ, N8BJQ, N9RV, W2RQ, W7EJ, and W9RE. Our DX advisors were very helpful in offering advice, providing information, and sorting out potential problems: CT1BOH, DL6RAI, EA3DU, G3SXW, I2UIY, JE1CKA, OH2KI, OH2MM, OK2FD, ON6TT, PY5EG, S50A, SM3SGP, UA9BA, and VE3EJ.

A special thanks to Dick, N6AA, who between trips to VK-land put in countless hours to make the CQ WW database the best in contesting. The CQ WW uses the software developed by N6TR to create the database. John, K2MM, set up and managed the CQWW.com internet site, and Larry, N6TW, was valuable in retrieving data from e-mail submissions. Thanks to the "voice," Gene, W3ZZ, for his efforts to decode problem disks. Thanks to Jim, N6TJ, for his editorial advice. And finally, thanks again to John, K1AR, for his advice and hard work to make the CQ WW so successful.

Congratulations to all the winners. Go to a club meeting, get a friend to join in the fun, or try a DXpedition. To participate is what contesting is all about!

73 and CU in '97, Bob, K3EST

## DX QRM

Worked three "new ones" on 160! Unfortunately, I can no longer participate full time—doctor's orders! . . . PA0LOU. Good openings to Africa and Caribbean on 160. Heard HC8N . . . LA8WG. I have gotten DXCC this October and CQ WW DX contest was very helpful. Thank you CQ magazine . . . 7K1EQG. Would never had expected to work XZ in a 160 meter effort! . . . G3XTT. I operated from shed in the garden, -3 degrees, 3 inches of snow, wrapped in blankets and sleeping bag. Of course I enjoyed it! First time in CW. This is becoming addictive . . . G4KIV. What a difference between two years ago and this year. Did 40 as single band both years, and this year I more than doubled my QSO and scoring. Good condx to NA first night, but at the second morning I got so tired at sunrise that I had to go to bed earlier than planned (we're all getting one year older every contest!) . . . EA8CN.

I chose to do single band 10 so I could sleep normal hours (am an old timer, age 77). You had to be quick when the band did open . . . EA6ZY. Tks to OM LA7SL, Peter for QTH and hospitality . . . LA9VDA. An enjoyable event as usual. In fact, I haven't enjoyed a contest as much for ages. CQ WW brings out the rare ones—at least three all time new countries for me . . . G3WRR. Twenty years ago I was starting in CQ WW (1976) for the first time! . . . UA6NZ. Halfway through the first night my keyer battery went flat. 4:30 AM found me frantically searching for a spare! Conditions seemed quite good. I'll be back next year! . . . VK6VZ. Enjoyed the contest. Did not find XE or VE (zone 2) again this year . . . RW4AA. Had a weekend of very heavy gales and storms which made 80

hard going. It should be a rule that all "W" stations that are not in their call areas sign /current call area. It must be a nightmare for the judges checking through the logs to get the zones right . . . VK2AYD.

I have been QRVing on 160 meters in this contest for 15 years. The propagation between JA-EU is very, very good. Fantastic and mysterious! Even at 13z we JA can hear many EU stations on 1825-30 kHz. At this time we hear also many USA stations who were calling XZ1N. But they did not hear on 1910 kHz. So I strongly say to EU and USA stations: Please call "CQ Contest QSX 1910 kHz" many many times . . . JE1SPY. I am very joyful in this contest because I got a new country . . . JA1WHG. My second CQ WW CW entry. Last year I had my license only two days. This year I could multiply last year's score by 3.5! Great boost for my DXCC . . . ON4CAS. Sometimes the QRM was so strong, I couldn't hear my own signals through the QRK. Propagation was good for a sunspot minimum . . . PA3ASC.

The last time I sent my log was 1964. I enjoyed this 96 contest even much more . . . OE3TL. Very pleased to participate for the first time in this contest! It is a great contest! . . . CN8GB. Condx was very hard on 28 MHz. The noise changed into live Morse code! . . . JH6SQI. I love this contest! Thank you! . . . EU4AA. I'm excited for my first African on 160! . . . JI3KDH/3. I was on an 870 foot oil tanker returning to Valdez, AK having been to BY and HL land. For me the CQ WW CW test is the greatest of all contests. It is truly amazing how simple it is to break pile-ups when propagation is good . . . W7SW/MM (Zone 19). Next year I will be QRV from Central America . . . JA6WFM. I felt that 5 watts was not QRP! But I think I had weak signal. Thank you very, very much to all stations . . . JR9OPJ.

I would like to thank Fred (G4BWP) for letting me use his station and his XYL, Mandy, for putting up with yet another radio fanatic in the house! . . . G0KRL. It was my first attempt to work DX stations on top band. I enjoyed big pile-ups from EU stations . . . JH4UYB. Bands were overcrowded, making it difficult to get through. Who says that CW is dying! . . . G4ZME. Poor condx on 10/15 but lots of DX to work on the other bands. It was a great contest . . . F5MW. We come to Lampedusa again and this year the propagation on 40 meters was not as good as in the previous year. See you all next year, from where? Do not know yet but maybe . . . IG9/AC6EW (Opr. UA3DPX). Forty meters was boiling. Enjoyed very much but east coast and West Indies did not come in . . . JA2NWF.

Not very many requests to change bands. Guess KL7's had Zone 1 covered . . . VY1JA. Better than SSB. My voice was OK on Monday! . . . SV1DET. Nice to be on again. Working HL3 and YB1 on 7 MHz with only two calls (25W) was great. It seems that search and pounce can bring in nice stations. Compliments to all the W's who managed to get my signals on 14 MHz . . . PA0MIR. Called all day, both days for contest stations finding none. In the evenings the overflow came to me . . . ZE0AOK. Operated from field-day location on the coast in Devon with good sea take-off to US, but also with the attendant typical late November gales that buffered the 80 ft. trailer-mounted 15 meter beam around somewhat . . . G3TXF. Many thanks for my first and FB WW DX. I'm on the air for 20 years and invalid for 2 years. Radio amateurs and contests are a good hobby! . . . LZ4RF.

Also with simple antennas (dipole and sloping dipoles) and 100 watts CQ WW CW is every year a great pleasure. Propagation is not so poor as numbers say . . . IK4EWX. Working Vietnam for the first time ever! . . . ZC4EE. I operated from superb seaside QTH. Great location, big signal, good conditions, but a shame about the operator! . . . G3WVG. This year's contest was extra tough, as I found the LF bands in poor condition. I only spent 32 hrs on the air but managed to produce good pile-ups in the last 8 hours . . . GD4UOL. It was very exciting working with only 5 watts and a simple wire antenna . . . F6CRP. This the best of the contests in the world . . . LU3DSI. Congratulations to the 5V7A group. Tks for 160 QSO! . . . ZD8DEZ. Worked Haiti for only the second time in 43 years! . . . GW3JSV. Great contest! Propagation was very poor until I had a 5 hour long JA opening Saturday night on 10 meters! First time I worked Antarctica and zone 39 on 10 meters . . . LU3HIP.

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20 • CQ • October 1997

Say You Saw It In CQ

Terrific condx on all bands except 10 meters. What an enjoyable contest... *EI4DW*. I don't know how you do it, but condx are usually good for contest weekends, and this one was by no means an exception. 21 MHz was the best of the year!... *VE3ST*. All my QSOs were with hand key... *BY4SZ* (*Opr. BZ4SCT*). I still give meaningful reports; seems *9J2BO* is the only other who does so!... *G3JKY*. I felt that band condx are going better. Nice contest as usual. I like it. N6TR program help me so much... *OK1ABP*. The St. Lucia DXpeditionary Force, a tiny division of the Southwest Ohio DXA. We started planning this year's trip in March, started packing in October, traveled 18 hours. After all that the contest lasted only 48 hours. Next year how about at least a week-long contest?... *J6DX*.

I had much fun! More than 10,000 points for the first time and 53 contacts with the USA... *DL4OBJ*. Excellent condx during last night! Thank you for new one, World-Wide Contest!... *UA0SR*. After seven airports and six airplanes, just being in the Bahamas at Treasure Cay on Abaco Is. was great... *AA6EW/C6A*. New callsign had to be repeated quite often. Hard work getting through in pile-ups... *M6C* (*Opr. G3KKQ*). Sixty-eight years old, ex-"Sparks" bit tired at end but still great fun. Cannot say no to this fine contest... *PA3GNO*. Excellent through North Pole conditions just before the end of the contest. Got many important double multipliers... *ES2RJ*. I am 16 years old and here in Sierra Leone with my Dad for the year. Power is somewhat unreliable and sometimes goes off in the middle of a pile-up. We do not mean to be rude but that is life here... *9L1MA*.

Enjoyed the contest and pleased to make the highest ever G score at the bottom of the cycle... *G4BUO*. I contacted many stations because many GREAT stations attended in the contest... *JH2NWP*. I started contesting in 1954 with the call *I1YCZ* from Trieste, a country separate from Italy. Forty meters is always open, not many QSOs but still fun... *IK2AIT*. For me it was a very first WW DX on top band after 50 years of my ham activity! Hmmm—a noisy item!... *ES1CW*. Station was set up at friend's house on South Bimini. WVW sent flux 104 on Sunday and 10 turned to gold!... *C6A/N4RP*. Many USA ops could not believe my call. They kept asking for another letter... *G6T* (*Opr. G3NYY*). Operation limited this year but my CW skills are still improving. Another ten years practice and I might be good!... *VK5GN*.

Thanks to *AH6NJ* for calling in as only zone 31!... *OI6KZP*. Took part in the contest to commemorate being in amateur radio for 40 years!... *TA2BK*. LW 12 meters long from balcony above the sea... *EA8/DJ1OJ*. I operated fully with N6TR for the first time and liked it very much... *LY2OX*. I tried to put up 80 meter antenna just before the contest but failed to do so. I wish I had because low band conditions were fantastic. CQ WW DX Contest is always great... *JL7PVR/1*. First time active from my new QTH. Used to be fairly active at my OH6VVR QTH in the past few years... *OH2NQS*. Not one USA station heard on 160 except for *KL7* and *KH6*... *VK3IO*. I'm a med doctor and spent part of the contest in emergency service... *HA8XX*.

No opening on 10. Excellent condx on 40. Hard job on 80 with 100 watts. I enjoyed it and I'll try better next time... *DL2HQ*. I used a GAP Titan DX vertical mounted 5 feet above ground and QRP. US east coast no problem. I was able to QSO US west coast, CW, JA, and V85... *HB9CBR*. Thrilling 7 MHz condx! Who needs sunspots!... *G3IGW*. We had two ops for the last eight hrs due to a severe snow storm which had the rest of the crew heading home early. Some had to drive 200+ miles!... *G6D*. This is fifth time I worked all the 40 zones during CQ WW. Great Fun!... *IG9/I79GSF*. I have never been asked to QSY to other bands so much in my life!... *VQ9IE*. Bad QRM on 40 meters here in Europe. By the second day two cases of beer and one bottle of whiskey were not enough!... *DA0RP*.

What we will remember from CQ WW CW 96 are *XX9X*, *XZ1N*, *5V7A*, *CP6AA*, *PY0FF*, and those new Ks, Ns, and Ws. Conditions were fairly good considering our location at 60 degrees N and the sunspot cycle... *O15N*. Great contest! Looking forward to the next CQ WW with our MS... *YB0ZBB*. First time to try low power. Nice to make DXCC on a single band!... *EI6FR*. It was difficult to reach the QTH on 4000

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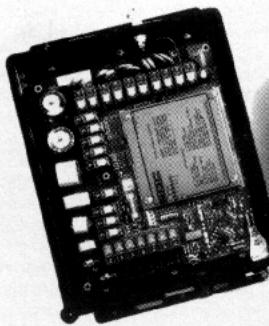


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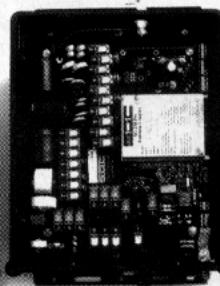
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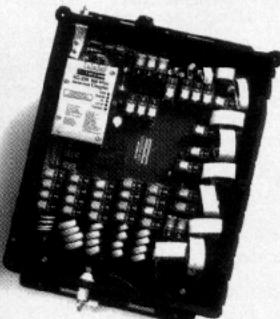
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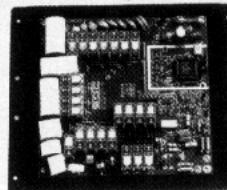
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6	XE1VV	941,488	26	XV7SW	330,718
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other five banders. Thanks to all who stayed with me to get the call correct. Only way I can make a stronger 100 watt signal is to improve the antennas. Wore me out but lots of fun! ... KJ9C. I worked 5V7A and several Europeans stations when 20 meters opened up ... K6GT (ex-AB6YL). Bottom of the cycle but condx were excellent on 20 and 15 ... K3SA. Many stations were active. The band conditions cannot be as bad as we often think they are ... W8FDV (ex-KA8OTU).

