

# Results of the 1999 CQ WW DX CW Contest

BY BOB COX,\* K3EST

**W**hat do you call out-of-this-world conditions, jam-packed CW bands, and 3550 logs? The Godzilla of contests: the 1999 CQ WW CW. Conditions were so good that there was activity on 10 meters clear into the beacon part of the band. There was something for everyone. The low bands were good. The high bands were excellent. One entrant commented that he was very surprised that he worked DXCC, WAZ, WAE, and he thinks WAS in one weekend! Whether you were a casual entrant or a Formula 1 contester, you came to appreciate just what is possible in a DX contest. Mark your calendars this year to join in the 2000 CQ WW. You won't regret it. You will experience what so many men and women testers have come to learn: Contesting is fun and personally challenging. Below are presented many of the highlights of the 1999 CQ WW CW Contest. Read on to learn more and see how you did.

## All Band

"As good as it gets" might be the motto of the top contestants for this year's coveted high power, all band crown. It takes a lot of thought, work, and band-wise intelligence to challenge for top honors. With conditions so good the battle was met. The Top Ten World score box contains some of the best operators who have ever pushed a key. This time the crown came to rest on the head of Trey, N5KO, who pushed his station, HC8N, and himself to new heights—a new world record. The station at HC8N was born from nothing a few years ago and has since moved itself into high contention. Trey had 7001 QSOs! That's a lot of Qs, in case you were wondering. In second place in the world was Jose, CT1BOH, operating from P40E. Jose is a real competitor who thinks about the contest from every angle. In third place was Ville, OH2MM, operating from EA8EA. Ville took time off from his university chores to put EA8 in a lot of logs.

Doesn't a 1-land station always win the USA top position? Wrong! In 1999 Bill, W4AN, keyed his way to a new USA CW record and first place. All his work to make his station very competitive sure paid off big time. In second place (It seems strange to write those words.) was John, K1AR. Both W4AN and K1AR broke the old record. Third-place USA went to the fine performance by Greg, W1KM.

Europe produced some surprises. The first-place spot was won by Dan, LY1DS, operating from LY6M. Conditions were so good that they took away the advantage of stations much farther to the west. Second place went to Andrew, GI0NWX, operating at GI0KOW. Third and



The VE3EJ multi-single team (left to right): VE3XN, VE7ZO, VA3UZ, and VE3EJ.

fourth place were very close. They were taken by OH0Z, operated by OH7JT, and Boris, S58A, respectively.

Mention must be made of W4AN's finish within the top ten world scores—a tough feat. The jobs done by A45XR, E4/S53R, JH4UYB (a new Japanese record), and XU7AAV were outstanding.

## Low Power

Running only a 100 watts forces a serious tester to adapt his or her strategy to rapidly changing conditions. Should I run or should I search & pounce? The low power category is the most popular in the contest. If you can make it into the TopTen box you can be rightly proud of your accomplishment. This year's Top Ten box has members from five continents. Heading the list is FG5BG. This station was keyed to the top spot by Mike, K9NW. A FB job, Mike. Not far away was the second place world winner, Felipe, NP4Z. Just behind Felipe was Jaroslav, SU9ZZ. He gave many people that rare double multiplier. Taking time off from diving in the beautiful waters of the Solomons was fourth place winner Paul, K1XM, at H44MX.

Finishing #1 in the USA and #6 in the world was Brooke, N2BA. Just behind Brooke was Mark, K1RO. Both broke the coveted 3 million point barrier. Much farther west was the station of K0EJ/4, who finished third. Looking to the

far west USA, you will find K6XV as the top score, followed by K7ZA and K6RO.

The top European honor goes to Ulrich, DL2HBX, who pushed DA0FF to new heights and was just short of a new European record. In second place was Franc, S59AA. Over the years Franc must be the European low power station who has had the most consistent high result. Only 54K separated third through fifth place. Yuri, EW2CR, took third place, followed by Con, DF4SA, and Marco, IK0YVV.

Special mention must be made of the efforts of XX9TDX (SM0GNU), CE3AA, VU2PAI, V73CW, YB2JU, EA8/DJ10J, and JE0UXR, who finished at the top or near it for their continents. Wonderful efforts from remote areas.

## QRP

Working people with 5 watts is a challenge at any time. Doing it during the CQ WW when conditions are great and the QRM is wall to wall is a real challenge. This year there were many operators who took up that challenge. A top ten QRP world list would include every continent except Oceania.

Leading the way and setting a new world QRP all band record was John, W2GD, operating from P40W. The real battle was for the other nine positions. In second place was Vitas, LY2FE, who had the top European score. He was followed closely by Bob at VE3KZ, the

\*1816 Poplar Lane, Davis, CA 95616  
e-mail: <questions@cqww.com>

## TROPHY WINNERS AND DONORS CW

<p><b>SINGLE OPERATOR</b> All Band World <b>HC8N (Opr. Robert Garlough, N5KO)</b> Donor: Albert Kahn, K4FW – W9IOP Memorial</p> <p><b>World Low Power</b> <b>FG5BG (Opr. Mike Tessmer, K9NW)</b> Donor: Slovenia Contest Club</p> <p><b>World QRPP</b> <b>P4BW (Opr. John Crovelli, W2GD)</b> Donor: Gene Walsh, N2AA</p> <p><b>World Single Operator Assisted</b> <b>OT9T (Opr. John Devoldere, ON4UN)</b> Donor: Snake River Contest Club</p> <p><b>U.S.A.</b> <b>Bill Fisher, W4AN</b> Donor: Frankford Radio Club</p> <p><b>U.S.A. Low Power</b> <b>Brooke Allen, N2BA</b> Donor: North Coast Contesters</p> <p><b>U.S.A. – Zone 3</b> <b>W6EEN (Opr. Kenneth S. Wideltz, K6LA)</b> Donor: Bill Fisher, W4AN</p> <p><b>U.S.A. – Zone 4</b> <b>W9RE (Opr. Patrick Barkey, N9RV)</b> Donor: Bill Fisher, W4AN</p> <p><b>Canada</b> <b>VE2IM (Opr. Yuri Onipko, VA3UZ)</b> Donor: Jim Fisher, VE1JF</p> <p><b>Caribbean/C.A.</b> <b>VP5GN (Opr. David K. McCarty, K5GN)</b> Donor: Chuck Shinn, W7MAP</p> <p><b>Europe</b> <b>LY6M (Opr. Dainius Savicius, LY1DS)</b> Donor: Edward Bissell, W3AU</p> <p><b>Europe – Low Power</b> <b>DA0FF (Opr. Ulrich Ann, DL2HBX)</b> Donor: Scott Jones, N3RA &amp; Tim Duffy, K3LR</p> <p><b>Africa</b> <b>EA8EA (Opr. Ville Hillesmaa, OH2MM)</b> Donor: Gordon Marshall, W6RR</p> <p><b>Asia</b> <b>Chris Dabrowski, A45XR</b> Donor: Chuck Shinn, W7MAP</p> <p><b>Japan</b> <b>Masaki Okano, JH4UYB</b> Donor: Japan Crazy Contesters Club</p> <p><b>Japan – Low Power</b> <b>Masataka Kamata, JE0UXR</b> Donor: Western Washington DX Club</p> <p><b>Oceania</b> <b>9M6NA (Opr. Saty Nakamura, JE1JKL)</b> Donor: Peahi Contest Club</p> <p><b>South America</b> <b>P4BE (Opr. José Carlos Cardoso Nunes, CT1BOH)</b> Donor: Venezuela DX Club</p> <p><b>Single Operator, Single Band</b> <b>World – 28 MHz</b> <b>ZX5J (Opr. James Neiger, N6TJ)</b> Donor: Joel Chalmers, KG6DX</p> <p><b>World – 21 MHz</b> <b>5N0W (Opr. David Klimosz, OK1RK)</b> Donor: N5JJ Memorial (Don Busick, K5AAD)</p> <p><b>World – 14 MHz</b> <b>Kazimierz Drzewiecki, SP2FAX</b> Donor: W2JT Memorial (North Jersey DX Assn.)</p> <p><b>World – 7 MHz</b> <b>Jiri Pesta, OK1RF</b> Donor: Alex M. Kasevich, VP2MM</p>	<p><b>World – 3.5 MHz</b> <b>VC1A (Opr. Yuri Blanzovich, K3BU)</b> Donor: Fred Capossela, K6SSS</p> <p><b>World – 1.8 MHz</b> <b>C4A (Opr. Ivo Pezer, 9A3A/5B4ADA)</b> Donor: Kenneth Byers, Jr., K4TEA</p> <p><b>USA – 28 MHz</b> <b>Vincent Sgroi, K1RM</b> Donor: Wireless Institute of the Northeast-Treasury</p> <p><b>USA – 21 MHz</b> <b>Scott Detloff, K8DX</b> Donor: Wayne Carroll, W4MPY</p> <p><b>USA – 14 MHz</b> <b>K9XD (Opr. Cedrick W. Johnson, K9YO)</b> Donor: Northern Illinois DX Association</p> <p><b>USA – 7 MHz</b> <b>Philip Allardice, KT3Y</b> Donor: W6AM Memorial (Jan Perkins, N6AW)</p> <p><b>USA – 3.5 MHz</b> <b>Robye L. Lahlum, W1MK</b> Donor: Bill Feidt, NG3K</p> <p><b>USA – 1.8 MHz</b> <b>George E. Taft, W8UVZ</b> Donor: Dave Patton, NT1N &amp; Mark Obermann, AG9A</p> <p><b>Canada (28 MHz)</b> <b>Lajos Laki, VA3RU</b> Donor: Radio Amateurs of Canada</p> <p><b>Carib./C.A. (28 MHz)</b> <b>3E1DX (Opr. Stefan Radtke, DL5XX)</b> Donor: Snake River Contest Club</p> <p><b>Europe – 28 MHz</b> <b>Ron Stone, GW3YDX</b> Donor: John Pryor, K4OGG</p> <p><b>Europe – 21 MHz</b> <b>OH0V (Opr. Jukka Klemola, OH6LI)</b> Donor: Robert Naumann, N5NJ</p> <p><b>Europe – 14 MHz</b> <b>Wilfried Gottschald, DJ7AA</b> Donor: G3FXB Memorial (Maud Slater)</p> <p><b>Europe – 7 MHz</b> <b>Zdravko Balen, 9A9A</b> Donor: Ivo Pezer, 9A3A/5B4ADA</p> <p><b>Europe – 3.5 MHz</b> <b>ZB2X (Opr. Jorma S. Saloranta, OH2KI)</b> Donor: K3VW Memorial (Frankford Radio Club)</p> <p><b>Europe – 1.8 MHz</b> <b>SN3A (Opr. Czeslaw Dubicki, SP3HLM)</b> Donor: Pat Barkey, N9RV &amp; Terry Zivney, N4TZ</p> <p><b>Japan – 21 MHz</b> <b>Kenji Koishi, JH3AIU</b> Donor: DX Family Foundation</p> <p><b>Japan – 14 MHz</b> <b>Hiromori Usui, JR1XFS</b> Donor: Mitsuhiro Nishimura, JA7WME</p> <p><b>MULTI-OPERATOR, SINGLE TRANSMITTER</b> World <b>P3A (Oprs. RA9JX, UA3DPX, RZ9UA, RW3TJ, UA3TU, UT7QF, 5B4AGM, RZ3AS)</b> Donor: Anthony Susen, W3AOH</p> <p><b>U.S.A.</b> <b>K1KI (Oprs. K1KI, K1CC, KM1P, K5ZD, W1RM)</b> Donor: Douglas Zwiebel, KR2Q</p> <p><b>Canada</b> <b>VE3EJ (Oprs. VE3EJ, G4VXE, VA7RR, VE2ZP, VE7ZO)</b> Donor: Eastern Canadian DX Assn.</p> <p><b>Carib./C.A.</b> <b>8P9Z (Oprs. K4BAI, N4TO, K1TO)</b> Donor: Octorino G. Villa, PY2KC</p>	<p><b>Africa</b> <b>S92CW (Oprs. DA1MH/KA0KKO, DK5AX/K2AXS)</b> Donor: Harry Booklan, RA3AAU</p> <p><b>Asia</b> <b>ZC4AKR (Oprs. 5B4AGC, 5B4AFB, G3VMW, G3ZEM, ZC4OS, ZC4CM)</b> Donor: Steve Merchant, K6AW</p> <p><b>Europe</b> <b>EA6IB (Oprs. EA3AIR, EA3AJW, EA3GGO, EA3KU, EA5BM, EA5ZF, EA6ACC, EA6FB)</b> Donor: Bob Cox, K3EST</p> <p><b>Oceania-Pacific Rim</b> <b>AH2R (Oprs. JG3RPL, JI3ERV, KH2/JH0USD, JR7OMD)</b> Donor: Junichi Tanaka, JH4RHF</p> <p><b>South America</b> <b>CE3F (Oprs. CE3/SM3SGP, CE3FIP)</b> Donor: CQ Magazine</p> <p><b>MULTI-OPERATOR, MULTI-TRANSMITTER</b> World <b>CN8WW (Oprs. DJ2QV, DK1BT, DK2OY, DK8LV, DK9IP, DL2MEH, DL3DXX, DL3NCI, DL6FBL, DL6LAU, DL8WPX, S51TA)</b> Donor: K2GL Memorial (Doug Zwiebel, KR2Q)</p> <p><b>U.S.A.</b> <b>KC1XX (Oprs. KC1XX, AD1C, K1EA, W1FV, K1GQ, N2IC, N3RD, KM3T, K6AW, DL7SI)</b> Donor: N6RJ Memorial (Bob Ferrero, W6RJ)</p> <p><b>Europe</b> <b>OH2U (Oprs. OH2BVI, OH2FT, OH2HE, OH2IW, OH2JQS, OH2JTE, OH2LUR/ES2RR, OH2MAM, OH2XX, OH4YR, OH6CT, OH7BX, OH7JR, OH8KXX)</b> Donor: Finnish Amateur Radio League</p> <p><b>Japan</b> <b>JA5BJC (Oprs. JA5BJC, JA5FDJ, JA5JCC, JH5FXP, JH5RXS, JR5JQA, JR5VHU, JM1UMB, JS1OYN)</b> Donor: Ryozo Goto, JH3JYS</p> <p><b>WORLD – SSB/CW COMBINED</b> <b>CN8WW: 143,908,150</b> Donor: Alpha/Power, Inc.</p> <p><b>CONTEST EXPEDITIONS</b> World Single Operator <b>ZD8A (Opr. Glenn Rattmann, K6NA)</b> Donor: Yankee Clipper Contest Club</p> <p><b>World Multi-Single</b> <b>ZA/S51F (Oprs. S51F, S57AW)</b> Donor: Carl Cook, A16V</p> <p><b>World Multi-Multi</b> <b>A61AJ (Oprs. A61AJ, K12M, KM3RA, KE3Q, N6ZZ, PA4AO, T93M, T93Y, T97M, W0UN, W3UR)</b> Donor: Bill Schneider, K2TT</p> <p><b>SPECIAL – SINGLE OPERATOR AWARD</b> World SSB/CW Combined <b>P4BE (Opr. Jose Carlos Cardoso Nunes, CT1BOH)</b> Donor: Hrane Milosevic, YT1AD</p> <p><b>WORLD ALL BAND – UNDER 21 YEARS OLD</b> <b>R19C (Opr. Andy V. Chepurnoy, RA9CKQ)</b> Donor: Chuck Shinn, W7MAP</p> <p><b>CLUB</b> World SSB/CW <b>Yankee Clipper Contest Club: 702,296,971</b> Donor: W1WY Memorial (CQ Magazine)</p> <p><b>Non-USA SSB/CW</b> <b>Bavarian Contest Club: 239,287,350</b> Donor: N6AUV Memorial (Northern California Contest Club)</p>
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Attilio, 11BAY, QRP.