CondX seemed well down this year. Lots of mulls, but very light volume into Europe ... K1ZM. Great fun until the cold front came through with 6 hrs of thunderstorms and 70 mph winds. Then more great fun afterward but without 20m ant ... K5GN. I had a great time even though I operated only 15 hours. Murphy struck in a big way just before the contest: my printer broke, I cut my finger repairing it, and 20 minutes before the contest my amp was lost. Fixed it and after that, I had a ball! Truly a great contest ... N2JT. First time I have entered this CW contest. Great fun! ... K4UK. Four and a half operators and a trainee for a MM equals no sleep and empty positions! At one time I was trying to cover three bands at the same time. We thought about doing a MS then decided to just have fun. That's exactly what we did! ... K4VX/0.

The 40 meter propagation gods did not smile this time around. Biggest change was working ZA1M for country number 100 as zero was fast closing! N6ZO/mm operating from Zone 34 helped out big time ... W8PX. QRP even in the best of times is a challenge ... K5IID/8. Having 5V7A pick me (Wow!) out of a fantastic pile-up put me in shock for a bit ... WA3DMH. Best overall score in 46 years of contesting. Not bad for a tri-band beam on the higher bands ... W9L7/8. Solar flux jumped to 100 on Sunday and all the bands were jumping in the final hours! ... K1TH. Best moment was working C21BH for a new country on the first call ... NK6F. This is my 50th year in this contest! ... K4FW/8. Nice to have C21BH call me for a new one! First time with new call in the Mother of all Contests. This time more Qs but less Zs and Cs ... WO4O (ex-WA6KUJ).

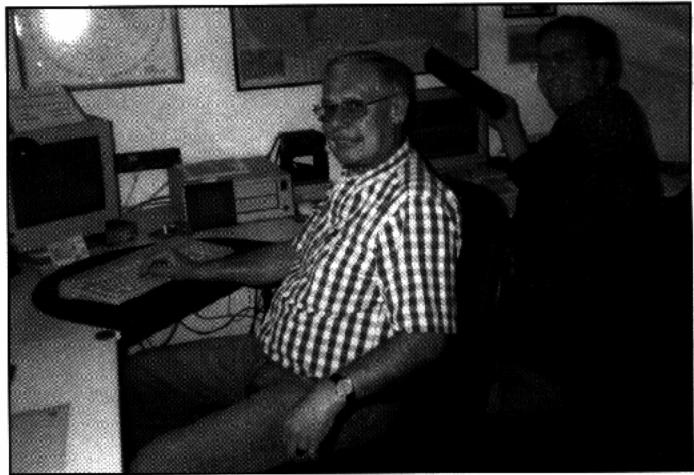
Great contest! Awesome low bands first nite. QRN pits the second ... K0EJ/4. Working 3C5A on 40 for a new one ... WA2YSJ. The definite highlight for this low power, wire antenna station was having 3DA0NX answer my call on 80 meters! Plenty of juicy DX sunspots or not ... KM2L. The best DX and most fun I've had in my ten months as a ham. Some nice openings to Europe and 19 new countries ... KQ6ES. Breaking 100 QSOs and 10K! Working YB1AQS for first Indonesian contact ... WA2OCG/7. I hate trap antennas! But sometimes you have no choice. But still nothing can beat a monoband Yagi. The question remains if I will have it next year? Maybe... W3UA/5. Really enjoyed contest. This was the first contest since winning the 1970 YV gold medal for North America. Will be back! ... W4ONO.

Highlight was working HC8N (with my 4.5 W) 10 minutes before I left for work ... WD9AB. My sympathies to IG9/IT9GSF for tough call to work with during contest ... K6BWX. After playing with several state QSO parties, I decided to work some of the CQ WW CW contest. Had a great time listening to hundreds of "world class" operators. I no longer think that 20 wpm is fast! ... K4NR. Happy to get C21BH, 3V8BB, and 5X4F. Thanks to them for being there ... K3GW. Very first time on 160 contesting! What a challenge ... K1UO. Worked everyone I heard on 10 and that was not much ... K4JYO. Thanks for sponsoring this contest. It sure seems to bring out the world's best ... K8UC. Released from hospital Monday after total hip replacement so couldn't make much of an effort, but still had to get my feet wet ... W6NKR.

First contest with computer controlled radio + packet. What a blast! ... NE3F. The CW speeds keep getting higher and higher. There are some really great operators out there. Wouldn't miss it for the world! ... W8KTQ. Fifteen meters came to life with a nice opening to EU and Africa. Just another FB contest ... K6VX. This was my 46th CQ WW entry for both modes and I have enjoyed every minute over the years. Keep them coming! ... W5FO. Great conditions! I believe CQ has an in with the solar flux gods! ... KS1L. First time with no packet in several years; it's great! I'm hooked on unassisted again. Forty percent more QSOs than last year when I used packet. Mults way down but I can work on that ... WZ6Z. I had a fun contact when I was called by a NH2 and a LU at the same time. Sent both a report and both said "OK." Two for one QSO! ... K7ABV.

High winds the afternoon before the contest created an intermittent at the 5-element 20 meter feed point. Kudos to N7QQ, who spent the day on the 20 meter tower and then took the night shift on 80 ... W6BA. Great job by 5V7A team. Great signals 160-15 ... K8RF. Our goal was 1000 QSOs and a million points. We were very happy that we passed that point. The entire multi station, from a desk to antennas, was built in two weeks. We worked on antennas, stubs, and switching right up to the last minute. We are very proud of our 12 year operator, KG2HV, who showed up at 5:30 in the morning to operate. He was able to run for us on 20 meters. Think we will up the goal next year to 3 million points and 2000 QSOs ... N2FF. Thrilled by working Northern Ireland from central Texas on 80 meters with 5 watts! ... NZ5A.

Eleven years since last contest. Wasn't sure what country I was working. Prefixes are so different ... K6SE. I had an unbelievably clear freq during the EU run both days! Ran exactly 400 stations Saturday morning on the same freq in 4 hrs and 40 minutes, peaking at 111 with low power! ... N8II. Did the contest from a laptop and telephone at home via a remote HF site on Vashon Island. All the comforts of home



JY8B was activated by Ulli, DL5MBY (left), Georg, DK3QJ, and Steve, K7SP (not shown).

with a saltwater antenna site! ... K7SS/Remote. Wish A61AJ had listened for W's, but I guess it is more interesting to work Europe from A6! ... N6AR/4. First time on 20 meters in any contest. Had a great time! First time I worked JA—five of them! ... WA2VQV. Chemotherapy can interfere with a great contest. I will be back in 97! ... NA2Q.

Amazing what can be done from an apartment with a mediocre antenna at the bottom of the sunspot cycle ... N7RK. Thanks to all those big guns willing to listen and dig out my QRP signal. I worked hard for every contact my 5W got me. Enjoyed the contest ... K8OUA. This is my second CQ WW CW. I was pleased to more than double my score from '95. Worked seven new countries including JA, immediately followed by my second, third, and fourth JAs! Used only 50 watts to avoid WAHE (Worked All Home Electronics). I used a 2-element X-beam in my townhouse attic fixed east. I also used a "stealth" vertical—a metal chimney liner 25 ft. high ... N3UMA. Three IC-706's in car and mag-mount on the roof. The old K2V2 20 meter signal is in retirement until I get established in Missouri ... K2VV.

Was it the new antenna farm or the snappy new 1×2 call that made this the most fun I've ever had in a DX contest, and at the sunspot minimum at that! ... K6LA. With all the racket and a piece of wire in my apartment, I got 5V7A! There is a God ... N7RAP. Working 3W5FM on 40 QRP. Was anyone else crazy enough to do 40 meter QRP single band? ... W0KEA.

## Station Operators Multi-Op Single Transmitter

**3C5A:** N5AW, N6ZZ, **4N6N:** YU6GB, Poleksic, Jovanovic, Spasojevic, Radovic, Vujovic, Popovic, **5X4F & N3BN:** KE4EW, **9USDX:** F5FHI, EA1BB, **A45ZN & SM0CXU:** AA1LN & NV1U, **AA2FB & K2QMF:** AB2E & NU3Y, WA2UDT, WK2G, **AC4HB & others:** C12PP, VA3ZC, VF27P, **CT3/DL5YM & DL1WC:** D44BC & DK7YY, DL2OAP, DL2OB, DL30XX, **DA8RP:** D10EFO, DA2KW/K5VK, DH3PAJ, DA1K/KB2SRS, **DF3CB & DL1MFL:** DL4MEH, **DK0EE:** DK2CY, DK6WL, DJ7CN, DL4MCF, DL4MDO, DL4MEH, DL4RCM, **DK0NT:** DJ6RN, DJ3TF, DK6NJ, DL5RDO, DJ5RE, DK1RP, **DK0TZ:** DL1SBF, DL4AAE, DF5EN, **DK0ZG:** DJ2RG, DJ5WG, DL6MPG, DL8CYG, DL8MUG, **DK1II & DJ7MG:** DL8UM, DL1EFO, DL1EFQ, DK2ZT, DK7PP, **DL3SKF & DL4SKF:** DL4SKF & DL3SKF, **DL6RA1 & DL2NBU:** DL4RDJ, DL7AU, DL7BY, DL7IC, DL7UBA, DL7URH, **E45BY & E45BXT:** EA5EU, EA5FD, EA5GRV, EA5KW, FA5SM.

**E46B:** EA3AIR, EA3AKY, EA3ALY, EA3DU, FA3KU, EA6ACC, EA6FB, EA6FO, EA6GP, **E47TH & EA7DPU:** EA7GYS, EA7KWH, **EM70:** UR5ON, UR4OF, **E55Q:** E55MC, E55MG, E55RN, E55RY, **EUF5:** EU6DX, EW6MM, EV6Z, EW6AW, EV6M, **EW5P:** EW6DX, EW6CM, EW6AL, **EW9A:** EX2M, EX0M, EX8W, **F5JVP & F6CEL:** F6ENO, **F5KPG:** FA1ITF, FB1N2ZD, FSAMO, FSJLY, F5SMS, F5IOA, F5SDT, F6ITY, F6EGC, F6BNH, F5UHE, FB1CMF, **F5MW& F6GYU:** F6KEO, Club, **F6KLO:** F6JSZ, F5NBX, F6GRU, F1MCO, FB1PH, **F5SP& K6CT:** K9VY, N7RT, **G6D:** G3LZQ, G3SJ3, G3WYW, G3ZRS, G4BYG, G4DRS, G4MVA, G4T9E, **H99AA:** HB9ARF, HB9IAE, HB9AFV, HB9DCM, HB9IAL, **HG1G:** HA1TJ, HA1DAC, HA1AV, HA1BN, HA1DAE, HG1DAI, HA1AR, **HG5A:** HA5IW, HA5GF, HA5TI, HA5CM, HA5FM, HA5AWH, HA5BSW, HA5CC, HA5COA, HA7RY, HA5CNC, **HG5M:** HA5MY, HA5WA, HA5OF, HA5PP, HA5WD, HA1DK.

**HG6Y:** HA3NS, HA3NU, HA3OV, HA6OL/3, HA6DX, HA6OB,

HAG0Y, HA7PO, Zsolti, HA6OI, **HS8AC**: LA7JO, VK3DXI, YU7AU, YU7EF, SM3DYL, WA2RUY, **I1R**: IK1LWL, IT1VNL, IK1OBT, IK1DPA and supports **I2K**: IK2KHM, 12EJ, IK2MMF, IK2KZB, IK2XSJ, **I4R**: IK4UOP, IK4CFV, IK4UNZ, **IL3/K3VIA**: K3VIA, IK3QAR, **I02L**: IK2MLY, IK2NCF, IK2NCJ, IK2NVU, IK2PFI, IK2PIG, IK2UB, IK2AJA, IK2ABW, IK2ACZ, **I04A**: 14ND, 14LCK, 14EAT, 14KWH, 14TJE, 14YFW, IK4EWK, IK4DCT, IK4XOH, IK4QJH, IK4CZF, IK4MGR, IW4ANU, **J6DX**: AC0S, K9JE, N8SM, N8R8, W9UI, W8QIC, N9AG, **JABYAK**: JE0ETP, JFOESV, **JAY2KA**: JP2QNB, JS2ERL, JI4RDO, JL7JRO, **JAZ2JW**: JH2CM, JL2ICO, JM2NFO, JA2MNB, JK2XXX, JE2PCY, JL2WNA, **JAZ2OH**: JH3PR, JG3KV, JI3OPA, JH4IF, JH4NMT, **J62IH**: JR6GKT, JE6UKS, JI6BRB, JG4KEZ, **JH8ZH**: JH1BBT, JH1TXG, JK1GK.

**JR1ZTT**: JETATM, JRBUUU, JRDXHL, JE0BKI, JT1T, JT1CD, JT1BV, JT1BL, JT5AA, **JY8B**: DL5WBY (JY8VB), K7JP (JY8SP), DK3QJ (JY9QJ), **K1AR** & K1EA, K1GQ, K1MM, K5ZD, **K1GW**: K1ART W8PH, **K1KP** & N10EK, K1OA, KB2F, NY12, K102 & K1RX, KF1V, K1EPJ, K1ZZ & K1PO, K2TE/1 & NE1V, W1SU, **K2VW/M** & K2ACUP, KB2OP, **K3CP/M** & NU3, KU3K, **K4D** & AD4TG, AF4Z, K4W4P, KC4HW, KT-D, W4JHH, W8CQN, **K5BN**: K5AD, K5GA, N5JJ, K5HZ, WA5PK, NM5M, **K5KG** & W6TER, **K5MDX**: N5FG, W05L, **K5RT** & K5MR, NSKM, NJ1V, W7CT, **K6ANP** & K6LN, **K6R0** & K6CX, K5RT, **K6ZM**: NH7A, AC6C, KE6TCC, **K8AZ** & K8BL, K8NZ, N3AA, N6ATR, N8LWX, NX8R, W8CAR, W8KIC, WT8C, **K8LX** & N8EA, WA2ZUT, **K9UWA** & K9RU, KR9V, KC9LA, KA9A, N9N0, **KB1H** & A1CE, K1EBY, N8JU, K1DW, **KB3TS** & KE3RR, **KE4GI** & N1XYR, N1XYS, **KH8DD** & JF1SOC, NH2CJ33ERW, AL7NCJ3K6AD, W130J/R7M0D.

**K9MD/C6A** & N9NC, **KV8Q** & KTOF, WX7K, WB8HBS, K9KF **K21M** & W1A1HN, N1MD, NM10, AND KA1ZN, **L48SDA** & L44DCA, LU4DRC: U7EE, LW9ETY, LW6EFP, LW1EXU, LX/DF0BZ, DL8SCG, DL8SEJ, DL4SDW, DL4SDX, **LY1D0** & LY2BOS, **LY1D5** & LY1CR, LY3AV: LY1XW, LY1CO, LY1BP, **LY2KMS**: L22CO, LZ2XW, L24J, L26A, L22EG, LZ3YY, LZ4C, LZ7M: LZ1U, LZ3AS, LZ3D, LZ3F, LZ3F, LZ3M, LZ4F, LZ4AX, Gosh, Krasi, Vantzi, Yanku, Yaser, LZ7N: LZ1NG, LZ1THI, LZ1JZ, LZ1NX, LZ1VR, LZ1CAM, LZ3AB, LZ3AX, LZ3OY, LZ4C, LZ50L, **LY9A**: RY0AM, LZ1UK, LZ1ZX, LZ2C, LZ2DF, LZ2HE, LZ2HM, LZ2JL, LZ2PP, LZ2T, LZ2X, LZ3D, LZ4UU, LZ4V, **M6A**: G4EOF, G4ZFE, 5B4WN, G3R3R, G4ARI, G4GVC, **N0ZA** & K0UK, K0CL, **N1AU** & K1BB, **N1MD** & K21M, KA1ZN, **N2FF** & N2GA, A2X2Y, KF2EH, KG2HV, AA2GC, N2LB & WA1KKM.

**N3Q** & ND3A, WR37, **N6CQ3** & K3SV, **N6RV** & K6HMA, N6EV, W6UL, N6NW, **NCBP** & N9NI, W00V, WAOFLS, WR0G, **NK7U** & N7BZ, KK7A, **NN7L** & A7CQ, **NP4Z**: AA6DX, K5GO, KP4BZ, KP3L, NP3A, NP3J, **NX8I** & others, **DE1A**, O1EIM, O1E1SW, O4E4BL, OM3LA, **OE3S**: OE1ETA, DE2GEN, OE2LCM, OE2VEL, O3E3SA, **O1ZE**: OH1T, OH1ZL, OH2BVI, OH28YY, OH2-E, OH2IW, OH2JA, OH2JN, OH2JQS, OH2KVN, OH2XX, K3FK, K8MN, **O15N**: OH1WZ, OH5TQ, OH5TS, OH5KW, OH5UX, **O17**: OH4LYX, OH6LNI, OH7MHL, OH7LT, OH7WV, OH7KU, **O1KU0**: 01KFC, CI1UG, **O2K2KD**: 0K2BDI, 0K2BZ, **O1KAE2**: 0K1CF, 0K1WF, 0K1TA, 0K1WT, 0K1JKT, 0K1FD, **O12A**: 0K2PD, 0K2HY, 0K2PEM, **OL3A**: 0K1AY, 0K1CM, 0K1DRQ, 0K1FCJ, 0K1MD, 0K1MR, 0K1RA, **OM3A**: OM3DX, OM8AM, OM8WR, **OT6P**: ON4GD, ON4LAM, ON4TH, OM500, OM5AH, OM6MH, OM6QR, OM6VL, ON7PC, L7E, OM8AN, N4XYA.

**OT6T**: ON5UK, DJ4AX, FA3AUU, UT4UZ, RW1AC, RV1AW, UN4UN, ON4MA, ON4JO, ON4AFZ, ON4PO, **P41ZD**: PA3BTH, DF6JC, PA3E0B, PA3GCU, VL8B84, **RK8B**: UA0ODL, UA0ON, UA0QAS, **RK3UWA**: Parfenov, Golikov, Gusaryan, **RK4WWA**: UA4WVA, RW4WA, UA4WAN, **RK6AYN**: RNE6BP, RW6ACM, UA6AH, **RK9CWW**: UA9FQY, UA9CDC, RZ9CO, RU9CO, UA9CDT, Rusakov, RA9CMO, **RQ4L**: UA4LQ, UA4LA, UA4LL, UA4LM, UA4LCH, RA4LFG, **R6LWZ**: UA6L0, UA6LV, UA6LFQ, RM5MVZ, RA6LBX, RN6MM, PV6AJJ, **RW2F**: RA2FA, RN2FA, UA2FB, UA2FC, UA2FE, UA2FM, UA2FX, UA2FZ, **RW6AWT**: RN6BN, RA6AX, UA6AU, UA6NP, RA6YY, RA6AU, RX6BA, RN6AL, RN6AA, **R90W0D**: RA9OW, RW9WU, OA9OI, UA9OLW, UA90UW, UA90AO, **RZ1AW0**: RA1ARZ, LA1-169, 1332, RZ4AYT: AA1AY, UA4ALI, UA9CD, UA4-156-1057, **S50G**: S58M, S51QN, S57MD, S57NRO.

**SK4AO**: SM4PEL, SM4ATJ, SM4KSM, SM4HF1, SM4RMH, **SK5AA**: SM5ACQ, SM5LNE, **SK6FM**: SM7BUA, SM5MCW, SM6FFK, SM6DYK, **SL0CK**: SM6GN, SM6MXO, SM6XT, **SM3KOR**: N0CKZ, SM0JHF, SM0ORD, SM0KCO, **SM5HJZ**: SM0AJV, SM0GNS, SM0HJZ, SM0HPL, SM0IHR, **SN2B**: SP2FAX, SP3ASN, SP3RBI, SP3RBR, SP8RN, SP8RX(DJ0U), SP2CWI, SP2SGL, S2PWI, SP2BMX, **SP2KFU**: Przyjemski, Badowski, **SP9KRT**: SP9-1753, SP9II, SP9D, OK8MR, **T9DX**: T9/016X, T92A, T93M, T93Y, T94CW, T94NE, T94NF, T94OF, T94TU, T97M, T99S, **TF05/RA**: TF3EJ, TF3GB, TF3DC, TF3HP, **TM2Y**: F6BEE, F6ARC, F6FGZ, F5NLN, F6FVY, F5LND, FOK1FWM, **UN8FB**: JN7FAR, UN8FM, UN9FB, UN5FM, UN7FK, **UR4LWY**: USP5LJ, US4LPF, US-L1018, **UR4LZA**: YU5DV, UR4LEP, UR4LEO.

**UR4MWU**: UR5MB, UR5MA, UR5MF, UR5ME, **UR4PWC**: LSP-272, USP-273, UT4PZ, **UR4ZF**: UR50KG, UR4QMP, UR4QKR, US3I: UR3BM, UR5IFX, UR5IHF, US2IIM, U3YIM, J3IDV, J3IEW, US2IIS, **US4LWM**: US-L1-1024, US-L1-125, US-L1-103, US-L-1104, US-L-1105, **UT7W**: UR5WCW, UT1IWL, JT7WA, UT7MZ, UX2WN, **UO5J**: UT1JA, UU2JQ, UU2JL, UU3J, UU5JR, UU0JX, **V47V**: G47VJ, G4RWD, **VE3DC**: VE3SS, VE3OCY, VE3OZY, VE3ST, VE3VMO, **VE3EJ** & VA3DX, VE3K2, VE3Y1, G4VXE, **VE6JY** & G3OUF, VE6BF, WE6WQ, VE6LDX, **VK4EMN** & VK4XY, **VO2WL**: NB30, N3GM, K3TM, **VR2SS** & UA3QJC, **VS6WD** & VR2NR, **W1NR** & W1BK, **W3GG** & AA3KX, WD3L, **W4PRO** & W4DHZ, WB4CNL, K4DZ, **W4WA** & AA4AG, KB4GID, AE6E, KE4ZQD, **W5MJ** & NSRP, N7XX, K1OJ, **W60AT** & A16V, **W8AV** & K3JT, K4LT, AF8A, KU8E, W8RZ, WB8WTS, **WU3A** & NS2K, F5FK & N0ZR.

**XE2L** & **XE2UV**, XE2BEY, XE2BGD, XE2BRL, K6LL, N6HC, N6WS, N6VR, **YB0ASL**: W9NGA, K4RB, **YB0ZBB**, YB0KII, YC0BUI, YC0WWW, **Y0K8M**: Y06LV, Y06DDF, **Y09PD**: Y09IF, Y09AFG, YU1L: Y11MS, Y1TVA, IIC, M1CA, Z37FCA: Club, ZF2RF: K4UVT, K9LA, K9MK, N5HRG, AA0CY, N9NS.

## Station Operators Multi-Op Multi-Transmitter

5W7A: KC/V, N7BG, K5VT, K7PN, K7GE, W6RGG, N7M3, G3SXW, GM3YTS, G4FAM, **7SBMG**: SM0KV, SM0BYD, **9A1A**: 9A5W, 9A2D, 9A9A, 9A6D, 9A3GW, 9A2SD, 9A2TS, 9A2EU, 9A3NR, 9A2R, 9A7R, 9A6A, S51R, 9A9A, 9A3ZA, **C21BH**: JA1BK, N4GN, N6HR, OH2BH, SM7PKK, **DF8HQ**: DJ6TF, DL1AUZ, DL30I, DL5ANT, DL5AXX, DL5MX, DL5L, DL6UST, DL7VDA, DL8WAA, **DKE5Z** & DJ2YE, DK4TP, DL3EBX, DL8EOA, **DLOKE**: DJ3UL, DJ6TN, DL8LQA, DF6LI, DK3UA, DJ1FZ, DL9PY, DJ7SW, DF4PA, DL4LBK, DK5TI, DK8LV, DK9AV, DL3LBX, DC2LB, DL3LA, DL6LAG, **E44ML**: EA4AFA, EA4AKQ, EA4CJA, EA4EKR, EA4ET, EA4KA, EA4MY, EA4MC, EA4NN, EA4TX, EA4UA, EA7CEZ, EB4EPJ, EC4AE, **EM21**: UT1UA, UT21B, UT21D, UT2II, UT2IJ, UT2IM, UT2O, UT2IV, UT2IY, US2IR, US2IZ, US1TU, US1IM, US1OK, UX1L.

**G3SSD**: G3ZRJ, G3LVP, G0FQX, **GU3HFN**: GU4WRP, GU3MBS, GU4EON, G3ZD, **HH2B** & N4WW, N4XN, K0LZU, **IR5R**: 15JHW, IK5C0E, IK5YY, 15NSR, I5IIG, **J39A**: K1KM, K01F, KW9R, WA1S, WF1J, KM1P, **J45T**: SV5TH, SV5VSR, SV5V5, SV5ADD, SV5BYT, SV5BVY, SV5DQZ, SV5DZS, SV5DZT, KB4PMS, **J41YD**: JH0NZN, J7TFK, JP1CWU, J7L7ML, Mizuno, JG3AXP, Ukyo, JL1WFI, JF0EGG, JA9VDA, N3NOL, JP1OGL, Nada, JH0LFE, JH6WHN, **J41YXP**: JA1VXQ, JF1QOW, J1UTP, K1ATC, JH1JWU, JQ1UXH, 7K1EW, 7L1ETO, 7M1W6Z, 7M2IXD, 7L3QUCU, JZ2JQF, JL2FJA, Gerry, Tckzu, **J43YBF**: JA3F6J, JL3AKW, JR3RYI, JH3NFZ, JF3NAL, JH4DHX, JF3KZB, JE3PFD, JA9T0Z, JF3PG, JU2ICA, JJ3JX, JF4UFU, JG4LCW, JU3LDN, JU1PEI, JJJ3BDG, JF4AGT, **J43YKC**: JZB2LE, JH3RHQ, J03UJG, JP3PZD, PRJ3SMB, JS3OGO, JG4LSR, JL4CVB, JE5DTs, JL6BM, JP6RBN, JQ6CT, Sakusha.