North American winner. Second place in Europe went to Peter from HA2A, while third went to Bosko, YT7TY. In the USA, John, K1RC, came very close to breaking the million mark in taking top USA honors. In second place was Alan, N3BJ/4. In Asia the top slot went to RA9SO, and a remarkable performance by JR4DAH shows what can be accomplished when you are isolated from the NA and EU population centers.

### Assisted

This was the year the assisted category had a feast with multipliers. There were so many spots of juicy DX that you could have spent your whole weekend jumping from one to another. However, if you wanted a good score, running was the name of the game. With that in mind, John, ON4UN, piloted OT9T to the world high score. Along the way he set a new European assisted record. In world second place and setting a new USA record was Charles, K3WW. Charles has really perfected the assisted category to a high level over the last few years. He was followed closely by fellow Frankford Radio Club member Sig, N3RS. Way over in Brunei, Hajime, JO1RUR, put V8A on the map to garner fourth place world and the top non-USA/EU score. The fight for second through fourth place in Europe was fierce. Second place went to LY8X, with LY2BIL at the key, who just beat out Sergey, UT0U (UT5UDX op.), Ben, DF3CB, and Tomi, OH5NQ (OH6EI op.). Third place USA went to Noel, K2NG.

### Multi-Op Single Transmitter

Making plans, gathering operators together, taking planes, and setting up the station at a location is repeated over and over by many of the multi-single and multi-multi DXpeditions you see in the results. It is not easy. Making sure that all the transmitters and receivers satisfy the distance rule is another challenge. The MS with "the mostest" this year was P3A. Putting together a multi-national team, they sure did it right and came up with a new world record. Close on their heels was the team at 8P9Z with an excellent UBN and a new North American record. Third was the fine team from Canada, VE3EJ, and a very close fourth was ZC4AKR.

After several years of building up the station at K1KI, Tom's crew put it all together to win the hotly contested USA top slot. Second place went to the ever-competitive team from the Frankford Radio Club, N2NU. Out in northeast Ohio, K8AZ had the third highest USA score. West of the Mississippi the top scorers were WX0B/5 and N0AV.

European competition was really rugged. After all the logs were checked, the winner and new European record holder was EA6IB. Close behind were the famous teams of RU1A and TM2Y, in second and third place, respectively.

Congratulations go to AH2R, S92CW, JH7PKU, CE3F, and UA7A, who either set new continental records or country records. Not being in a geographic position to make the top boxes most of the time, these stations must also be recognized as champions.

### Multi-Op Multi-Transmitter

Figuring that doing the CQWW once a year was not enough fun, the team from CN8WW traveled back to their seaside location for the CW contest. Well, let's begin by saying they met their goal of winning. They convincingly demonstrated that zone 33 during the sunspot maximum is the place from which to operate. Not only did they set a new world record, they changed the dynamics of the MM competition. Being close to Europe they could take full advantage of the large number of European contesters. Comments from all over the world remarked on how loud they were—and they could hear! Quite a combination. Finishing second was the team from PJ4B. Operating in only their second CW CQ WW, PJ4B had to settle for top South American honors. That honor was fought over with the world third-place team of 4M7X. In fourth world place was the team at A61AJ. You have to take your hat off to their remarkable score, and they set a new Asian MM record. Rounding out the top six positions were efforts from 9G5AA and EA9EA.

Here in the USA, the top three MM's really locked horns. Big stations with hundreds of hours of construction and maintenance equals a big signal. Operating such a state-of-the-art station requires top operators. Setting a new USA MM record was the team of KC1XX located in New Hampshire. Located 400 miles

southwest is W3LPL, whose team keyed Frank's station to second place. Third place went to Tim's crew at K3LR. The top team from the midwest was K9NS; they prevailed over K4VX/0 and K0RF. From the far west the top scorer was W7RM, closely followed by N6AW.

The new European champion and record holder was the fine crew at OH2U. They orchestrated their way through the QRM and found enough QSOs and multipliers to edge out the hard-working team at RW2F. Third place went to DF0HQ, whose quads proved to be very competitive.

Putting in big MM efforts were the new Japanese record holder, JA5BJC; the wonderful effort by the Aurora team, KL7Y; and team Mongolia, JT1JA.

### Special Mention

Every year hundreds of dedicated contesters head out on DXpeditions. In many cases the trips are first-time experiences from the "real" pile-up side. Once you have had that experience, you are really bitten by the DXpedition bug and you can't wait to do it again. DXpeditions bring about interest and fun for all entrants, and real excitement for the traveler. We would like to recognize many of DXpeditions that made the CQ WW contest so interesting: J45T, PJ4B, CN8WW, HB0/HB9LF, 9G5AA, V26KZA/S51F, T32PO, V31JP, P40E, NP4A, ZB2X, LX4B, WP2Z, KP2A, 3E1DX, OH0V, 9H3J, 6Y3A, 6D2X, VP5DX, 4U1VIC, 4M7X, J3A, V26K, WP3R, 9M6AAC, AH2R, V8A, E4/S53R, AP2N, XX9TDX, 9M6NA, H44MX, ZF2AM, S92CW, P3A, EA8/DJ1OJ, ZD8A, IH9P, VP2MGU, OX/N6AA, 6V6U, 3V8BB, J45KLN, OD4/OK1MU, EA6/DL8NBF, MJ0AWR, FG5BG, 9M2JI, XV7SW, BY1DX, XU7AAV, VP5GN, 9G5ZW, OH0R, HI3/OH3UU, XE3/OH2CB, E41/OK1DTP, 9V1XE, BW0R, MU/OH3GI, VK7WB, HC8N, PQ5W, EA8EA, KP4/SM5AOE, 5B4AGD, 9H3MH, 9M8YY, OH0Z, 3W7TK, MU/OH9MM, 5N0W, VC1A, A61AJ, EA6IB, and ZX5J.