**JH5ZJS**: JA5BJC, JA5FDJ, JA5JCC, JH5PKS, JH5QJ, JR5VHU, **J01YA0**: JA1PFJ, JI1AZO, JN1KNT, JH1RFM, JI1PZ, **K0RF** & **A0A9S**: K4XU, K7D, K0AD, K0IG, N0AH, W1XE, Randy, **K1KI** & **K1P1**, K1RM, K1TO, KA1TA, W1OD, W1RM, K2KQ, W2E0, **K2LE/1** & **W2AX**, N1B, N2UN, NB1B, K1BC, **K1T1** & **W1MD**, K1CA1 K1TR, K1GK, **K1TTT** & **K1W**, N2X, AB2AP, KB2ZIC, WR2I, A1AAS, URS5LW, K2J4Y & N1DS, **K3ANS** & N2BIM, N2KJM, AJ2U, N3JGX, N3XKG, **K3LR** & N3RA.

W3YQ, K3UA, K3EST, N9RV, KB3AFT, ND8L, KA3JWJ, K8CX, **K4VXB** & KW9KW, K9BGL, N9JF, W9WI, N0NX, **K7F** & K7V, W7WMO, KA7EKL, **K8CC** & AC8W, K8D8, K8JM, K8MM, N8CC, N8CD, VA3NA, VA3EF, WB8JY, W8MJ, WA8RR, **KC1KX** & AD1C, K1DG, K1C, KM3T, DL7RA, AA1ND, N1W1, K1XX, K1D1O, Christine, **K59K** & AG9A, N1RR, N89C, K8GL, N9WV, K9PG, KA9FOX, W69V.

**LY5A**: LY1BA, LY1DC, LY2BKW, LY2BT, LY2IJ, LY2MW, LY2PAJ, LY2PX, **LY7A**: LY1DI, LY1EE, LY2AO, LY2BMM, LY2N, LY2U, LY2F, LY3B, LY3D, LY3A, LY4AA, LY4AF, LYR-346, LYR-728, **N1TT** & W1ES, W1A, K17WF, K1WD, W01N, W1T1, W1TQ, N1WV, **N2RM** & WW2Y, K2W1, N2NC, N2AA, W2REH, WH2Z, N2NU, K2BM, **N3RS** & WA3LRO, W3UM, N3ED, N3RD, N2SR, **N4JF** & K4GMH, KA4RUR, W4C4E, Diav, **NL75** & KL7Y, WL7E, KL7PJ, N7DF, **N3MK** & N3ISB, WV3F, **OH1AJ**: OH1.M, OH1R, OH1MR, OH1AT: OH3NB, OH3DC, OH3FS, **014JFN**: OH4MFA, OH4KE, OH4EA, OH4KZM, OH4JFM, **025W**: 021FT, 021FTU, OZ1KRF, **025WQ** & 021BZ, OZ2PZ, CZ3ZW, **P14COM**: PA36BP, PA3BWD, PA3CAL, PA3DMH, PA3ERC, PA3EWC, PA3GBC, PA3BXC, PA3CTM, PA3ERL, PA3EZ, PA3FRN, **S1VAF**: SV-DP, SV1CDN, SV1CIB.

**SV1S**: SV1IW, SV1KU, SV1MF, SV1TN, SV8ZS, SV1AH, SV1BKE, SV1CDM, SV1DKL, **V9DH**: K2NB, K2VIE, NR2, W2EN, W2EV, VE9AO, VE9D, **W8AIBH** & N0K9K, N9CK, A9AC, N9TC, W9TQ, A9A9D, N9U, A9A0Z, K5ZQ, K0TG, WA8RBW, KM0O, N0AXL, **W3EA** & WB3FZ, WB3L-F, W3FV, W8FJ, WU3M, K3WV, W3E, WB2R, **W3PL** & K1HTV, K2YWE, W2VJN, N0AX, N7EPD, W7RJ, W7YAO, K5ZM, W7BX, A7K7F, K9JF, K07I, K7R0, K7Q0, **WH6R** & AH6MZ, K1CC, N17GP, K1ER, K6H1F, K6HJAT, K6HU, WH6T, K7VAY, WH6XR, **ZM2K**: ZL1AZ, ZL2AGY, ZL2AH, ZL2AL, ZL2BA, ZL2BSJ, ZL2IR, ZL2AMI, ZL2ASD, ZL2IQ, ZL2UD.

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## CW RESULTS SINGLE OPERATOR NORTH AMERICA

### UNITED STATES

K5ZD/1	A 5,461,830 3061 144 469	W1ZR/2	47,970 138 35 68	K3IE/4	315,560 426 76 204	K6BWX	45,878 149 44 69	*K8CV	143,021 286 49 130
W1KM	" 5,307,693 3153 138 441	WB2JFP	44,488 137 44 90	W4ZYT	239,787 338 68 181	W6RCL	30,780 115 46 62	*N6YYS	100,386 255 35 108
N6BV/1	" 4,045,252 2672 123 404	KB2NU	41,021 118 40 67	W2YE/4	184,210 305 56 23	K6AZA	29,639 117 43 64	*W8IDM	87,906 185 52 130
KQ2M/1	" 3,717,277 2277 126 443	W2UE	25,602 88 40 62	AE4LQ	179,310 260 78 180	W6YM	23,564 103 37 49	*WTB*	73,205 222 28 93
W1WEF	" 3,673,723 2316 132 425	K2YR	11,400 57 30 46	W4IF	178,380 316 49 147	K6SE	15,288 68 39 45	*KA8ZPE	72,128 159 61 123
K1AM	" 3,275,935 2251 123 382	KG2BI	11,088 70 22 24	K4NA	156,006 262 59 155	K6HRT	14,518 147 28 33	*KB8FLY	67,782 205 51 107
K1VR	" 2,716,208 1870 117 389	KE2UW	8,618 52 20 42	WA4DA	131,328 24* 55 137	W6OUL	7,375 46 27 32	*WB8VE	59,214 166 45 97
K5MA/1	" 2,512,848 1816 116 362	K2FR	5,115 41 24 31	AD4PU	118,730 357 46 109	W6KFV	28 5,002 56 16 25	*WB8FDV	30,430 128 23 62
AA1ON	" 1,468,641 1327 98 295	W2AOY	3,912 34 13 26	W4CE	94,631 199 51 122	K6AW	21 209,430 760 31 86	*AFBC	9,042 52 29 37
WU1ITU	" 1,217,415 1732 70 223	WA2NPC	1,138 28 19 24	W4YDD	93,480 200 64 126	W6YA	" 197,370 535 33 102	*N8II	21 314,440 820 29 111
	(Op. KAT1)	N2AU	2,088 37 9 20	W4RW	79,040 98 38 114	K2KW/6	14 501,384 1210 37 119	*K8UC	7 32,508 140 22 62
KV1W	" 1,156,237 1151 85 264	NA2X	40,215 141 31 74	WB4UBJ	70,912 191 34 94	NU6S	" 425,941 1004 36 121	*WB8ORV	969 17 7 12
WA1LNP	" 1,126,350 912 105 345	W2PAU	31,392 119 27 69	WB4RDV	60,600 56 47 103	W6BSY	" 75,649 268 29 72		
K1HI	" 1,106,854 1119 81 265	K2PS	3.5 91,584 202 22 84	W4VC	48,532 38 49 87	W7CB/5	7 154,044 424 35 97	*W8RE	A 2,975,280 1973 130 409
N4XR/1	" 754,527 562 125 364	W2FR	16,380 36 15 55	W4VC	28,456 119 22 64	W6NKR	3.5 686 17 7 7	K9AN	" 1,342,320 1017 120 356
W1EYT	" 733,858 629 108 314	K2JF	7,260 50 9 35	W4KYM	21,836 84 29 63	W7BNM/5	" 593,280 732 111 198	K9BG	" 1,20,90,70 1079 115 315
W1WFZ	" 602,330 693 76 234	W2VO	1.8 20,382 126 61	W4KJX	17,922 79 31 56	N6NF	" 117,656 244 73 118	K9BZ	" 1,215,918 1061 115 299
K1AM	" 5,275,935 2251 123 382	K2SG	" A 2,158,728 1601 118 363	W4YV	10,031 47 31 42	AA6EE	" 112,288 249 67 109	(Op. K9WIE)	
K1VR	" 2,716,208 1870 117 389	N2BA	" 1,919,598 1578 104 359	K4YD	" 1,583 33 11 16	N6JM	" 104,468 234 64 100	N9BR	" 1,162,890 1169 109 256
K5MA/1	" 2,512,848 1816 116 362	NA2U	" 860,394 845 97 289	KC2X/4	21 391,572 946 33 116	K6JUM	100,980 207 74 113	K9SW	" 1,130,367 1028 138 291
AA1ON	" 1,468,641 1327 98 295	N2ED	427,721 506 72 229	N4BP	" 239,104 667 28 100	W6BHM	96,957 210 59 112	W9MU	" 670,446 670 37 260
WU1ITU	" 1,217,415 1732 70 223	K2UF	330,561 451 81 216	W4WA	129,794 366 * 95	N6TW	78,400 191 57 103	WA9TPQ	58,1823 704 84 213
	(Op. KAT1)	KM2L	230,832 355 57 172	W4PA	76,500 231 30 95	W6WSA	73,008 201 60 84	K9CN	57,548 593 95 254
KV1W	" 1,156,237 1151 85 264	W2TZ	167,076 273 59 162	W4PA	14 570,564 1279 36 126	W6ATLA	61,056 140 58 101	W9OA	428,664 462 100 237
WA1LNP	" 1,126,350 912 105 345	WA2Y SJ	135,432 260 54 144	W4PN	536,372 818 36 126	W9FGV	51,000 163 49 71	W9NO	305,505 691 36 119
K1HI	" 1,106,854 1119 81 265	K2SZ	129,960 247 59 131	W4PV	244,098 601 33 109	W6UDX	43,680 135 46 74	W9XR	242,277 350 70 179
N4XR/1	" 754,527 562 125 364	K2AD	123,500 240 51 139	W4RZ	147,810 404 27 103	W6D6X	37,296 130 46 66	K9UQN	186,186 362 52 134
W1EYT	" 733,858 629 108 314	WA2C	90,424 198 52 126	W6XA/4	7 196,788 550 32 106	N6GL	36,600 143 45 55	K9ZD	162,750 393 49 106
W1WFZ	" 602,330 693 76 234	N4AQ	67,340 176 45 95	W4OX	" 182,484 434 34 114	W6JTA	26,970 209 49 67	K9NR	150,064 257 74 152
K1AM	" 5,275,935 2251 123 382	K2ZA	58,917 172 33 90	W6XPA/4	" 138,725 320 36 119	NK6F	" 24,064 117 44 50	K9NMU	18,432 87 33 63
K1VR	" 2,716,208 1870 117 389	K2GSL	55,624 161 40 96	W4BX	98,550 269 32 103	AC6LK	" 3,267 38 14 19	K9OM	28 5,781 69 11 30
W1WFZ	" 602,234 620 84 254	WA2VCV	28,416 116 28 68	W4PLL	35,496 137 26 61	W6FGV	21 19,966 115 22 45	W9XT	21 152,766 446 30 93
K1AX	" 572,234 620 84 254	W2OP	19,780 61 34 58	K4PI	3.5 137,124 445 25 92	W6QJI	14 26,242 150 25 47	K9QVB	14 304,114 749 34 117
W1RH	" 408,676 520 70 214	K2SWZ	17,028 81 25 61	N6AR/4	" 133,548 418 27 97	K6CEO	" 12,978 75 23 40	WB9HRO	316,333 814 32 105
W3SOH/1	" 255,668 360 57 185	K2FC	14,136 95 26 50	W4NA	52,605 592 88 247	K06IG	3.5 855 23 10 9	W9OF	231,012 498 34 128
W0MHK/1	" 236,334 274 76 255	W2LRC	12,075 115 28 47	K2UFT/4	23,205 105 21 64	K9Y	" 213,297 514 34 113		
W1CX	" 209,954 337 59 167	N2MMB	3,800 40 9 35	W4DSN	20,944 101 21 56	NYTT	A 1,077,359 1075 112 247	K9CJ	7 66,105 207 32 52
KA1DWX	" 186,990 254 60 170	K2LWQ	3,564 16 9 12	W4DR	1.8 36,757 161 18 71	W7SE	A 1,427,141 539 107 212	K9DX	3.5 148,717 466 29 98
N1SOH	" 160,820 263 56 164	WA2ASO	21 10,092 70 16 42	K4TEA	" 19,856 113 16 52	W7MD	307,563 441 90 174	W9RM	33,176 142 22 66
	(Op. W1FM)	K2MFY	" 14 163,240 411 30 110	K7SV/4	" 1,017,968 898 113 314	K7ABV	207,208 328 83 153	W9BZ	1.8 22,357 128 19 59
K1BV	" 57,354 177 37 84	W3BGN	7 88,689 239 33 108	W4O	" 599,872 700 99 265	W7LGG	" 179,598 317 82 140	*W9AU	A 434,712 518 84 223
N1RL	" 23,876 94 31 63	W2ZMK	49,197 185 22 71	W4NA	599,872 700 99 265	W7HS	" 147,600 279 74 131	K9JC	" 399,921 466 87 240
WA1CFCS	" 23,400 128 30 70	N1ET	7 88,689 239 33 108	W4P	599,872 700 99 265	W7YS	137,760 304 58 110	K9MMS	" 336,102 451 83 195
NJ1F	" 4,368 342 40 28	K1V	3,554 16 9 12	W4YDU	52,605 592 88 247	W8AEF/7	" 127,140 250 72 123	N9CIO	187,754 340 59 143
KE10	" 4,365 75 16 29	K3ZO	" A 4,096,170 2477 140 445	W4FPP/4	472,290 492 80 266	W7IT	" 122,400 273 58 101	*W9ILY	" 82,110 191 50 120
K81SO	" 14 439,668 1275 31 102	KT3Y	" 3,491,818 2358 119 396	W4PC/4	405,072 513 74 217	N7RK	105,336 235 61 110	W9MY	" 17,812 91 25 48
K1EF	" 153,408 382 31 110	W3BGN	" 3,395,878 2261 122 399	W4AJUK	275,806 435 65 174	KC7UP	79,365 208 53 90	WB9AYW	" 16,008 39 6 23
K1JB	" 26,964 119 25 39	W3AP	1,537,900 1191 116 339	W4RK	191,277 287 75 168	W0RSG/7	65,919 197 52 77	WB9LAU	4,250 40 14 36
W51SM	" 7 239,219 662 29 110	W3RJ	1,392,780 1178 128 309	W4NW	175,916 296 58 163	NG7M	" 19,488 128 27 29	W9LNO	2,576 50 19 49
K1VW	" 130,520 365 31 99	N9GG/3	1,337,014 1387 86 257	W4UK	127,366 242 50 149	^AF7O	" 16,060 84 33 40	W9IXX	1,344 17 11 17
WR*P	" 7,250 56 15 35	W3HQV	756,378 825 81 241	W4AHZ	" 111,813 221 49 134	N7LJJ	12,393 77 26 35	N9GBB	14 5,534 50 17 29
W1NPK	" 3,529,278 967 28 94	W3A7	648,274 252 130 273	W4BAM	109,335 227 56 165	W7USA	28 3,780 42 12 24	*N9AU	7 44,240 146 29 83
K1UO	" 1,8 32,320 168 17 63	WF3J	594,758 619 92 255	W4KWW	95,387 200 53 128	K7QO	21 169,932 583 33 86	KC9TV	24,682 119 23 59
K2LP/1	" 7,080 64 7 33	W3UJ	484,846 582 70 228	AC4PQ	88,312 199 47 119	W7E7U	14 72,600 298 30 58	*N4TZ/9	3.5 35,200 164 18 62
KM1X	" A 1,065,582 1073 86 292	W3UW	460,374 516 86 235	W4WE	40,460 125 35 84	W7AYY	52,976 216 22 64		
WT10	" 963,500 1022 83 282	K3ATO	422,636 480 82 250	W4KJ	3,045 106 103 35 73	W7GG	7 493,570 1151 39 115	N2IC/B	A 2,958,168 1974 149 380
W51E	" 799,891 773 95 255	N3KR	356,427 432 84 223	W4DTJ	21 163,064 420 31 105	W7D	3 1 1 1	W8B00	" 1,243,928 991 128 330
K1HT	" 515,596 560 86 246	W3GN	301,568 437 57 191	AD4TJ	27,216 115 19 65	N7D	3 1 1 1	W0HW	" 275,520 360 83 204
K1NO	" 461,692 541 23 179	W3GU	282,719 410 72 197	AC4ZD	14,112 95 16 40	K7SS	3.5 29,016 161 27 45	W0RA	" 144,557 270 50 134
W1EQ	" 366,608 508 173 93	W3RN	223,444 327 69 187	W4AC	127,216 115 19 65	W7DRA	3 1 1 1	KM0R	160,968 268 77 151
K1MO	" 360,920 466 70 210	W3EVW	192,260 296 62 148	W4C2/4	60,604 203 27 82	N7NA	62,350 152 56 89	W0ML	" 144,557 270 50 134
K1VUT	" 228,573 355 63 170	K4LJD/3	192,148 290 64 178	W4DFAZ	41,040 168 23 67	W6OZK	20,400 82 38 64	W0ID	103,190 228 58 111
W21K	" 123,540 223 65 148	W3NX	175,512 296 58 156	W4H4M	7 70,566 225 29 85	A74KF	20,400 82 38 64	W0D	84,168 187 60 108
N1ET	" 100,742 24 52 122	AD8J3	167,090 284 58 159	W4D4	22,308 106 20 58	W6WLG	15,312 121 18 26	WAO0ZP	64,945 166 53 102
K1A1CLV	" 6,384 175 34 110	W3QIR	62,370 172 38 97	W4ON	8 1,269 23 8 19	W7GT	9,222 62 25 33	W0AG	64,719 180 46 95
W1VSJ	" 66,434 188 40 90	W3TWTI	33,275 110 40 81	W4ONO	8 1,269 23 8 19	K7XJ	21 8,268 57 14 38	AA0AI	45,458 142 40 79
KD1YH	" 52,363 142 37 100	K3AMY	4,218 42 4 13 23	W4K2/4	5,200 106 103 35 73	K7ZA	14 120,448 331 33 95	KG0UA	32,918 112 39 70
W1HYN	" 46,544 127 40 98	W3TMZ	114,704 305 33 101	W4BTS	7 151,375 613 98 221	K7OD	21 104,324 242 61 102	W0KFL	21 35,010 139 24 66
A16E/1	" 44,341 12								