Special mention should be made of the following: The new Japanese all band record set by Masa, JH4UYB. The very close battle between ZX5J and ZS6EZ on 28 MHz and between SP2FAX and 9A9A on 7 MHz. The fine 28 MHz effort of KH7R. The low power top ten finish of XX9TDX and H44MX—rare mults in any contest! The great effort by BY1DX and XU7AAV, showing that when a great operator puts a rare place on the air, the call gets into a lot of logs. The fine low power scores of XV7SW, FK8HC, and EY8MM. The high power finishes of E4/S53R, A45XR, 5X1Z, UN7/AB8CK, and E41/OK1DTP. There were too many closely contested battles to mention them all, but check out JA3 low power 28 MHz, and low power all band in European Russia, the Czech Republic, Germany, Italy, Poland, Brazil, Sweden, and the Ukraine for starters. Of course, there were hundreds of one-on-one battles in many countries. Pay close attention in reading the results and you will find them all.

### Team Contesting

When you gather together five contesters from anywhere or make up several teams from your own club, you have entered the Team Contesting category. This year's winner was Neiger's Tigers team #1, which finished with 42 million points. Four of the top six finishers were from Team Handkey. It was Handkey Team #2

## TOP SCORES

### WORLD

**All Band**  
 HC8N ..... 14,626,579  
 P40E ..... 13,577,850  
 EA8EA ..... 13,097,214  
 3V8BB ..... 11,729,116  
 ZD8A ..... 9,727,320  
 6V6U ..... 9,538,398  
 A45XR ..... 9,363,900  
 VP5GN ..... 8,408,202  
 E4/S53R ..... 8,391,987  
 W4AN ..... 8,279,616

### 28 MHz

ZX5J ..... 2,131,942  
 ZS6EZ ..... 2,102,496  
 9G5ZW ..... 1,801,182  
 3E1DX ..... 1,472,166  
 KH7R ..... 1,420,825  
 5X1Z ..... 1,352,608

### 21 MHz

5N0W ..... 1,603,641  
 9Y4VU ..... 1,385,976  
 AY1I ..... 1,317,400  
 E41/OK1DTP ..... 1,229,728  
 PQ5W ..... 1,071,725  
 OH0V ..... 1,051,380

### 14 MHz

SP2FAX ..... 974,880  
 DJ7AA ..... 919,853  
 9A3GW ..... 904,722  
 UN7/AB8CK ..... 774,228  
 OH8LQ ..... 738,164  
 LT1F ..... 713,236

### 7 MHz

OK1RF ..... 1,040,910  
 9A9A ..... 1,007,591  
 S59A ..... 863,028  
 M7Z ..... 826,485  
 KT3Y/4 ..... 695,002  
 LZ9A ..... 694,212

### 3.5 MHz

VC1A ..... 513,663  
 ZB2X ..... 420,875  
 LY2TA ..... 360,685  
 W1MK ..... 346,332  
 HA8JV ..... 289,640  
 DF9LJ ..... 263,310

### 1.8 MHz

C4A ..... 261,489  
 4X4NJ ..... 177,744  
 SN3A ..... 158,445  
 S50U ..... 119,600  
 HA8BE ..... 96,628  
 S57M ..... 95,933

### Low Power All Band

FG5BG ..... 7,042,830  
 NP4Z ..... 5,442,660  
 SU9ZZ ..... 5,370,968  
 H44MX ..... 3,715,320  
 DA0FF ..... 3,410,784  
 N2BA ..... 3,347,190  
 XX9TDX ..... 3,333,666  
 S59AA ..... 3,120,620  
 K1RO ..... 3,021,344  
 K0EJ/4 ..... 2,754,150

### 28 MHz

CX5AO ..... 1,082,390  
 WP2Z ..... 882,576  
 FK8HC ..... 661,055  
 EY8MM ..... 512,796  
 DL1LH ..... 498,750

7M1MCT ..... 492,156

### 21 MHz

EA8FT ..... 654,408  
 VE6BF ..... 620,739  
 XV7SW ..... 583,766  
 VC7A ..... 515,637  
 YT0C ..... 508,546  
 9A5Y ..... 474,846

### 14 MHz

CX9AU ..... 580,320  
 RJ9J ..... 576,387  
 EN1I ..... 316,800  
 VE6EX ..... 295,023  
 UA0SAD ..... 212,003  
 UA9CBM ..... 195,881

### 7 MHz

EA8CN ..... 537,840  
 S57DX ..... 494,431  
 HI3K ..... 402,875  
 PA3AAV ..... 399,828  
 RU4PL ..... 324,348  
 YZ7ED ..... 258,150

### 3.5 MHz

TA3D ..... 195,889  
 RK9AY ..... 112,694  
 CO8DM ..... 84,282  
 SP9BBH ..... 74,390  
 IV3KTY ..... 68,284  
 YU1YV ..... 64,032

### 1.8 MHz

9A7R ..... 94,822  
 UN2O ..... 45,778  
 YU1CC ..... 18,550  
 DJ3RA ..... 15,180  
 9A3RE ..... 12,788  
 SP6LV ..... 9,655

### QRP All Band

P40W ..... 5,024,800  
 LY2FE ..... 1,379,329  
 VE3KZ ..... 1,349,316  
 HA2A ..... 1,320,662  
 YT7TY ..... 1,221,597  
 K1RC ..... 953,670  
 SM3C ..... 944,168  
 RA9SO ..... 902,761  
 N3BJ/4 ..... 901,296  
 JR4DAH ..... 861,120

### Assisted All Band

OT9T ..... 8,511,750  
 K3WW ..... 8,182,098  
 N3RS ..... 7,438,200  
 V8A ..... 6,889,770  
 K2NG ..... 6,410,180  
 K2TW ..... 5,720,357  
 K1I1 ..... 5,645,250  
 K2BU ..... 4,831,386  
 W3EEE ..... 4,815,628  
 N2MM ..... 4,751,500

### Multi-Operator Single Transmitter

P3A ..... 19,243,476  
 8P9Z ..... 18,711,252  
 VE3EJ ..... 12,803,210  
 ZC4AKR ..... 12,639,016  
 EA6IB ..... 11,670,260  
 K1K1 ..... 11,590,494

### Multi-Operator Multi-Transmitter

CN8WW ..... 70,713,270  
 PJ4B ..... 47,528,180

4M7X ..... 40,142,880  
 A61AJ ..... 38,789,751  
 9G5AA ..... 34,918,107  
 EA9EA ..... 30,316,678

### USA

#### All Band

W4AN ..... 8,279,616  
 K1AR ..... 8,046,695  
 W1KM ..... 7,583,360  
 K1ZZ ..... 7,099,542  
 K5ZD/1 ..... 6,570,312  
 KQ2M/1 ..... 6,500,892  
 K1DG ..... 5,942,552  
 K3ZO ..... 5,937,057  
 W1WEF ..... 5,718,249  
 N2LT ..... 5,490,882

#### 28 MHz

K1RM ..... 789,330  
 K5RX ..... 655,044  
 K8MFO ..... 617,430  
 N0NR ..... 579,636  
 K4EA ..... 559,680  
 W6NL ..... 557,100

#### 21 MHz

K8DX ..... 864,999  
 N9AG/8 ..... 797,849  
 AA4GA ..... 690,536  
 N2MF ..... 687,357  
 NN4T ..... 633,294  
 NQ4I ..... 589,632

#### 14 MHz

K9XD ..... 292,334  
 K9CAN ..... 123,114  
 W2ZI ..... 83,636  
 W6DCC ..... 80,087  
 N7WA ..... 79,394  
 WA6IQM/7 ..... 60,756

#### 7 MHz

KT3Y/4 ..... 695,002  
 K4XS ..... 687,516  
 K7EM ..... 554,952  
 KR1G ..... 515,460  
 K8PO/6 ..... 387,552  
 K9AN ..... 296,240

#### 3.5 MHz

W1MK ..... 346,332  
 K5NU ..... 96,728  
 W0AH ..... 26,166  
 K8MD ..... 23,622  
 W4GD ..... 14,760  
 K2LP/1 ..... 12,096

#### 1.8 MHz

W8UVZ ..... 13,774  
 K4RX ..... 12,834  
 K1VW ..... 12,696  
 K4TEA ..... 12,408  
 N4UK ..... 11,977  
 W2VO ..... 4,230

#### Low Power All Band

N2BA ..... 3,347,190  
 K1RO ..... 3,021,344  
 K0EJ/4 ..... 2,754,150  
 K1VUT ..... 2,555,175  
 KM1X ..... 2,256,638  
 WD4AHZ ..... 2,177,055  
 K1VR ..... 2,142,112  
 KB1EAX ..... 2,075,532  
 KJ9C ..... 1,750,960  
 K1NO ..... 1,710,912

#### 28 MHz

W4WA ..... 298,571

WB4TDH ..... 283,300  
 N5AW ..... 264,231  
 K0RS ..... 253,800  
 WO4O ..... 245,280  
 K9WA ..... 239,100

#### 21 MHz

N4MO ..... 464,512  
 WW3S ..... 423,776  
 KU0C/4 ..... 410,711  
 K6OY ..... 280,176  
 AE0Q ..... 179,196  
 K7DBV ..... 171,872

#### 14 MHz

W0ETT ..... 65,578  
 W3KHQ ..... 55,990  
 N9WI ..... 41,644  
 KB3EHY ..... 32,220  
 W8UMR ..... 17,702  
 AF8C ..... 6,901

#### 7 MHz

W2MMD ..... 90,415  
 K9MMS ..... 88,680  
 WB2DVU ..... 83,579  
 W5CWQ ..... 60,480  
 KU6T ..... 7,841  
 K5BN ..... 6,664

#### 1.8 MHz

K1PX ..... 2,628  
 K4LDR ..... 420

### QRP All Band

K1RC ..... 953,670  
 N3BJ/4 ..... 901,296  
 N8ET ..... 809,992  
 N0KE ..... 784,080  
 N7IR ..... 748,071  
 N1TM ..... 687,492  
 W6JTI ..... 624,530  
 N9CIC ..... 497,169  
 WA3NKO/4 ..... 462,927  
 W6YJ ..... 416,160

### Assisted All Band

K3WW ..... 8,182,098  
 N3RS ..... 7,438,200  
 K2NG ..... 6,410,180  
 K2TW ..... 5,720,357  
 K1I1 ..... 5,645,250  
 K2BU ..... 4,831,386  
 W3EEE ..... 4,815,628  
 N2MM ..... 4,751,500  
 N3RR ..... 4,540,338  
 K5MA/1 ..... 4,477,640