BARBADOS																										
A 8,650,620 6134 132 429 (Opn. K4BAI)																										
CANADA																										
A 2,092,480 1909 96 320																										
VE1AI	380,047	551	71	192																						
VO2																										
WB8YTY	255,706	1052	37	81																						
VO1AH	76,840	272	30	83																						
VE1JF	3.5	60,563	378	15	56																					
CG1ZZ	1.8	218,715	898	22	83																					
(Opn. VE3BMV)																										
*VE1GN	A 1,042,855 1236	82	253																							
*VO1GO	206,028	443	42	152																						
VE2AYU	A 937,962	1171	79	242																						
VE2FFE	79,768	282	32	86																						
VE2CJZ	8,610	100	16	26																						
VE2ZDR	3,842	58	16	18																						
*C12AWR	A 284,172	598	50	154																						
PUERTO RICO																										
3E1DX																										
VE3P	A 5,922,267	4860	127	380																						
	(Opn. DL5XK)																									
*HP3XUG	A 27,334	137	32	47																						
ST. EUSTATIUS																										
*PJ5JP																										
A 95,060	474	40	57																							
ST. VINCENT																										
*J87GU																										
A 1,421,684	2027	81	235																							
	(Opn. DL7VGQ)																									
ST. KITTS & NEVIS																										
V47KP																										
A 1,647,744	2126	92	244																							
	(Opn. W20X)																									
TURKS & CAICOS																										
*VP5EA																										
A 3,094,236	3196	106	308																							
	(Opn. W5DWS)																									
US VIRGIN ISLANDS																										
KP2A																										
A 1.8	203,300	928	20	77																						
	(Opn. KW8N)																									
*WP2Z																										
A 2,951,910	3519	88	263																							
	(Opn. K9DEO)																									
AFRICA																										
AFRICAN ITALY																										
IG9																										
/IG9SF																										
A 141,096,200	2230	39	136																							
	(Opn. K7LXC)																									
IG9	/AC6WE																									
A 7,123,431	317	2677	37	122																						
	(Opn. UA3DPX)																									
AFRICA																										
AFRICAN ITALY																										
*EK4JJ																										
A 946,830	1482	55	167																							
ASIA																										
ARMENIA																										
UE9XAB																										
A 521,550	844	50	175																							
	(Opn. UA9XEN)																									
ASIAN RUSSIA																										
RA9XF																										
A 237,800	753	24	92																							
	(Opn. RW9SW)																									
RW9JC																										
A 157,760	555	87	116																							
	(Opn. RA9JX)																									
RA9QH																										
A 867,680	2136	40	132																							
	(Opn. RW9SW)																									
RA9UW																										
A 302,457	977	30	93																							
	(Opn. RA9UW)																									
RA9CK																										
A 96,260	1049	79	258																							
	(Opn. RA9CK)																									
ANGOLA																										
D26L																										
A 14	37,985	187	25	46																						
	(Opn. PA3DZN)																									
ASCENSION ISLAND																										
ZD8DEZ																										
A 3,091,968	2724	103	281																							
	(Opn. G0DEZ)																									
COSTA RICA																										
TI1C																										
A 7,346,856	5431	145	418																							
	(Opn. N6TJ)																									
TI8C																										
3.5	791,208	2315	30	118																						
	(Opn. TI2CF)																									
DOMINICANA																										
*HI3JH																										
7	406,461	1532	28	81																						
GRENADE																										
J3/WJ2O																										
A 1,282,046	2155	75	199																							
GUANTANAMO BAY																										
KG4ML																										
A 580,345	1445	58	127																							
	(Opn. WB6VGI)																									
HAITI																										
4V2A																										
A 7,007,128	5293	134	402																							
	(Opn. 9A3A)																									
JAMAICA</																										

SAUDI ARABIA														BULGARIA														EUROPEAN RUSSIA													
JA7JHT	35,420	127	51	59	72500	A 3,687,114 3160 108 309	LZ1BJ	A 754,680 1417 79 252	*OK1IR	70,338	239	25	89	*OK2BNF	25,047	158	29	40	RN6BY	A 2,835,726 2959 133 460																					
JA7ERJ	28	380	14	5	21	228,657 699 37 86	(Op. K3UOC)	LZ1WG	21 28,951 152 21 110	*OK2BNF	25,047	158	29	40	RZ3Q	" 2,699,284 3036 135 461																									
JA7FTR	21	228,657 699 37 86	HZ1HZ	" 384,800 512 81 179	LZ2TF	14 88,583 470 28 75	*OK2BF	212,382 689 29 109	RZ6LJ	" 1,949,373 2098 126 401																															
JH7DNO	14	317,528 1032 30 76	SINGAPORE	LZ1CZ	7 79,800 458 22 83	*OK2BF	212,382 689 29 109	R3DU	" 599,650 716 83 252																																
JA7JY	·	104,796 297 32 91	*9V1ZB	A 725,760 1453 84 156	LZ5W	7 858,960 2582 40 140	(Op. LZ5DB)	*OK2BF	212,382 689 29 109	UA1QV	" 577,955 1264 75 268																														
JA7COI	·	35,192 158 27 56	TAIWAN	LZ4RV	· 107,908 461 26 80	*OK1NG	110,975 430 28 87	RA1QN	" 438,094 1087 76 241																																
JH7JYU	7	234,668 718 35 81	*BV/JJ1TBB A 482,171 1089 85 166	LZ1ZD	· 37,312 319 19 57	*OK2BZ	12,604 312 27 80	R3CBY	" 272,209 706 60 199																																
JE7RJS	3.5	58,590 248 31 59	SINGAPORE	LZ1PM	3.5 55,475 381 16 76	*OK1EF	6,248 100 9 35	RV6ASY	" 272,209 706 60 199																																
JA7NI	1.8	23,616 138 21 43	TAIWAN	LZ2ZUZ	· 239,298 575 60 214	*OK2BZ	6,248 100 9 35	RA1OMX	" 234,427 377 91 268																																
JH7FU	A	31,680 124 45 54	*HS0EHF	A 100,528 461 44 78	LZ1FJ	· 40,132 184 54 104	*OK1EF	6,248 100 9 35	R3RK	" 202,920 419 74 193																															
JA7VEI	·	27,100 108 39 61	*HS8AS	· 50,342 246 38 65	LZ4BU	· 9,234 65 24 30	*OK1EF	6,248 100 9 35	RW3FO	" 90,725 804 19 76																															
JA7SYA	·	17,220 80 35 47	(Op. E21AOY8)	LZ1ZJ	· 1,366 54 13 19	*OK2VB	75,840 351 28 92	RA6LW	" 84,588 340 33 100																																
JT7VUR	·	13,932 86 48 114	TURKMENISTAN	LZ2KEM	· 740 39 4 16	*OK2VB	75,840 351 28 92	UA4YG	" 52,264 290 31 108																																
JF7BIR	·	1,196 20 12 14	*ZL2GS	28 21,080 44 16 32	(Op. L71A-1744)	*OK1FOG	31,326 381 13 56	UA3UCD	" 11,508 62 7 77																																
JATDOT	14	73,458 273 28 71	TAIWAN	LZ2TW	21 95,232 320 30 94	*OK2PJM	27,160 446 8 48	RZ3BW	21 199,068 682 35 124																																
JA7AXP	·	2,060 35 8 12	*LZ1CW	· 84,072 366 27 86	*OK2PMN	24,480 337 10 50	RK3AWR	14 235,770 880 35 110																																	
JF7VVL/7	·	960 15 9 15	*LZ1KNP	7 39,100 240 24 44	*OK1FF	9,500 177 7 43	(Op. RX3APM)																																		
JA7FN	7	4,263 53 15 14	TURKMENISTAN	LZ1A	1.8 4,214 90 6 37	DENMARK																																			
JA7KM	·	1,710 34 10 9	TK5NN	3.5 438,684 1930 30 109	OZ1LO	A 2,195,564 2064 121 411	RW4AA	7 523,152 1643 36 132																																	
JABRWU	A	611,391 773 106 185	UNITED ARAB EMIRATES	9A5I	A 1,249,976 1275 107 369	OZ7BW	" 125,736 350 49 137	RA1AC	" 173,972 390 32 90																																
JH3UQJ	28	378 15 5 4	A61AJ	A 2,440,704 2362 97 287	9A4D	· 95,284 369 39 127	UA1OMS	" 156,053 74 36 106																																	
JAYBY	14	530,196 1340 34 104	(Op. J01DFG)	9A6K	· 479,631 1760 35 114	RW6FF	" 146,592 840 29 108																																		
JABJCR	A	277,848 479 89 138	CYPRUS	9A7A	3.5 378,576 1688 27 105	RW6GW	" 141,224 561 31 108																																		
JABAIE	·	143,242 314 72 115	*ZC4EE	21 268,488 1126 21 67	OZ2AE	A 2,195,564 2064 121 411	RU6AV	" 20,952 165 16 56																																	
JAXXOD	·	50,096 159 49 75	(Op. G40OE)	9A7A	7 772,375 2348 39 146	OZ7BW	" 125,736 350 49 137																																		
JHBBCDA	·	33,174 123 49 65	UZBEKISTAN	9A7A	· 95,284 369 39 127	UA4CJJ	" 107,226 722 24 87																																		
JABRJE	1.8	294 9 6 8	A61AJ	A 2,440,704 2362 97 287	OZ2AE	A 2,195,564 2064 121 411	RN3F	" 98,748 590 29 88																																	
JACWCJ	A	856,654 953 104 233	VIETNAM	9A7A	· 95,284 369 39 127	DENMARK																																			
JAFJFO	14	118,044 409 31 77	3W5FM	A 200,770 649 69 101	OZ2AE	A 2,195,564 2064 121 411	RW4AA	7 523,152 1643 36 132																																	
JAXKBW	A	602,994 681 116 227	A	200,770 649 69 101	9A7A	3.5 378,576 1688 27 105	RA1AC	" 173,972 390 32 90																																	
JH9KVF	21	115,390 409 34 76	*UK7F	A 342,912 606 61 167	9A7A	· 95,284 369 39 127	UA1OMS	" 156,053 74 36 106																																	
JATTSI	14	89,082 337 29 69	VIETNAM	9A7A	3.5 378,576 1688 27 105	RW6FF	" 146,592 840 29 108																																		
JAKLKG	·	7,515 62 16 29	3W5FM	A 200,770 649 69 101	9A7A	· 95,284 369 39 127	RW6GW	" 141,224 561 31 108																																	
JR9NVB	7	51,744 212 28 68	WESTERN MALAYSIA	9A7A	3.5 378,576 1688 27 105	UA4CJJ	" 107,226 722 24 87																																		
JAKHKHJ	·	938 15 6 8	*9M2TO	A 686,368 1237 77 164	9A7A	· 95,284 369 39 127	RN3F	" 98,748 590 29 88																																	
JHFUFW	A	1,323,645 1237 129 266	A	686,368 1237 77 164	9A7A	· 95,284 369 39 127	DENMARK																																		
JABOWO	·	469,336 536 96 193	*9M2HQ	A 208,320 609 52 140	9A7A	3.5 378,576 1688 27 105	RW4AA	7 523,152 1643 36 132																																	
JAOUMV	·	449,319 599 105 176	(Op. GW36GJ)	9A7A	· 95,284 369 39 127	RA3X	" 173,972 390 32 90																																		
JH0GHZ	·	371,772 515 100 176	ALAND ISLANDS	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																		
JH0WZR	·	109,655 237 71 102	A	200,770 649 69 101	9A7A	· 95,284 369 39 127	RA3X	" 173,972 390 32 90																																	
JH0DAU	14	37,360 184 27 53	WESTERN MALAYSIA	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																		
JEBUXH	A	960,160 1089 115 233	*9M2MC	14 9,600 100 18 32	9A7A	· 95,284 369 39 127	RA3X	" 173,972 390 32 90																																	
JAFVU	·	93,216 25 65 94	*9M2JJ	7 87,898 528 23 48	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
JAOATE	·	29,000 104 104 47	EUROPE	9A7A	· 95,284 369 39 127	RA3X	" 173,972 390 32 90																																		
JHOSJJ	·	23,040 116 33 46	ALAND ISLANDS	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																		
JH0EPI	21	91,545 402 28 57	AUSTRIA	9A7A	· 95,284 369 39 127	RA3X	" 173,972 390 32 90																																		
JFBGSW	14	53,664 250 25 53	*9M2MM	14 9,600 100 18 32	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
JH0HON	·	8,771 71 18 31	BALEARIC ISLANDS	9A7A	· 95,284 369 39 127	RA3X	" 173,972 390 32 90																																		
JEOFTY	7	3,770 52 12 17	*9M2ZL	A 919,289 1353 79 292	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
JAB6GZ	·	2,464 34 14 15	EU4AA	A 919,289 1353 79 292	9A7A	· 95,284 369 39 127	RA3X	" 173,972 390 32 90																																	
JR0BQD	3.5	2,030 35 14 15	EU4AA	A 919,289 1353 79 292	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
KAZAKHSTAN			0E3DSA	A 253,176 779 36 118	9A7A	· 95,284 369 39 127	RA3X	" 173,972 390 32 90																																	
UN7LG	21	322,687 877 31 120	0E3TL	7 40,392 248 25 74	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
UN6GT	·	116,250 402 30 95	0E6D	1.8 5,656 180 4 37	9A7A	· 95,284 369 39 127	RA3X	" 173,972 390 32 90																																	
UN9LY	14	493,365 1230 37 118	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
UN7CW	3.5	427,840 1238 34 106	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
UN7TX	·	141,867 585 25 74	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
UN20	1.8	26,676 196 10 42	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
UN7FW	14	125,114 447 31 90	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
UN5J	1.8	61,172 313 18 64	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
KOREA			0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
HL1CG	A	259,578 387 85 168	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
HL5AP	·	129,108 375 59 100	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
KUWAIT	9K2/Y09HP	7 498,420 1548 30 87	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
LEBANON	·		0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
MACAO	XX9X	A 4,117,548 3648 139 353	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
(Op. OH2PM)			0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
MONGOLIA	JT1BH	A 331,315 834 71 144	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
MYANMAR	XZ1N	28 30 4 2 3	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
(Op. K72V)	XZ1N	14 83,700 482 29 61	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
(Op. WA7LNW)	XZ1N	7 276,471 1013 32 85	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
(Op. K7WP)	XZ1N	3.5 264,543 1046 29 80	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
(Op. N6BT)	XZ1N	1.8 64,167 347 20 53	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
(Op. WA6CDR)	XZ1N	· 17,248 160 18 38	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
OMAN	A41LK	A 247,260 735 40 90	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
QATAR	A71CW	A 5,895,043 3943 134 405	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
BOSNIA-HERZEGOVINA	T99T	28 4,752 58 13 31	0E6Z	28 27,306 217 17 57	9A7A	3.5 378,576 1688 27 105	RA3X	" 173,972 390 32 90																																	
	T94YT	3.5 54,936 656 8 64	0E6Z	28 27,306 217 17 57																																					



*Y09AWV	10,349	64	19	60	SPAIN	HB9HFN	209,300	303	82	217	Y1ZAU	13,731	156	13	56	ARGENTINA								
*Y06DBA	2,185	53	6	13	EA2IA	A 1,918,008 2535 100 308	HB9KC	117,660	333	39	109	YU1EA	1.8	109,408	991	21	83							
*Y07LHR/P	7	270	18	4	11	EA3ALN	" 1,104,916 1404 103 308	HB9DX	21	33,902	104	31	103	LU9AUY	28	98,280	540	20	55					
T77WI	A	25,088	127	35	SAN MARINO	EA1JO	" 541,960	784	87	253	HB9AFH	A	59,340	167	51	78	LUSHIP	"	86,268	419	22	57		
IS00MH	A	359,122	1032	54	157	EA3GHB	" 447,552	934	64	188	HB9QAH	"	11,480	92	20	50	LUGETB	21	1,554,092	3566	34	132		
IS00MKU	"	247,434	562	64	89	EA1FBJ	" 100,160	425	35	125	HB9HFD	7	2,058	40	8	34	(Op. YU1B0)					(Op. LU6BEG)		
IS00LWX	"	16,872	158	23	53	EA2CR	" 30,700	167	27	73	HB9HLE	7	122,752	563	27	101	LU4FM	"	258,640	1184	21	80		
*IS00WBT	A	238,349	576	60	181	EA1FEL	21	125,364	612	25	68	HB9GCD	"	106,267	558	24	95	(Op. LU>NN9K)						
*IS00HQJ	"	64,086	350	38	57	EA3AOE	" 94,424	451	34	82	(Op. YU1EE)						LS0I	14	387,500	1073	30	95		
SCOTLAND	GM6V	14	517,068	1505	38	121	EA4AV	" 46,512	176	31	71	4N1N	"	184,128	680	31	106	LU4FD	3.5	58,566	238	24	62	
						(Op. GM3W0J)					(Op. 4N1LB)					LU8HSO	A	775,404	1262	80	172			
GM6Z	7	192,231	1224	25	92	EA2BNU	" 427,000	941	54	190	YU1AA	7	96,086	597	21	85	LU1EWL	"	318,176	320	70	154		
						(Op. W5ASP)					(Op. Zika)					LU4HKN	"	153,156	527	67	87			
*GM4SID	A	546,922	1202	72	230	EA4AAF	" 344,473	687	61	198	YU1HU	28	3,192	50	11	31	LU3DSI	"	154,980	410	51	89		
*GM5CFS	14	67,584	396	23	65	EA3BOW	" 287,382	639	58	169	YU7BZ	14	369,600	1150	36	114	LU5UJL	28	256,520	845	25	81		
*GM4YXJ	7	48,484	385	20	72	EA1ABM	" 276,794	634	50	178	(Op. YU1EE)					LW4DYI	"	256,305	846	25	80			
SICILY	IT90RA	A	267,430	649	59	175	EA7TG	" 246,519	424	73	200	UX1UA	"	825,214	1183	107	335	LW6MFQ	"	105,450	483	24	50	
						(Op. IT9AF)					UX5UO	"	645,752	876	110	314	LU7HTJ	"	15,200	145	13	25		
											UT2Q	A	2,817,936	3316	120	408	LW8EXF	"	5,075	77	11	14		
											US5WE	"	2,115,910	2254	115	348	LU7DW							
											UT9U	"	1,122,590	1687	101	305								
											(Op. UT5DS)													
SLOVAK REPUBLIC	OM8A	A	4,601,610	3730	137	461	EA4AEI	" 37,856	179	33	71	VK1FF	A	1,865,956	1811	108	245	OCEANIA						
						(Op. OM3RM)					VK8AV	"	1,231,452	1348	95	221	AMERICAN SAMOA							
OM3TA	"	50,375	273	30	95	EC2AGR	" 35,653	200	31	70	VK2BQ	"	279,642	446	83	126	KH8/N5OLS	A	1,276,845	1309	134	211		
OM5M	14	722,936	1824	39	145	EA3ANE	" 27,945	83	40	75	VK5GN	"	119,973	472	37	50	LU7FJ	21	657,850	1882	29	89		
OM3RRC	"	72,590	459	21	64	EA4AYB	" 22,200	158	21	53	VK4ET	7	245,086	704	31	87	L5V	"	258,602	1037	27	59		
OM5R	3.5	174,608	1122	24	88	EA1EVL	" 21,420	138	20	48	VK3APN	"	144,336	528	26	67	(Op. LU5VC)							
OM5ZW	1.8	117,393	663	25	84	EA3AAF	" 17,460	218	16	44	VK3IO	1.8	1,720	26	12	11	LU3EAQ	"	28,140	147	24	46		
OM5ZM	"	30,072	255	17	67	ED2URG	" 14,726	117	21	53	VK2YD	A	1,220,664	1521	91	190	LU3FSP	14	558,846	1444	32	99		
OM/RU	"	9,570	147	10	45	VK4AEK	" 11,088	88	20	46	VK5HG	"	154,241	768	80	131	LU1BW	"	21,509	124	23	36		
*OM3PO	A	376,629	639	80	223	EA4CIE	" 7,684	53	26	42	VK4XW	"	37,100	123	43	63	LU1IV	7	916,776	2029	35	118		
OM1AF	"	346,524	797	59	209	EA7GVW	" 7,644	66	23	26	VK2APN	14	392,448	1043	33	95	(Op. LW9EUJ)							
OM5NA	"	338,415	800	53	178	EA4AQO	" 5,529	35	24	33	VK4TT	"	89,349	400	26	61	P48W	A	12,742,731	6315	159	524		
OM3GB	"	317,165	551	70	207	EA4AWJ	" 4,480	46	21	35	VK6VZ	7	407,365	1223	31	82	(Op. W2GD)							
OM3TLO	"	303,480	723	53	217	EA1AKP	" 2,600	39	13	12	VK6GLW	3.5	83,300	346	22	63	ARUBA							
OM8ON	"	261,942	389	89	204	VK7BB	" 5,676	79	12	31	PP1AJK	A	58,420	201	49	78	BOLIVIA							
*OM7PY	21	35,700	136	28	77	EA1AK/7	21	204,545	794	31	104	PP5CC	"	34,452	110	56	76	CP6AA	A	4,299,834	3283	120	334	
OM9TR	14	18,760	183	14	42	VK7GTV	" 198,170	964	23	72	PY7OJ	"	26,720	232	36	50	(Op. OH0XX)							
*OM4WW	7	82,422	446	25	89	EA3GIS	" 28,350	150	23	52	PU2KER	21	44,290	183	23	63								
OM4DN	"	21,760	265	12	52	EA4DBB	" 11,818	136	9	29	PP6BRV	"	27,510	228	17	25								
OM1AW	"	11,220	141	12	48	EA1BXW	" 882	14	14	42	PY2TI	14	82,665	295	29	70								
*OM5KM	3.5	74,532	745	13	63	VK7CLU	" 14	349,110	1210	29	106	PY2BW	1.8	8,262	61	13	38							
OM3ZIR	"	33,453	284	9	50	VK7AL	" 14,074	138	13	49	PY5BLG	A	202,738	429	62	105								
OM3CDN	"	25,155	349	10	55	VK7A	3.5	107,310	732	20	78	ZW22	"	86,726	300	34	69							
*OM3DM	1.8	65,160	590	16	74	VK7OP	" 1.8	672	21	5	19	PP7CZW	"	78,122	19	49	85							
OM5DW	"	2,145	50	6	33	VK7OMG	"	155,078	461	35	119	PP3JHG	"	59,782	125	52	90							
SLOVENIA	S53R	A	2,938,908	2265	143	450	SM5COP	A	737,326	1020	86	260	PY7IQ	"	56,070	181	40	86						
	"	2,696,872	2116	132	422	SM5A0E	"	647,778	1007	81	240	PP2SP	"	25,228	87	50	69							
						SM6NNM	"	189,696	329	67	245	PY1VHF	"	17,313	72	41	46							
						SM0TGG	"	121,511	372	45	124	PP7CI	"	12,141	129	38	72							
						SM3AF	"	44,172	271	29	79	PY1OB	"	1,560	12	12	18							
						SM5BEU	"	43,186	171	39	112	PP4AST	"	1,150	16	12	13							
						8S3FRO	"	21,870	163	23	58	PY1KS	28	3,568	233	23	65							
						(Op. SM3CV)					PP2DUN	"	1,104	31	29	15								
						SM5IRV	"	16,758	99	29	69	PY3FBI	"	36	4	3	3							
						VK5PZ	"	9,548	63	30	47	PY1KN	21	396,845	973	32	107							
						7S0MG	21	155,078	461	35	119	PP2MBH	"	321,152	864	33	95							
						(Op. SM0KV)					ZW2A	"	34,304	180	19	48								
						SL3ZV	14	537,000	1682	36	114	PP2MCW	"	17,805	171	13	22							
						(Op. SM3JLA)					PP7SD	"	7,310	63	15	28								
						SM6DER	"	188,958	697	35	119	PP1LJB	"	4,699	50	16	21							
						SM2DMU	"	172,524	793	32	100	PY4WS	"	903	15	9	12							
						SL3ZV	3.5	3,219	71	7	30	PR7FB	14	61,812	216	30	71							
						(Op. SM3DJR)					PP2EYE	"	16,995	109	18	37								
						SM6CPY	1.8	108,474	716	24	77	PY4M3JJ	"	6,760	45	20	32							
						(Op. SM3BDZ)	"	107,738	781	23	80	PY2NZR	"	5,165	102	18	35							
						YT0T																		