### Multi-Operator Single Transmitter

K1KI ..... 11,590,494  
 N2NU ..... 11,213,664  
 K8AZ ..... 9,636,380  
 K1IR ..... 7,481,942  
 K8LX ..... 6,880,962  
 W2AA ..... 6,586,408

### Multi-Operator Multi-Transmitter

KC1XX ..... 24,602,524  
 W3LPL ..... 23,539,901  
 K3LR ..... 23,379,714  
 K9NS ..... 16,032,942  
 K1TTT ..... 14,223,600  
 K2LE/1 ..... 13,651,588

### EUROPE All Band

LY6M ..... 7,140,784

GI0KOW ..... 6,918,708  
 OH0Z ..... 6,212,463  
 S58A ..... 6,203,967  
 SP7GIQ ..... 5,921,220  
 4N9BW ..... 5,269,900  
 OH5LF ..... 5,255,874  
 S50A ..... 5,148,900  
 OZ1LO ..... 4,658,952  
 G0IVZ ..... 4,233,732

### 28 MHz

GW3YDX ..... 990,120  
 SM2EKM ..... 921,193  
 DL1AO ..... 818,432  
 OK2RZ ..... 780,922  
 YZ9A ..... 678,600  
 YL3CW ..... 657,354

### 21 MHz

OH0V ..... 1,051,380  
 9A5W ..... 951,993  
 G4BUO ..... 835,086  
 ON5UM ..... 626,500  
 G5G ..... 626,316  
 RZ3QU ..... 556,864

### 14 MHz

SP2FAX ..... 974,880  
 DJ7AA ..... 919,853  
 9A3GW ..... 904,722  
 OH8LQ ..... 738,164  
 HG3DX ..... 598,210  
 ES7RE ..... 593,217

### 7 MHz

OK1RF ..... 1,040,910  
 9A9A ..... 1,007,591  
 S59A ..... 863,028  
 M7Z ..... 826,485  
 LZ9A ..... 694,212  
 S57AL ..... 614,955

### 3.5 MHz

ZB2X ..... 420,875  
 LY2TA ..... 360,685  
 HA8JV ..... 289,640  
 DF9LJ ..... 263,310  
 DL7ON ..... 252,585  
 EW1WZ ..... 190,670

### 1.8 MHz

SN3A ..... 158,445  
 S50U ..... 119,600  
 HA8BE ..... 96,628  
 S57M ..... 95,933  
 LY2VAD ..... 90,440  
 IT9BLB ..... 78,020

### Low Power All Band

DA0FF ..... 3,410,784  
 S59AA ..... 3,120,620  
 EW2CR ..... 2,494,010  
 DF4SA ..... 2,452,064  
 IK0YVV ..... 2,439,444  
 G3WGV ..... 2,369,120  
 LY3BA ..... 2,352,674  
 I3JSS ..... 2,323,517  
 RA1ACJ ..... 1,933,792  
 OK2PP ..... 1,875,976

### 28 MHz

DL1LH ..... 498,750  
 UA4LL ..... 433,488  
 OK2PAY ..... 389,693  
 YU7WW ..... 344,396  
 DJ7IK ..... 318,636  
 HG8C ..... 318,006

### 21 MHz

YT0C ..... 508,546

9A5Y ..... 474,846  
 MU/OH9MM ..... 411,635  
 S50N ..... 380,856  
 SP9XCN ..... 368,160  
 8S7X ..... 286,380

### 14 MHz

EN1I ..... 316,800  
 YU1HFG ..... 160,776  
 UA3ABJ ..... 159,800  
 Z31CN ..... 140,251  
 RA3SL ..... 136,347  
 OE2GEN ..... 119,272

### 7 MHz

S57DX ..... 494,431  
 PA3AAV ..... 399,828  
 RU4PL ..... 324,348  
 YZ7ED ..... 258,150  
 S54A ..... 234,150  
 S59KW ..... 219,583

### 3.5 MHz

SP9BBH ..... 74,390  
 IV3KTY ..... 68,284  
 YU1YV ..... 64,032  
 9A7T ..... 61,760  
 S52GO ..... 57,780  
 UR3PDT ..... 56,056

### 1.8 MHz

9A7R ..... 94,822  
 YU1CC ..... 18,550  
 DJ3RA ..... 15,180  
 9A3RE ..... 12,788  
 SP6LV ..... 9,655  
 HB9APJ ..... 7,524

### QRP All Band

LY2FE ..... 1,379,329  
 HA2A ..... 1,320,662  
 YT7TY ..... 1,221,597  
 SM3C ..... 944,168  
 HA5BSW ..... 856,826  
 YU1LM ..... 658,086  
 G4ELZ ..... 468,948  
 I0ZTU ..... 443,704  
 RZ6HX ..... 439,570  
 UA4YJ ..... 421,648

### Assisted All Band

OT9T ..... 8,511,750  
 LY8X ..... 8,431,636  
 UT0U ..... 4,370,327  
 DF3CB ..... 4,343,312  
 OH5NQ ..... 4,178,694  
 OK2FD ..... 3,263,351  
 YU7NU ..... 3,242,525  
 DJ2YA ..... 2,979,200  
 DK5QN ..... 2,955,615  
 UT5UGR ..... 2,718,247

### Multi-Operator Single Transmitter

EA6IB ..... 11,670,260  
 RU1A ..... 11,360,022  
 TM2Y ..... 10,893,247  
 OM8A ..... 9,799,288  
 IR4T ..... 9,772,505  
 IQ4A ..... 9,506,760

### Multi-Operator Multi-Transmitter

OH2U ..... 22,244,067  
 RW2F ..... 21,568,933  
 DF0HQ ..... 20,013,588  
 GM7V ..... 16,595,772  
 HG6N ..... 15,457,260  
 PI4COM ..... 12,721,272



OD5/F5SQM, Jean Paul, F6FYA, and his XYL.

that edged out the Handkey Team #4 and Contest Club Finland Limitless teams to take second place. Several of the teams reflected specialties. Join the fun and create your own team of five members. Look at the rules (September CQ or the CQWW web site) and send in the list.

## Clubs

The Club Scores box reflects the addition of SSB and CW entries. As a matter of interest, the total points submitted for both contests by everyone was 7.244 billion!! Quite a fantastic number, and it is presented here for the first time in any contest. What is really remarkable is that the winning club score for the world was achieved by the Yankee Clipper Contest Club, with 702 million points. This means that 10% of all points submitted from anywhere came from the YCCC. The second-place winner was the Frankford Radio Club with 561 million points, followed by the Potomac Valley Radio Club with 247 million. DX competition was a bit closer, with top honors going to the Bavarian Contest Club with 239 million points, followed by Contest Club Finland with 200 million and the Rhein-Ruhr DX Association with 183 million. The grand total for these six clubs was 2.132 billion points! Clubs do put people on the air. Why not join the fun and join a club? Look over the list in the Club Scores box and find one near you. You can also check out <<http://www.cqww.com>> for more club information.

## New All-Time Records

The following champions set new all-time CW records for the world and their continents.

World: AB HC8N (N5KO); 28 ZX5J (N6TJ); 1.8 C4A (9A3A/5B4ADA); L28 CX5AO; L3.5 TA3D; QA P40W (W2GD); Q28 LU7EE; A28 NP4A (DL2CC); A21 WP3R (DL5XL); MS P3A; MM CN8WW.

South America: AB HC8N (N5KO); 28 ZX5J (N6TJ); LA CE3AA; L28 CX5AO; QA P40W (W2GD); Q28 LU7EE; MM PJ4B.

Africa: 28 ZS6EZ; L21 EA8FT; MM CN8WW.

Asia: 28 5B4AGD (YT6A); 21 E41/OK1DTP; 1.8 C4A (9A3A/5B4ADA); L14 RJ9J (RA9JR); L21 XV7SW (SM5MX); L3.5 TA3D; Q28 JR3RW; A28 UN7FZ; A14 RA9AA; A7 JE1CKA; MS P3A; MM A61AJ.

## ZONE LEADERS SINGLE OPERATOR

Zone	Call	Score	Zone	Call	Score
1	KL7RA	2,899,666	21	A45XR	9,363,900
2	VE2IM	8,158,683	22	VU2PAI	2,080,166
3	W6EEN	4,008,744	23	UA0YAY	473,760
4	W9RE	5,033,959	24	XX9TDX	3,333,666
5	W4AN	8,279,616	25	JH4UYB	5,139,152
6	XE1V	957,307	26	XU7AAV	4,659,280
7	3E1DX	1,472,166	27	KH2/K4ANA	1,297,115
8	VP5GN	8,408,202	28	9M6NA	7,402,265
9	P40E	13,577,850	29	VK8AV	1,372,572
10	HC8N	14,626,579	30	VK2IA	2,312,019
11	ZX5J	2,131,942	31	*V73CW	1,922,760
12	CE3AA	2,685,690	32	ZL6QH	2,213,710
13	AY1I	1,317,400	33	EA8EA	13,097,214
14	GI0KOW	6,918,708	34	*SU9ZZ	5,370,968
15	LY6M	7,140,784	35	6V6U	9,538,398
*16	RM4W	4,073,976	36	ZD8A	9,727,320
17	EX8W	5,927,040	37	5X1Z	1,352,608
18	RV0AM	2,257,270	38	ZS6EZ	2,102,496
19	*RU0LL	1,839,096	39	No Entry	
20	E4/S53R	8,391,987	40	OX/N6AA	4,146,723

\* Low Power

North America: L28 WP2Z; Q21 NA4CW; Q14 KR2Q; Q7 KV0Q; AA K3WW; A28 NP4A (DL2CC); A21 WP3R (DL5XL); MS 8P9Z.

Oceania: AB 9M6NA (JE1JKL); 28 KH7R (KH6ND); 3.5 KH2/N2NL; LA H44MX (K1XM); L28 FK8HC; AA V8A (JO1RUR); MS AH2R.