URUGUAY		US5QQX	"	18,426	113	21	53	N2TX	"	1,325,660	843	30	427	K0EU	A	1,743,446	1260	135	367	DL1FDV	14	328,185	938	37	116		
CX6VM	21	724,200	1819	32	110	ES1CR	"	12,537	114	18	45	W1GD/2	"	1,053,135	854	04	331	NR0X	"	729,252	625	114	317				
CW5W	14	491,556	1087	36	120	J1R1KN	"	9,450	86	19	31	W2YC	"	1,004,980	846	11	325	KJ0G	"	270,810	404	87	168				
					5B4AFM	"	8,073	102	5	22	KF2O	"	939,679	641	28	405	WB8ZRL/0	"	57,376	126	47	116					
					7K2VNA	"	2,800	31	17	18	WB2P	"	885,273	542	43	458	K0RX	"	9,990	49	31	43					
					J1G1UKW	"	1,961	53	15	23	K2NV	"	878,990	758	94	312	N7DR/D	14	175,370	494	32	98					
					K8UCL	"	1,534	24	10	16	W2R/	"	520,773	512	89	278	K0DEI	"	89,563	313	24	83					
					G3LHJ	14	95,354	448	22	76	N1CG/2	"	512,400	605	84	216	W0CP	7	83,814	249	35	87					
					JR4DAH	"	60,984	279	27	57	N2JT	"	431,032	507	67	234											
					HA0GK	"	43,602	264	19	62	K2WS	"	275,577	337	70	221											
					J13FAD/1	"	41,040	213	24	48	K2XF	"	251,566	378	65	173	C13AT	A	1,263,427	1458	81	250					
					G0OGN	"	36,855	294	15	50	K2TR	"	221,067	249	84	235	C61HA	"	702,736	834	80	254					
					JR90PJ	"	36,244	169	24	58	N2QLT	"	42,497	252	56	157	VA3NR	"	77,433	214	50	109					
					HB9CBR	"	33,594	252	18	48	W2XN	"	25,928	210	56	156											
					ALL BAND						W2KA	"	09,053	210	53	136											
ZX2X	A	753,255	988	80	205	SP5ANX	"	29,646	161	20	61	K3WW	"	4,541,412	2394	147	527	JH7PKU	A	2,649,527	2188	131	302				
					(Op. PY2OU)						G3TXZ	"	25,675	237	13	52	JH7AUL	"	1,221,360	1330	114	222					
AA2U	"	549,450	615	82	248	HA7YS	"	21,870	207	14	40	N2KJM	"	3,677,170	1989	148	507	JL1ARF	"	1,021,786	883	135	311				
K1RC	"	419,661	449	66	231	J7A7S	"	21,063	145	22	37	AA1K3	"	3,613,776	2023	146	486	JF1SEK	"	678,704	728	110	228				
UT5UN	"	419,497	897	69	230	E31W	"	20,838	148	18	51	K3JGJ/2	3.5	60,970	236	19	72	J9DDF/2	"	176,240	343	99	141				
F60IE	"	387,564	886	56	189	K4GEI	"	18,850	116	14	44	K3N2	"	3,128,832	1917	133	448	JK2YUC	"	116,960	304	73	99				
LY3BA	"	332,514	799	56	217	PA3ASC	"	8,856	122	9	32	K3N3	"	2,756,040	1658	134	445	JR4QZH	"	93,292	204	56	110				
LY2FE	"	301,392	890	51	225	J4AXHF/3	"	6,392	66	17	30	K3N4	"	2,484,690	1469	144	454	JA03JY	"	91,933	234	57	92				
DL3KVR	"	298,718	715	55	211	ISAT	"	5,882	65	13	21	K3N5	"	2,463,012	1557	135	423	J75SUR	"	52,432	168	49	64				
K3DI	"	297,920	441	64	202	N7JXS	"	3,627	47	13	18	K3N6	"	1,699,883	1400	107	312	JG6ILIN	"	19,068	87	37	47				
DL0QW	"	288,392	684	47	189	KA6SGT	"	3,021	73	11	8	K3N7	"	1,638,306	1188	114	372	JN2JTO	"	6,138	37	29	33				
					(Op. DL4MFM)						W3EFF	"	2,750,040	898	133	437	JE9LLO	"	21,726	125	26	45					
UR5MTA	"	264,321	7C5	54	199	ON4ARJ	"	2,240	56	8	7	K3N8	"	1,318,958	896	130	411	JA8JQD	14	63,840	242	86	67				
KA1CFZ	"	259,831	422	66	187	O7ZV	"	1,776	34	9	28	K3N9	"	1,311,688	1122	100	313	JL0X3R	"	34,880	165	29	51				
K2PH/3	"	238,392	373	67	185	WB6FZH	"					K3N10	"	1,248,192	790	130	446	JK10XU	7	10,260	68	26	34				
I3BBK	"	235,879	584	51	166	J/KH6	"	36	4	3	4	K3N11	"	1,065,904	898	130	437	JH4UYB	1.8	17,922	114	19	39				
YU1LM	"	231,075	731	49	176	JE8JXU	"	2	1	1	1	K3N12	"	1,240,538	1433	100	262										
UA4JY	"	216,814	544	52	217	J74QOK	7	25,270	142	26	44	W3MM	"														
K5ID/8	"	211,641	365	68	169	(Op. JR2BNF)					W3PF	"															
OH7NVU	"	200,080	619	49	156	W0KEA	"	21,787	123	25	46	K3N13	"														
KV8S	"	193,584	377	58	164	VE3SMA	"	13,685	193	11	24	K3N14	"														
YU1KN	"	185,947	413	74	189	F5LEN	"	7,536	96	11	37	K3N15	"														
N1AFC	"	171,402	223	41	153	IK6HWX	"	224	14	4	10	K3N16	"														
EA7AAW	"	153,114	434	44	107	SP4FGF	3.5	36,075	487	10	55	N3NT	"														
KP3S	"	145,638	342	58	128	UT5UOV	"	11,514	159	9	48	WT3W	"														
UA0SAU	"	136,120	352	46	120	OK1KAI	"	10,556	191	11	41	W3GK	"														
PA0ADT	"	133,722	428	37	134	OK1XNF	"	10,485	228	7	38	K3N17	"														
LZ1AG	"	132,124	287	67	201	W0XZK	"	8,064	155	9	39	NY3C	"														
W8ILC	"	121,179	477	93	246	ES8NW	"	7,958	166	7	39	WR3L	"														
8S0FRO	"	116,127	407	45	162	2E0AOK	"	4,104	106	6	32	N3MKZ	"														
					(Op. SM0DZH)						N5ZA	"	2,695	36	11	24	WT3P	"	338,530	361	91	258					
VE7CA	"	113,960	376	60	80	UA0GOQ	"	2,366	56	12	14	W3FG	"	317,754	419	65	213										
VE7CFD	"	109,625	400	53	72	DH0JAE	"	1,188	46	4	23	K3SA	"	312,550	416	70	196										
ON7CC	"	104,980	385	38	107	OK1FRO	"	989	41	5	18	W3KV	"	310,426	420	72	195										
EA3CKX	"	104,876	340	41	116	W8QZ/A/6	"	294	10	7	7	K3AR	"	306,768	343	81	251										
JH1HRJ	"	101,549	239	68	95	VA3JFF	"	200	26	2	2	A3AJU	"	293,986	343	81	241										
UA9UUN	"	97,032	282	49	107	JK3ZQJ	"	49	6	4	3	K3KY	"	291,384	375	83	201										
UA3LIZ	"	96,160	441	32	127	(Op. JR1EQ)					WT3P	"	280,340	400	62	198											
HP1AC	"	89,694	242	54	97	ES1CW	1.8	28,670	435	10	51	NN4T	"	119,637	237	55	134										
9A3G	"	87,763	407	35	122	U7BT	"	11,760	194	7	42	W4AF	"	2,544,373	1856	122	371										
RA6LAE	"	87,050	347	35	115	CT1ETT	"	5,800	135	6	34	W4NTI	"	7	52,212	170	29	85									
UR5ZOS	"	87,050	100	40	88	W1R1H	"	1,111,443	767	125	402	N0DS	"	316,940	381	91	208										
DL2ZG	"	87,050	100	40	87	W1R2Z	"	710,700	803	75	234	W4NC	"	7	52,212	170	29	85									
DL2ZG	"	87,050	100	40	87	W1R2Z	"	710,700	803	75	234	K5AW	A	798,368	705	105	300										
DL2ZG	"	87,050	100	40	87	W1R2Z	"	710,700	803	75	234	W4NC	"	637,728	589	106	310										
W0HEP	"	8,320	63	15	36	K1AJ	"	281,664	363	78	210	AC5HF	"	192,230	296	81	172										
NQ7X	"	7,242	49	21	30	W1XK	"	192,672	328	55	161	K5LP	"	108,600	200	69	131										
G0KZQ	"	6,292	65	13	39	K1TM	"	182,130	335	56																	