Europe: AB LY6M (LY1DS); 28 GW3YDX; 21 OH0V (OH6LI); 7 OK1RF; L21 YT0C (YU7CB); QA LY2FE; Q28 OH7FF; Q21 ES1CW;

## TOP SCORES IN VERY ACTIVE ZONES

Zone 3		Zone 15	
W6EEN	4,008,744	*DF4SA	2,452,064
K7RAT	3,466,386	EA2IA	2,443,258
W7GG	3,381,516	G3TXF	2,437,394
W2VJN/7	2,842,605	*G3WGV	2,369,120
AA7A	2,750,069		
K4XU/7	2,398,914		
N6TU	1,833,720		
N6CW	1,486,706		
W7OM	1,044,151		
KG7H	970,746		
Zone 4		Zone 16	
W9RE	5,033,959	RM4W	4,079,160
K8GL	4,024,440	*EW2CR	2,494,010
K5MR	3,516,792	UX7IA	2,431,765
VE3OI	3,413,916	EU1DX	2,314,920
K9MA	3,170,959	UA4WA	2,065,190
N4GN	3,127,448	RW1ZA	1,942,230
K5YAA	3,033,630	EU1MM	1,690,200
K4AB	3,025,770	RU6AV	1,578,528
KT8X	2,968,031	*RA3AF	1,354,200
K0EJ/4	2,754,150	RZ3AA	1,202,432
Zone 5		Zone 25	
W4AN	8,279,616	JH4UYB	5,139,152
VE2IM	8,158,683	JS3CTQ	3,370,140
K1AR	8,046,695	JA8RWU	3,290,800
W1KM	7,583,360	*JE0UXR	2,267,954
K1ZZ	7,099,542	*JL1ARF	2,215,448
K5ZD/1	6,570,312	JH2BCN	1,758,291
KQ2M/1	6,500,892	JQ6NAW	1,734,700
K1DG	5,942,552	*JH8SLS	1,680,426
K3ZO	5,937,057	JA9CWJ	1,558,374
		JF3CCN	1,439,064
Zone 14			
GI0KOW	6,918,708		
OZ1LO	4,658,952		
G0IVZ	4,233,732		
*DA0FF	3,410,784		
EA5FV	2,960,808		
MJ0AWR	2,748,434		

\*Low Power

# 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
HC8N	351/19/38	713/27/75	1144/33/93	1341/34/104	1498/37/120	1954/35/116
P40E	301/12/23	707/27/73	1453/31/100	952/37/107	1296/36/114	2011/34/121
EA8EA	195/13/49	633/22/64	842/28/70	1495/36/106	1363/37/114	1916/36/116
3V8BB	305/12/59	1000/19/77	1732/31/100	853/31/100	817/32/97	1505/34/105
ZD8A	7/6/6	311/22/59	711/26/77	953/36/94	1153/33/98	2371/37/124
6V6U	32/10/18	193/16/55	999/26/81	1194/34/95	1089/33/104	2001/32/103
A45XR	69/7/37	350/16/60	1044/23/82	1087/33/104	1235/32/101	1532/34/108
VP5GN	249/15/36	416/20/60	1003/24/86	963/31/96	1127/30/102	1643/33/105
S53R	158/10/52	441/15/65	1029/27/90	1405/34/102	543/31/86	1334/34/93
W4AN	41/17/32	158/23/69	1247/33/98	764/36/106	1018/34/108	1073/32/108

## USA TOP SINGLE OPERATOR, ALL BAND

Station	160	80	40	20	15	10
W4AN	41/17/32	158/23/69	1247/33/98	764/36/106	1018/34/108	1073/32/108
K1AR	26/10/17	326/20/74	835/30/95	1035/38/115	851/36/112	1104/32/106
W1KM	68/16/42	359/24/79	728/28/87	883/34/97	698/28/89	1283/35/97
K1ZZ	42/14/25	343/21/72	523/25/95	810/37/107	734/30/93	1325/31/107
K5ZD/1	43/14/29	368/19/61	820/25/82	788/34/100	854/30/87	1062/30/93
K0ZM/1	23/12/20	222/20/61	695/29/90	736/35/103	916/33/104	1079/32/103
K1DG	32/12/22	195/18/66	876/30/91	767/33/93	813/31/102	852/26/92
K3ZO	15/6/15	81/14/55	714/28/74	801/34/95	1180/33/101	934/28/84
W1WFF	25/10/19	195/18/66	652/29/88	819/33/91	909/34/93	807/28/94
N2LT	35/17/29	141/16/55	659/27/94	575/33/93	700/31/94	1009/32/100

## WORLD MULTI-OPERATOR SINGLE TRANSMITTER

Station	160	80	40	20	15	10
P3A	264/13/61	1121/27/98	1535/35/121	1825/39/136	1782/39/136	1761/38/139
8P9Z	194/16/33	475/27/89	1995/30/118	2242/40/141	1462/40/149	1977/39/139
VE3EJ	179/19/48	491/29/96	1410/38/128	1225/40/147	1245/39/145	1023/36/136
ZC4AKR	169/9/58	877/16/76	1144/25/100	1726/32/107	1350/34/107	1501/29/96
EA6IB	66/10/66	826/24/97	1581/35/127	1151/38/128	1761/40/129	1327/39/135
K1KI	55/20/50	284/27/89	1163/38/121	1071/40/140	1096/38/141	1081/36/139

## USA MULTI-OPERATOR SINGLE TRANSMITTER

Station	160	80	40	20	15	10
K1KI	55/20/50	284/27/89	1163/38/121	1071/40/140	1096/38/141	1081/36/139
N2NU	50/17/48	353/29/100	1043/38/123	1145/39/147	993/39/145	981/37/140
K8AZ	39/17/35	97/27/85	1023/36/117	861/40/138	986/37/136	1179/36/141
K1IR	25/11/24	505/25/84	808/29/105	862/36/126	877/33/123	826/32/126
K8LX	23/10/16	109/22/72	722/34/108	580/39/123	890/39/133	1014/35/130
W2AA	28/14/26	105/24/84	968/35/119	754/38/134	443/36/127	857/34/126

## WORLD MULTI-OPERATOR MULTI-TRANSMITTER

Station	160	80	40	20	15	10
CN8WW	1694/24/100	3248/35/121	4358/40/141	4837/40/159	4319/40/161	4612/40/161
PJ4B	777/22/55	1612/30/102	3446/37/136	3972/40/160	4133/40/156	3949/39/148
4M7X	630/21/60	1578/27/96	3196/38/129	3290/40/144	3604/40/152	3464/37/131
A61AJ	768/20/74	1913/34/115	3303/39/141	3509/40/154	3208/40/156	3110/40/148
9G5AA	112/15/46	651/25/80	2300/35/129	3685/40/147	3820/40/153	3229/40/153
EA9EA	49/5/28	1447/26/86	2992/38/135	3066/36/125	3080/39/143	2816/37/128

## USA MULTI-OPERATOR MULTI-TRANSMITTER

Station	160	80	40	20	15	10
KC1XX	291/23/63	1040/34/116	2119/40/138	2155/40/155	2028/38/150	1947/38/148
W3LPL	197/25/67	823/31/107	1812/38/135	2114/40/158	2102/40/154	2053/37/151
K3LR	149/22/56	468/31/103	1921/39/134	2162/40/154	2277/40/155	2020/39/150
K9NS	220/25/54	401/30/92	1159/38/128	1579/40/145	1701/39/139	1842/38/141
K1TTT	139/18/46	559/28/97	1363/37/120	1817/40/151	1631/37/139	1117/35/130
K2KE/1	93/16/44	297/21/77	1504/35/120	1918/40/139	1190/38/128	1195/35/127

AA OT9T (ON4UN); A28 DL4NAC; A21 OH6AC (OH6CS); MS EA6IB; MM OH2U. You can check out the records for every country for every mode at <<http://www.cqww.com>>. Look under "All Time Records."

## Comments

The CQ WW DX 1999 contests will go down as the largest—ever. Over 7500 logs were received and processed. This, as you can imagine, was a massive undertaking. It was made possible by the thousands of contesters from over 125 countries who sent in e-mail logs. The adjudication of such a large contest is only possible through the use of computers. It was only

a few years ago that there were 15 cartons of paper logs sitting at my QTH. This time the number of boxes was down to four. Of those logs about 40% were computer-generated printouts. It would be helpful, if you use a computer in the contest, to take a few minutes and send in your log via the internet. It is easy and cheaper than mailing. If you do not have direct access, maybe a friend does and you can send it that way. Please send your SSB CQ WW logs to <[ssb@cqww.com](mailto:ssb@cqww.com)> and your CW logs to <[cw@cqww.com](mailto:cw@cqww.com)>.

The overall skill of contesters who submit an electronic log is improving with every year. It is very encouraging to see this. The UBN report that each entrant can retrieve serves the pur-

pose of providing a way for the entrant to improve. We receive hundreds of letters each year from entrants asking questions and passing along their thanks for this special service the CQ WW Contest Committee provides.

## Thanks

First of all, the CQ WW Contest Committee wants to thank you, the entrants, for taking the time to send in an electronic log. It really makes a difference. And none of the results would be possible without the efforts of the 40 or so people behind the scenes who make it happen. The CQ WW e-mail robot was set up and is maintained by John, K2MM. Once you send your log and summary to either <[ssb@cqww.com](mailto:ssb@cqww.com)> or <[cw@cqww.com](mailto:cw@cqww.com)>, it is processed, decoded, and massaged by Larry, N6TW. Larry has put in many hours to make the log processing efficient and accurate. He really is an unsung hero of contesting. He processes each log and sends the information to Dick, N6AA, and K3EST. The amount of effort Dick puts into producing an accurate, state-of-the-art score analysis is herculean. N6AA and K3EST are in contact almost daily from late November to late August. Once the logs are ready to produce a UBN report, each log checker reviews the logs in his care trying to find any errors by the entrant or by the analysis. The log checkers are K1DG, N3ED, KR2Q, K6NA, N6ZZ, W7EJ, N9RV, N2NC, K3WW, and K3LR.

Each year we receive some disks that are in a weird format or are damaged. A group headed by W3ZZ—N5NJ, I2UIY, and JE1CKA—solves these problems or asks the entrant to resubmit the log. In addition to log checking, Phil, N6ZZ, serves as a sanity check at each stage of the creation of the master database. Each year I rely on the sage advice of our special advisors: K3ZO, N2AA, N8BJQ, G3SXW, S50A, KR2Q, and N5KO. The CQ WW uses the

## TEAM CONTESTING

1. Neiger's Tigers #1: 42,058,472. P40E(CT1BOH), HC8N(N5KO), ZD8A(K6NA), N6AA/OX.
2. Handkey Team #2: 31,293,680. K2UA, FG5BG(K9NW), K7RAT, W1KM, W4AN.
3. Handkey Team #4: 28,252,291. VE2IM(VA3UZ), K5ZD/1(W2SC), W6EEN(K6LA), VP5GN(K5GN), K6RO.
4. CCF Limitless: 26,245,806. EA8EA(OH2MM), BY1DX(OH2PM), OH5LF(OH1WZ), OH5NQ(OH6EI), OH6YF.
5. Handkey Team #3: 23,101,988. W9RE(N9RV), N2NT, K4AB, N4ZR, IH9P(OL5Y).
6. Handkey Team #1: 21,239,512. K1AR, K8GL, AA4S, K1DG, KB3AFT.
7. Team Nippon: 17,020,036. 9M2TO(JA0DMV), 9M6NA(JE1JKL), 9M8YY(JR3WXA), V8A(JO1RUR).
8. Dream Team: 14,778,185. LY2KM, LY2LA, LY2MM, LY5W(LY1DR), LY6M(LY1DS).
9. CCF Max-3-Towers: 11,100,577. XX9TDX(SM0GNU), OH4JFN, OH7A(OH7MA), OH6NIO, OH3WW(OH1HS).
10. Neiger's Tigers #2: 9,999,347. W2VJN/7, ZX5J(N6TJ), P40W(W2GD).
11. Team Tennessee Uno: 8,404,732. K0EJ/4, K4LTA, K4RO, NA4K.
12. Bay Code Whistlers: 7,775,379. DA0FF(DL2HBX), DF4SA, DL8UD, 9H3MH(DJ9MH), DK0DO(DL1MGB).
13. Beverly Contest Group: 7,689,386. W1ZT, K1EO, K1JE, W1NT, W1TE.
14. CCF Limited: 6,199,430. MU/OH9MM, OH8BQT, OH6AC(OH6CS), OH0V(OH6LI), OH1JD.
15. Lithuanians - Not High Power: 5,212,697. LY1BW, LY2FE, LY2FN, LY3BA, LY3IW.
16. Kentucky Contest Group: 5,105,454. K4AO, KS7O/4, W9AU, K4FXN, N4GN.
17. Team Tennessee Dos: 1,491,090. NN4T, N4IR, W9WI, N4KN, WO4O.
18. CCF No Sweat!: 648,480. OH2LU, OH4A(OH4JLV).
19. CCF Part-Timers: 575,054. OH2BCI, OH5JOC, OH6OS.
20. Team Isla Delatorre: 166,535. EA1YV5NIQ, EA1EB, EA1AAW, EA1ATQ.

### EUROPE TOP SINGLE OPERATOR, ALL BAND

Station	160	80	40	20	15	10
LYGM	127/9/49	488/18/81	1163/35/116	625/33/89	1354/33/107	877/35/116
GI0KOW	291/8/53	783/21/88	906/26/91	828/36/104	987/35/104	1036/37/113
OH0Z	240/10/47	396/18/66	704/29/87	1322/34/96	862/33/102	1083/35/116
S5BA	55/8/42	272/18/75	1074/37/119	547/33/106	738/36/110	1303/39/130
SP7GIQ	159/12/46	287/17/55	1116/29/88	744/29/72	1177/33/92	996/28/79
4N9BW	201/12/64	366/17/77	1249/28/95	906/31/97	791/33/105	447/32/107
OH5LF	72/10/41	276/22/76	604/27/89	926/35/95	748/36/115	825/36/120
S50A	65/7/42	517/22/74	1012/31/98	582/34/91	875/35/102	550/37/102
OZ1LO	259/10/57	458/17/58	513/26/76	613/31/84	821/29/81	997/33/99
G0IVZ	253/12/49	416/15/64	755/24/80	561/27/85	597/29/88	908/31/95

### EUROPE MULTI-OPERATOR SINGLE TRANSMITTER

EA6IB	66/10/66	826/24/97	1581/35/127	1151/38/128	1761/40/129	1327/39/135
RU1A	95/15/63	351/30/103	1311/39/137	1167/40/141	1025/38/143	1301/40/150
TM2Y	64/14/63	640/25/99	1337/36/123	834/40/140	1392/40/133	1311/38/136
OMBA	131/11/63	474/24/93	1549/37/126	848/40/130	875/39/135	1423/40/136
IR4T	208/15/71	494/26/98	1103/36/119	903/39/140	882/40/136	1487/39/136
IQ4A	62/11/62	281/30/109	1138/37/122	877/39/139	1039/37/138	1370/38/146

### EUROPE MULTI-OPERATOR MULTI-TRANSMITTER

OH2U	718/19/77	1173/33/118	2251/40/144	2729/39/146	2317/40/145	1766/40/156
RW2F	1002/21/89	1663/37/121	2307/40/140	2484/40/145	1937/40/145	1708/40/149
DF0HQ	731/16/75	1525/34/115	2690/40/140	1868/39/135	1997/40/145	1860/40/147
GM7V	890/15/71	1394/27/106	2014/39/134	1843/40/136	1961/40/141	1952/36/141
HG6N	727/14/74	1168/22/94	2009/37/126	1921/38/134	1930/40/133	1848/39/143
PI4COM	559/15/66	1177/20/91	1348/35/124	1776/37/132	1827/39/134	1289/40/143

constantly updated software developed by Tree, N6TR, in order to create the database. Translations of the rules into Spanish, Japanese, German, and French were done by EA3DU, JE1CKA, DL6RAI, and F6BEE. In addition, many DX advisors provide reliable country databases. The DX advisors are CT1BOH, DL6RAI, EA3DU, F6BEE, G3SXW, HS0/G4UAV, I2UIY, JE1CKA, OH2KI, OH2MM, ON6TT, PY5EG, S50A, UA9BA, and VE3EJ.

Congratulations to all the winners! Join the CQ WW fun in 2000!  
73, Bob, K3EST

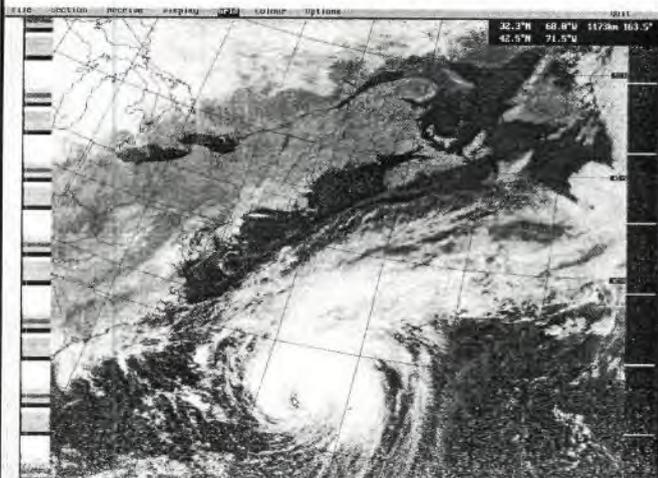
### DX QRM

Fabulous conditions, but activity was low on 160...**4X4NJ**. Weather was not very nice. Fog all around! At Sunday afternoon started troubles with power-network. 170 VAC was not enough for proper operation of TS930S. Last few hours I was running only 50W. After all, operation was finished early evening, more than 6 hours before the end of the game...**9A2U**. Very hard to work US stations from here with 100W. Only I could work few Big Ear stations!...**9M2JI**. Due to family and working commitments, decided to operate single 160m. Called by HC8N, PJ4B, 4M7X, 8P9Z, JT1JA, VQ9IO, and many more. Missed my 1000 QSO goal, but looks as if at the end I'll get a new world record instead...**C4A (9A3A/5B4ADA)**. Sunshine, sandy beaches, and CQWW. What a way to vacation! Thanks to everyone who called...**C6AGY (ND6S)**. Very good DX condx on 14 MHz this weekend. It was a real victory for my wire Vee dipole and old FT-707. I didn't catch zone 2, but at the end HC8N gave me zone 10...**CX9AU**. Glad I could use the great antenna system of Ben, DL6FBL, during the contest. Really had a blast. Often could break pile-ups on the first call. Found out only after the contest that the targeted EU Low Power record was at 3.4M (EA7CEZ, 1994) rather than 2.6M (S59AA, 1998). Should be a good incentive to go for the real record in 2000...**DA0FF (DL2HBX)**. I came so close to the European Single/Assisted record. If the contest had lasted only another 20 minutes...4 hours without the linear due to recordings in the nearby recording studio despite prior agreements...**DF3CB**.

All antennas were running fine on Thursday already! Unfortunately, TX and PS developed some problems right before the contest, so no time for sleep again...had to take 7 hours off from Saturday to Sunday. Used second radio for the first time; did not use it very much but learned a lot and hope to improve it. DXing during the test was too tempting, so I spent too little time running stations myself...2.5 million is my all-time high; happy I did it with low power. Many thanks again for running the contest!...**DF4SA**. First time during the last 36 years of WW DX we had a broken 160m vertical and 40m beam due to heavy wind...**DL0KF**. Due to a failure of my PA I couldn't work as effectively as the last years, but I think I managed it ok. Again it was great fun and I'm looking forward to CQ WW in 2000...**DL1EMH**. Nice condx. My first WW DX with all 40 zones on 10m. See you in next "Millennium WW DX 2000"...**DL1LH**. Hey, this was *big fun!* Originally I had plans for doing my first WW DX since 1991 in a serious way. Well, things turned out to be not in my favor. I arrived at the station (which is at my parents' home, 300 miles from where I live now) at 21:30 local being very tired even before takeoff!! So I decided to go for 1500 Q's and/or 1.5 million pts to add to the RRDXA score. I have never ever seen the bands so crowded. There was a 4 minute period on 15m where I worked all continents in a row, with the antenna bearing northeast! Does it get any better than that?! It was great to see all the activity, meeting old and new friends. Congrats to all the real big scorers from all over the planet and thanks to my YL for trying to understand how this can be fun!...**DL3YBM**. Switched on my radio to give some points to good friends. Left the chair 20 hours later. Millennium condx...**DL7ALM**.

Super condx! Sorry that those Asian stations didn't stay longer than the EUs were there.

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A new USA record was set by Bill, W4AN.



HC8N was operated by Trey, N5KO, to a new world record.

With 100W you have to be there when the bands open up otherwise you don't come through in the pile-ups. Managed again to improve result from year before, this time with almost 10% increase in points. Was this the highest score that I can reach from here?...**EA8CN**. Super contest. Storm force winds kept the tower down again this year and shifted the beam 90 degs out of true so made beam turning fun. You know the wind's strong when it holds the beam steady against the rotors torque—Hi! New personal best though, so am very happy...**E16FR**. I had an opportunity to taste low power entry, spending about 18 hours on the air, wasting my time breaking through the pile-ups. But that is good experience...**EO1I (UT1IA)**. I am sorry; problem with electricity in north Moldova...**ER0N (UT7ND)**. As usual a lot of activity, fun, fatigue. Anyway, everybody is satisfied. Thank you for a great contest...**EW1WZ**. Thanks for the contest. Good propagation to States and big activity from this side makes a lot of fun...**EW6GB**. It's a new radio club, and it was the first time we were together in a contest. Some operators were in their first contest...**FBKHZ**. First time as Single Op from the "other side!" Great conditions, great ops, great fun!...**FG5BG (K9NW)**. Worked several BY, BV, JA. The new antenna seems very good on 10 meters. Most Asian came from the south during night...**FM5BH**.