KB1H	2,791,083	1826	129	444	UGANDA	FRANCE	UT7W	2,259,234	1950	142	484	ENGLAND					
K1GW	2,955,680	1827	124	456	5X4F	3,318,312	2457	116	340	G3SSO	877,270	1210	91	279			
K2TE/	1,588,650	1118	116	354	ASIA	FRANCE	EM7Q	1,145,001	1366	110	361	FINLAND					
KZ1M	1,344,798	912	94	308	ASIATIC RUSSIA	FSKPG	UR4PWC	785,026	1161	87	287	OI4JFN	1,541,256	2221	101	346	
W1NR	510,720	504	110	330	RK9CWW	7,546,648	4804	171	587	UR4LZA	230,669	602	64	187			
N1AU	445,950	463	89	261	4,189,584	1,843,552	2108	101	323	UR4MWU	154,638	469	49	149			
N1MD	212,100	366	46	156	RK9CWW	1,612,569	2234	86	271	UR4QZF	85,744	323	40	144			
KE4GI/1	80,910	325	37	108	RW90WD	513,383	911	73	226	US4LWM	71,694	521	31	95			
AA1LN	72,839	175	53	116	2,350,400	328,280	906	58	174	UR4LWY	13,120	66	30	52			
AA2FB	2,757,015	1725	129	462	HONG KONG	GERMANY	YUGOSLAVIA	4N6N	2,259,234	1950	142	484	GERMANY				
K5KG/2	1,992,441	1366	119	400	VS6WO	DL6RAI	DBH0	11,248,125	6967	189	668	N2FF	1,255,798	1888	88	205	
N2FF	1,728,860	1353	107	359	VR2SS	DL8BM	DLBKF	5,102,208	4001	151	537	AB2E	271,614	980	83	120	
N2LB	1,369,446	910	126	417	JAPAN	DL3CB	DK5EZ	1,026,927	1390	82	287	N2LBR	597,072	83	253		
W3GG	3,206,272	2050	133	459	JAZZOH	DK0EE	OCEANIA	1,255,798	1888	88	205	W3GG	4,923,758	2892	164	438	
WU3A	2,056,156	1369	125	406	JR1ZTT	DL7AU	AUSTRALIA	VK4EMM	5,847,068	3566	170	587	WU3A	2,223,940	1900	137	285
N3OC	1,866,195	1184	125	440	JE6ZIH	DK0NT	INDONESIA	2,093,040	2094	106	236	NE3F	2,061,120	1667	134	318	
K3CP	1,397,038	931	124	423	JAZZJW	DK0ZG	YB0BASI	1,025,206	1172	93	208	KB3TS	809,508	707	91	328	
KB3TS	443,760	472	83	261	JAY2KA	DK1II	YB0ZEB	14,874	115	397	JAY2YAK	602,800	817	58	177		
W4WA	5,092,857	2721	157	536	JAY2YAK	DK0ZG	YB0ZEB	38,125	111	50	W4WA	142,857	371	50	93		
W4PRO	11,181,003	795	125	416	JORDAN	DK1II	YB0ZEB	50	50	50	W4PRO	4,810,220	3758	109	351		
K4QD	335,665	352	96	263	JY8B	DK0ZG	YB0ZEB	106	236	JY8B	SV1AFA	605,120	1447	77	120		
AC4HB	289,990	648	36	119	JY8B	DK0ZG	YB0ZEB	106	236	JY8B	YB0BASI	1,025,206	1172	93	208		
KSRT	2,027,547	1687	134	367	KAZAKHSTAN	DK0ZG	YB0BASI	14,874	115	397	KSRT	1,567,800	1633	97	293		
K5BN	1,722,759	1374	118	335	UN8FB	DK0ZG	YB0BASI	14,874	115	397	K5BN	5,433,560	3859	124	406		
K5MDX	474,354	503	94	248	KYRGYZSTAN	DK0ZG	YB0BASI	14,874	115	397	K5MDX	1,567,800	1633	97	293		
W5MJ	462,526	632	84	197	MONGOLIA	DK0ZG	YB0BASI	14,874	115	397	W5MJ	978,924	2121	95	196		
W6REC	1,653,468	1302	143	311	EX9A	OMAN	TF5BIR	421,024	1067	54	169	W6REC	3,998,293	3217	118	339	
NCQ	1,522,998	1332	100	301	EX9A	OMAN	TF5BIR	421,024	1067	54	169	NCQ	5,433,560	3859	124	406	
K6RQ	1,307,440	1071	133	339	HS0AC	OMAN	TF5BIR	421,024	1067	54	169	K6RQ	3,998,293	3217	118	339	
K6ANP	625,706	589	131	255	JT1T	OMAN	TF5BIR	421,024	1067	54	169	K6ANP	5,046,000	3834	152	428	
N6RV	567,336	691	105	203	HS0AC	OMAN	TF5BIR	421,024	1067	54	169	N6RV	978,924	2121	95	196	
K6ZM	483,458	595	111	215	EU9A	OMAN	TF5BIR	421,024	1067	54	169	K6ZM	3,998,293	3217	118	339	
W6CAI	385,056	431	107	229	EU9A	OMAN	TF5BIR	421,024	1067	54	169	W6CAI	5,046,000	3834	152	428	
NN7L	1,581,696	1351	134	290	THAILAND	OMAN	TF5BIR	421,024	1067	54	169	NN7L	1,581,696	1351	134	290	
NK7U	1,565,460	1481	117	273	BALEARIC ISLANDS	OMAN	TF5BIR	421,024	1067	54	169	NK7U	5,046,000	3834	152	428	
K8AZ	5,831,985	2797	166	587	EU9A	OMAN	TF5BIR	421,024	1067	54	169	K8AZ	5,046,000	3834	152	428	
K8LX	4,301,868	2514	151	482	EU9A	OMAN	TF5BIR	421,024	1067	54	169	K8LX	5,046,000	3834	152	428	
WB8AV	3,65C,064	2000	155	527	EU9A	OMAN	TF5BIR	421,024	1067	54	169	WB8AV	5,046,000	3834	152	428	
K9UWA	2,199,952	1280	140	474	EU9A	OMAN	TF5BIR	421,024	1067	54	169	K9UWA	5,046,000	3834	152	428	
K9RF	5,225,584	3001	166	513	EU9A	OMAN	TF5BIR	421,024	1067	54	169	K9RF	5,046,000	3834	152	428	
KV8Q	3,684,768	2358	154	432	EU9A	OMAN	TF5BIR	421,024	1067	54	169	KV8Q	5,046,000	3834	152	428	
NX0I	2,588,736	1772	143	413	EU9A	OMAN	TF5BIR	421,024	1067	54	169	NX0I	5,046,000	3834	152	428	
NO9I	2,490,345	1565	142	443	EU9A	OMAN	TF5BIR	421,024	1067	54	169	NO9I	5,046,000	3834	152	428	
NOZA	286,578	408	84	177	EU9A	OMAN	TF5BIR	421,024	1067	54	169	NOZA	5,046,000	3834	152	428	
K2VW/0	94,975	167	41	104	EU9A	OMAN	TF5BIR	421,024	1067	54	169	K2VW/0	5,046,000	3834	152	428	
BAHAMAS	3,477,208	3343	106	328	EU9A	OMAN	TF5BIR	421,024	1067	54	169	BAHAMAS	5,046,000	3834	152	428	
C6A/K3TE	3,477,208	3343	106	328	OT6T	OMAN	TF5BIR	421,024	1067	54	169	KM9D/C6A	8,765,744	4441	192	679	
KM9D/C6A	2,468,750	2536	105	290	OT6P	OMAN	TF5BIR	421,024	1067	54	169	KM9D/C6A	2,593,765	2875	106	337	
CANADA	3,477,208	3343	106	328	EU9A	OMAN	TF5BIR	421,024	1067	54	169	CANADA	8,765,744	4441	192	679	
VE3EJ	6,740,665	3699	164	571	EU9A	OMAN	TF5BIR	421,024	1067	54	169	VE3EJ	4,139,672	1664	113	395	
VE6JY	2,806,894	2756	128	329	EU9A	OMAN	TF5BIR	421,024	1067	54	169	VE6JY	4,139,672	1664	113	395	
C12ZP	2,390,288	2356	105	317	EU9A	OMAN	TF5BIR	421,024	1067	54	169	C12ZP	4,139,672	1664	113	395	
VO2WL	1,597,895	2426	78	227	EU9A	OMAN	TF5BIR	421,024	1067	54	169	VO2WL	4,139,672	1664	113	395	
VE3CC	108,540	501	43	65	EU9A	OMAN	TF5BIR	421,024	1067	54	169	VE3CC	4,139,672	1664	113	395	
CAYMAN ISLANDS	6,066,018	4693	133	425	EU9A	OMAN	TF5BIR	421,024	1067	54	169	ZF2RF	5,046,000	3834	152	428	
MEXICO	5,414,990	4781	146	344	EU9A	OMAN	TF5BIR	421,024	1067	54	169	XE2L	5,046,000	3834	152	428	
PUERTO RICO	9,687,744	5475	163	541	EU9A	OMAN	TF5BIR	421,024	1067	54	169	PUERTO RICO	5,046,000	3834	152	428	
ST. LUCIA	11,493,255	7160	149	496	OK5W	OMAN	TF5BIR	421,024	1067	54	169	J6DX	5,046,000	3834	152	428	
ST. KITTS & NEVIS	2,226,159	2589	79	280	OL3A	OMAN	TF5BIR	421,024	1067	54	169	V47VJ	5,046,000	3834	152	428	
SAINT MARTIN	7,223,975	5353	128	417	OL2A	OMAN	TF5BIR	421,024	1067	54	169	FS5PL	5,046,000	3834	152	428	
AFRICA	2,203,535	2675	78	199	OL2K	OMAN	TF5BIR	421,024	1067	54	169	BURUNDI	5,046,000	3834	152	428	
CAPE VERDE	9,865,736	5484	139	465	OL2KUO	OMAN	TF5BIR	421,024	1067	54	169	D44BC	5,046,000	3834	152	428	
EQUATORIAL GUINEA	3C5A	7,550,220	4892	128	409	OL2W	OMAN	TF5BIR	421,024	1067	54	169	AF4GI/1	5,046,000	3834	152	428
MADEIRA ISLANDS	CT3	5,056,816	3351	177	631	OL2W	OMAN	TF5BIR	421,024	1067	54	169	/DL5YM	5,046,000	3834	152	428
FINLAND	O1E	5,576,816	3351	177	631	OL2W	OMAN	TF5BIR	421,024	1067	54	169	O1E	5,576,816	3351	177	631
ESTONIA	O17T	3,683,910	2855	166	530	OL2W	OMAN	TF5BIR	421,024	1067	54	169	O15N	2,588,344	2489	155	509
SWEDEN	SK6FM	2,996,284	2684	143	491	OL2W	OMAN	TF5BIR	421,024	1067	54	169	ES5Q	2,321,248	2393	142	436
SWEDEN	SL0CB	2,223,872	2270	130	414	OL2W	OMAN	TF5BIR	421,024	1067	54	169	EU9A	4,139,672	1664	113	395
SWEDEN	SM3KDF	2,181,409	2090	125	426	OL2W	OMAN	TF5BIR	421,024	1067	54	169	EU9A	4,139,672	1664	113	395
SWEDEN	SK4AO	1,093,320	1825	80	280	OL2W	OMAN	TF5BIR	421,024	1067	54	169	EU9A	4,139,672	1664	113	395
SWEDEN	SK5AA	685,152	1080	82	284	OL2W	OMAN	TF5BIR	421,024	1067	54	169	EU9A	4,139,672	1664	113	395
SWEDEN	SM5HJZ	673,992	1048	92	315	OL2W	OMAN	TF5BIR	421,024	1067	54	169	EU9A	4,139,672	1664	113	395
SWITZERLAND	HB9AA	1,996,164	2595	95	309	OL2W	OMAN	TF5BIR	421,024	1067	54	169	EU9A	4,139,672	1664	113	395
SWITZERLAND	OL2W	1,996,164	2595	95	309	OL2W	OMAN	TF5BIR	421,024	1067	54	169	OL2W	1,996,164	2595	95	309
UKRAINE	UO5J	4,226,977	3388	173	614	OL2W	OMAN	TF5BIR	421,024	1067	54	169	US3I	3,129,979	4081	114	335
UKRAINE	UO5J	4,226,977	3388	173	614	OL2W	OMAN	TF5BIR	421,024	1067	54	169	US3I	3,129,979	4081	114	335
UKRAINE	UO5J	4,226,977	3388	173	614	OL2W	OMAN	TF5BIR	421,024	1067	54	169	US3I	3,129,979	4081	114	335
UKRAINE	UO5J	4,226,															