DXCC in a weekend, I never thought it possible!...**GBDEZ**. What a blast! The best contest of the year without a doubt. After success on 15m LP last year, I tried 10m this time. Had some great runs into the USA, but struggled to find some "easy" countries when in Search & Pounce mode. Very pleased to make DXCC with 100W in a weekend—unassisted! Tried using my reserve TS850 (albeit one without a CW sidetone) to search for mults whilst calling CQ for the first time, but will have to improve my technique here. Gales not too bad this year, no floods either (yippe) ...**GMNTN**. My first CW CQ WW. It was a little bit too fast for me but great fun, I must do it again next year...**GBSAH**. Pleased to work AH2R. Great ears at that end and A61AJ who had a fab signal into Europe...**GBWAT**. Great contest; broke all records. Condx very good but found some of the "pile-ups" hard to break with the 5W. Had a great time; roll on next year...**G3LHJ**. There's definitely a high correlation between the CQ WW CW weekend and strong gales in Devon. The antennas were all being smashed about by the high winds again this year...**G3TXF**. Can't compete with G10KOW all band from plain old G, so I had a shot at 15m and enjoyed the different experience. Beat the

10-year old record of OH6M CW, but I was not the only one to do that. Cndx good, but not as good as they should be at the top of the cycle. The band closed quite early both days...**G4BUO**.

Age 83 and managed my best score ever. Computer kept saying zone 5 for all W4's and hope I logged 4 when given it. After studying UBN for 1997 for G6QQ and 1998 for V29QQ tried to check doubtful calls and deleted some. Not everyone says "r" or "tu" so uncertain sometimes if I had a valid QSO though it may have been okay...**G6QQ**. I entered this year's contest as a check log entry as the dipole was practically useless on the LF bands after storm damage (although 5C8M was worked on 160m prior to the contest!). The new Yagi allowed me to hold a frequency throughout the contest. I called CQ all the time with only the last hour searching & pouncing to get the score past 2M. My aim was to have as many QSOs as possible and to avoid last year's comment, "Where were you?" Although I guess many missed me on the LF bands, I achieved my objective and had fun with the pile-ups...**GD4UOL**. Thanks for running the contest. Might have had a slightly better score if a gale of wind had not threatened to remove the mobile whip. I am always amazed at the perseverance of DX stations when trying to copy my QRP sigs...**GM4HQF**. A lot of fun and very good propagation. Not easy to be QRV with low power on 160 in downtown Bogota, but fine with the slopers on 80 and vertical on 40...**HK3JBR (F2JD)**. My first SOAB CQ WW DX from a multiplier place. Fantastic. Lot of problems with thunderstorm and antennas, but I am happy. Looking forward Y2K...**IH9P (OK1FUA)**.

What a blast! Missed one zone on 10m for a WAZ in a weekend. I operated only few hours with an MP without filtering. Let's figure what I heard with a 500 Hz stock filter only!...**IK0HBN**. It was wonderful because it was my first WW!...**IN3NOR**. Murphy visited me and jammed my computer hard disk. Has anyone tried magic keys "CTRL + ALT + DEL" before saving log? It's a terrible experience...**IV3TQE**. Great fun as always and this year a better score. We lost one PC in our network Sunday afternoon and suffered some interstation QRM despite fitting Dunestars. We liked the condx and had a better setup and sharper operators than in previous years. Watch us in 2000! Planning has now started. My 47th birthday was on the Sunday of the test and everyone stopped sending when the XYL of SV5TH presented me with a birthday cake. Very nice...**J45T (G4OBK for J45T)**. The propagation on 28 MHz band was very good in this contest. I enjoyed so much...**JA1XRH**. With our location (middle of Tokyo), bands were noisy especially in low bands. And our antennas for low bands were mainly DP, so operating low bands was tough for us...**JA1ZLO**. Surprised to be called by A61AJ on 160m during working W6/7 hours! Also great to be called by zone 14 (three DLs) on 160m! The first night on 40/160m was awesome, but the second day was worse. Glad to make my best WW CW score...**JA8RWU**. I enjoyed this contest very much for stable condx on 21MHz band long time. I wish to get more points next year expecting more sunspot numbers...**JH3AIU**. The score is increased little bits more than last year. It's my record. I could not QRV on 160 meter due to the trouble. The condx on 40m is very good for me...**JH4ADK**. I had only 2-hour sleep and few rest. So I had done my best and marked new JA record in Single Op category...**JH4UYB**.

With a lot of pleasure I have participated in this competition, the 1999 CQ WW DX CW Contest. I have enjoyed it as always, now with a new experience of competing in the category of QRP and many desires to have a good and happy weekend and to greet to the excellent old and new CW operators that deck out this party. As always it happens, there was a lot of QRM of CB pirates angry, protesting the high CW activity! In this band (28 MHz) listen truck drivers from Argentina and bordering countries, with their colleagues, families, and friends, in the face of the easiness of the authorities. Could you help us, could the ARRL help in this problem? It is the same as drugs. I think it is an international problem. In spite of everything we had a great party, with many, many stations. Some alone listened, because with the impossible QRP to work them. My bilateral deafness of 90% influences in the bad operation, for what I apologize to those I was not able to copy...**LUTEE**. Had a blast, got a kick out of being called by 5A1A!...**KG4RF (K8RF)**. Most QSOs ever, most mults ever, biggest score ever. Wow! The only dark cloud was the lack of a decent opening to EU on 10m. At the top of the sunspot cycle we get our best score ever on 40!...**KL7Y**. Didn't get some of the long path propagation that I heard other Caribbean stations taking advantage of on Friday night. Antennas needed to come down between phone and CW due to strange late season hurricane. Went into contest with objective of breaking 10m North American record. Mission accomplished but was also accomplished by several others. Good to get KP2A back on the air again...**KP2A (KW8N)**. This CQ WW CW was my first contest from SA. Good cndx, many stations on the band, but nobody answer my call. EU worked with USA and JA. USA and JA with EU, I feel like on VHF with QRP...**Z55LY2BBF**. Very nice conditions on 10, even forget about 20m till Sunday morning...**LY2JJ**.

This is my best result since I take part in CQ WW DX Contest. Practically all QSOs I made after my call. But 110

different countries is a good achievement for my small rig...**LZ1AG**. If some of the speed merchants slowed their callsigns down a bit they would be called by many more stations like myself who just could not copy at that speed. Thanks for organizing a fine contest...**MM8BQI**. Only 13 hours on the air, a lot of fun despite missing a lot of multipliers because of low power. Highlight was HC8N, really the loudest DX signal here. SU9ZZ called me and gave me a new one on 80!...**OE2LCM**. My deepest respect to FK8HC and PY0ZFO, who both kept waiting until the Europeans stopped QRMing and who pulled me into their logs! Also big thanks go to V73CW who called me on 15m. I had a QSO with Mike at R1AND days before the contest and he said he would look for me. Guess what? He really made it! All in all a fantastic contest with many surprises and good participation. It really seems to me that CQ WW contests make the earth tremble year after year...**OE5OHO**. Trashed score target...got 15% more than anticipated. Thanks for the last contest this millennium!...**OH6V (OH6LI)**. We missed zone 29 for the super jackpot—a historical 4-band WAZ in CQ WW CW. I think now OH1F and OH2U are holding the record of 3-band WAZs in CQ WW CW. On 80m only WAE country worked was 4U1VIC, so this makes our effort as the first Scandinavian 5BDXCC multi-single log ever. Well, sad to us but OH7M beat us. Also SK3W is very close (9.3M) so we are anxious to see what is the new final Scandinavian record...**OH1F**. The demanded encore of the Paksalo Philharmonics (aka OH2U) was yet another blast! Some musicians were on their pre-scheduled solo tours, but by tuning all the instruments to the limit the rest of the orchestra went through the main concert of the millennium with style, and the audience was given a thrilling show with the climax of making the long-played European Record performed by LX7A to become history. The old millennium was closed as the millennium of the Paksalo Philharmonics—the OH's to you!...**OH2U**.

1998's 20% score penalty made me want to improve my logging and give it another try. Tried to pay special care in not logging any uncertain QSOs, gave my callsign more often in S&P, etc. Let's see how it turns out this year. Condx vy good and my strategy worked fine. Got good night sleep before the start so had no problems in staying awake for full 48 hours. Only last 2 hours were difficult, but nothing compared to 1998...**OH5LF**. Excellent conditions and excellent contest. No low-rate (OH-scale) hours in principle. But the operator was not capable to keep up any rates after 40 hours nor was he wise enough to take a nap at that point. You all who are like-minded know how it is. The sadomasochistic pleasure, which is hard to explain to non-believer...why even try it. Thanks everyone for short but nice QSOs. Special thanks to station host Pete, OH5NQ. Also thanks to Peter and Axel, OH5NW, for mental support when visiting me during the test. Too bad you could not help much. Some things a man just has to do alone...**OH5NQ (OH6EI)**. It was nice to work CQ WW CW from home QTH after three years! A lot of multipliers were on the air and together with good conditions it was nice to find them!...**OH6YF**. Quite good conditions even from north. Missed some (easy) EU multipliers. Spent much time on searching multipliers and that resulted in less QSOs than last year but I have never got so many mults before and the score seems to be much better. Hope 2000 gives even more improvement...**OH8LAE**. Good propagation again—all 40 zones worked! Never thought that it possible to complete WAZ, DXCC, WAC and maybe WAS, WAE, etc., in one contest!...**OK1KT**. It was hard to rotate the antennas in heavy snow and wind. More than 1m of the snow everywhere; 55m high tower became more than 10cm frosted...**OK1RP**. My greatest contest ever. Super condx and very nice activity. Thanks to CQ for making this show possible. See you next year for sure...**OZ1AA**.

First contest with over a 1000 QSOs. The new antenna seems to be working alright now. Also was signalled quite a lot on the cluster, so if it is not acceptable, please scratch it out, but I think no penalty should be attached to this correction—only if I take it out myself and the operation appears to be legit then I am doing wrong to somebody else...**PADMIR**. It was a propagation-wise interesting weekend. The band was open to every part of the world. Even at local noon I could hear K8PO working a ZL3ATA with very strong signals. Sad thing was that I missed two potential 7 MHz new ones: heard T32PO with good signals but I could not break the North American pile-up; the same thing with JD1BIC/JD1. No activity heard from zones 30 and 38. Hope they will be around next year...**PA3AAV**. As I remember well I sent in a check log for the 1998 CW contest. But I discovered in the October CQ issue the log was changed into a "normal" contest log. Thanks to whoever did this. I hate the after-contest logging work. This year I used the "Superduplex" program and again had a lot of fun. Thanks again for a superb contest, and will be around next year! Also think some very loud ops do need a hearing aid...**PA3BFH**. Will be back again...**RA3XA**. CQ WW DX CW is the most wonderful great competition. 6D2X had heavy pile-up of USA on 80m we could not break through; next time please try operate for EU sometimes. The result raised quickly at the last hours: 10 minute of operation on USA

(Continued on page 117)

pile-up gave 0.1 meg points. It was a pity that power-line breaks consumed much time (4 hours of operation with diesel engine). Our result could have been better. We spent 22 weekends at the site of RU1A before CQ WW in hard work...**RU1A**. It was very good propagation on 10m. All antennas are homemade. I like working QRP! I listened good activity from USA...**AZ6HX**. Many station heard, but not everybody heard me (hi)...**AZ9CX**.

My firstborn son, Martin, was born just 9 minutes before the beginning of the contest, so I have been "radioactive" only for few hours on Sunday...**S53AU**. Everything looked just perfect 'til Sunday morning. Then Murphy comes around! Looks like a heavy-duty truck full of workers set to change the line transformer for the whole city quarter. Power's gone for 7 hours. Would certainly approve their action if it just wasn't so ill-timed! This was a real DXpedition, carrying all equipment and antennas and setting up everything from 160 to 10m in just two days prior to the contest. When you show up at the check-in window with over 80 kilograms of equipment, you certainly don't qualify for any discounts on the access baggage...**E4/553R**. First time I was QRV on each band with 2 ant, but day before contest big storm destroyed 4 ant. This is reason for lower scores on 21 and 14 MHz. On 1.8 and 80m big QRM all time...**S58A**. Lost second ants due to icy/fog after 18 hours. Surprised to be called by T32PO, FK8GM, KH8/N5OLS, V8A, R1AND, AP2, TZ6, TU2, and many other rare DX! Good condx and also some aurora at the end so all sigs have been ringing and lot of echoes...**S59A**. The location here is very effective. With one beam heading (330) we worked all Ws, whole EU and JA. We have them all within one minute sometimes. It was strange that we did not work a single JA on 15m. Saturday afternoon 10/15/20m were totally dead for about 2 hours...**S92CW**. Greatest surprise: being called by 6D2X on my CQ. Worst surprise: hearing SP5? three times in a row sent by AL7IF (needed double multiplier) in terrible pile-up and finally he made QRT!...**SP5DDJ**.

During the contest sailed from 40.30°S 060.20°W to 49.30°S 058.30°W (to VP8f). For 8 hours I loaded 35 kg fish cartons into holds on Saturday (for a change, hi). Never believe those who say "your barefoot TRX and vertical are doing FB job." Life is too short for QRP and small antennas!...**UA2FM/mm**. Nice contest, but very hard to work a DX with 150W even with good antennas!...**UR5WCW**. Enjoyed the contest but missing zone 13 was a shock...**US5WE**. First time single band (40m) operation. Just three DXpeditions are passed from the announced list. NA QSOs equal EU QSOs = 40% + 40% (600 Q's each)! Enjoyable experience! 30 Q's only behind of '93s zone 16 leaders result...**UX1UA**. I was not able to operate the last 8 hours of the contest due to a power outage here on Kwajalein, so I grit my teeth and sadly "threw in the towel." After all the hours of operating alone, the power man down the road did not want to see me coming...**V73CW**. I never had such huge pile-ups! Thanks to all who moved for me as well as to VE2CSI club and personally to VE2NN for letting me use club's facilities...**VE2IM (VA3UZ)**. A great weekend, and a great contest...**VE6EX**. My very first attempt at a contest with an official entry. Look out next year...**VE6TN**. My first semi-serious try, from a city lot. Amazingly consistent signals from CN8WWW on all bands...**VE7XF**. I enjoyed plenty of fun and sleep in the single band 20m entry. It was great working many strong signals on long path USA, east to west. My bonus was to pass the zone 30 and Australian records (20m single band high power) set in 1989. After 20m closed, I was pleased to give zone 30 to 221 stations on 10m during the last 100 minutes. A separate check log has been forwarded for the 10m QSOs. Special thanks for pointing your beams to Australia...**VK4EMM**.

Wow, 10m was hot! I've never heard the band so open. Must be that contest-induced propagation! I even got 9G long path for an all-time new CW DX QSO...**VK4ICU**. Had to be out Saturday morning. Have been getting too addicted to running so thought it was time for a bit of masochism operating 80m. Really hard work from down here with summer static to add to the joy. We don't give enough credit to operators who do this contest after contest at multi-multis. All the glory goes to the single ops on an island near the equator with their fast runs, which is easy compared to 48 hours on 80!...**VK5GN**. I was surprised at the amount of activity. The YB/BV/BY intruders got a real shock—for a change! Once again, I had a hard time trying to make QSOs while fighting the NA/EU/JA clique! I also spent a lot of time making and keeping skeds, and QSY'ing, for people wanting zone 29, to the detriment of my own score! This, too, will be noticed in the log...**VK8AV** (Your QSY'ing is really appreciated by many contesters!..ed.). While some may complain about a lot of lids on the air, I must say that there are a lot of great ops on the air who really know the code. Thanks to all for a really fun contest...**VP5GN (K5GN)**. This is my second CQ WW CW Contest. Band conditions are picking up...**YB8UNC**. Glad to get JT1JA on topband after waiting; his/her signal peaked for 80 minutes!...**YCBLOW**. I used a computer for the very first time in a contest. What a relief making the log. Bye-bye, paperwork!...**YU7WJ**.

Tropical fever hit. Had to stop Saturday morning!...**YV4A (OH8XX)**. I again operated from the Quartz Hill Amateur Radio station ZL6QH. I was disappointed with a lower score than last year. Activity and conditions appeared to be gen-

CLUB SCORES

USA		DX	
Yankee Clipper Contest Club	702,296,971	Bavarian Contest Club	239,287,350
Frankford Radio Club	561,848,239	Contest Club Finland	200,725,281
Potomac Valley Radio Club	247,145,726	Rhein-Ruhr DX Assn	183,847,231
North Coast Contesters	98,919,747	Marconi Contest Club	94,275,019
Society of Midwest Contesters	77,992,687	Slovenian Contest Club	90,085,930
Northern California Contest Club	65,879,656	Ural Contest Group	61,919,511
Southern California Contest Club	49,878,519	Chiltern DX Club	46,934,821
Mad River Radio Club	48,330,781	Aphrodite Contest Group (5B4)	46,383,992
Southeast Contest Club	45,835,590	UA2 Contest Club	45,992,538
North Texas Contest Club	40,815,413	Russian Contest Club	44,238,852
Florida Contest Group	40,087,806	Kaunas Technical University RC	38,388,548
Central Arizona DXA	33,523,262	Japan Crazy Contesters Club	37,796,060
Tennessee Contest Group	24,494,914		
Minnesota Wireless	23,652,945		
Rochester DX Assn	21,528,184		
Western Washington DX Club	20,660,984		
Eastern Iowa DX Assn	19,977,008		
Texas DX Society	17,920,728		
Florida Contest Club	17,812,634		
Central Texas DXCC	17,804,977		
San Diego DX Club	16,801,478		
North Florida DX Assn	16,109,094		
Southwest Ohio DXA	14,730,906		
Western New York DX Assn	11,024,969		
Willamette Valley DX Club	9,184,315		
Kentucky Contest Group	9,014,144		
Carolina DX Assn	8,380,897		
Grand Mesa DX Club	6,496,513		
Yegua Valley Contest Club	6,395,019		
Hudson Valley DXCC (W2)	5,438,434		
Mother Lode Contest & DXC (W6)	4,140,014		
Southeast DX Club	3,949,037		
Northern Arizona DXA	3,128,279		
Salt City DX Club (W2)	2,809,304		
Mile-High DX Assn (W0)	2,544,823		
Ozark Contest Club (W5)	2,107,542		
Kansas City DX Club	1,888,018		
Metro DX Club (W9)	1,309,777		
CA Central Coast DX Club	1,246,411		
Order of Boiled Owls (NY)	992,567		
Athens Co. ARA	959,380		
West Park Radio Ops (W8)	753,154		
Mississippi Valley DXCC	682,805		
American Red Cross EC (W2)	681,897		
Southern California DX Club	659,031		
Great South Bay ARC	658,702		
Magnolia DX Assn (W5)	633,791		
Oklahoma Dx Assn	592,158		
Sterling Park ARC (W4)	448,788		
HeartLand DX Assn	443,761		
Northern California DX Club	385,910		
Northrop-Grumman RC	335,953		
Ozaukee Radio Club (W9)	241,092		
		Croatian Contest Club	37,117,717
		Low Land Crazy Contesters	34,345,146
		GPDX (CT)	34,224,609
		Top of Europe Contesters	32,613,683
		SP DX Club	32,141,919
		YU Contest Club	31,685,694
		LNDX (F)	29,270,509
		Lithuanian DX Group	28,946,119
		Ukrainian Contest Club	28,119,832
		French Contest Club	27,173,266
		LA Contest Club(LA)	24,427,992
		Vojvodina Contest Club (YU)	22,601,142
		Crimea Contest Club	21,275,692
		Czech Contest Club	19,490,782
		Moscow Contest Club	17,531,812
		Northern Lithuania DX Group	15,069,872
		Berghem Contest Club (I2)	13,776,852
		Aruba ARC	13,126,564
		TuPY (PY2)	12,873,398
		Lynx DX Gang (EA)	11,515,583
		Sky Contest Club (YU)	10,555,088
		Belarus Contest Club	9,892,189
		Kiev Contest Group	9,496,486
		Lyon DX Gang(F)	9,239,910
		Mariana DX Assn	8,790,719
		Araucaria DX Group (PY5)	8,686,885
		Shakhan Contest Club (RA6)	8,629,329
		Radio Luxembourg	6,560,876
		Z30M Contest Team	6,399,532
		Pacific Rim Contest Club (VK4)	6,380,401
		Western Siberia DX Club	6,231,697
		Lichfield ARS	4,689,516
		GADX (LU)	4,621,066
		Sao Paulo Contest Group	4,591,158
		Vologda Radio Club (RA1)	4,136,931
		British Columbia DXC	3,806,311
		LU4AA Club	3,744,718
		GACW (LU)	3,600,502
		Koryazhma-DX-Company (UA10)	3,267,274
		HA DX Club	3,104,038
		Ivanovo DX Club (UA3)	2,803,337
		ALRS (UA1)	2,716,081
		SP Contest Club	2,703,865
		Capital Region DXC Club (VE3)	2,631,064
		Central Siberia DX Club	2,331,249
		Venezuela DX Club	2,290,630
		North Patagonia DX Group (LU)	1,882,823
		YO DX Club	1,838,130
		LZ4KAC Club	1,790,082
		Saravejo Contest Group	1,643,445
		LZ Contest Club	1,552,468
		Fox Contest Club (YU)	1,504,447
		UT4UWT Club	1,314,369
		Amsterdam DX Club	1,222,783
		Far East Islands DX Club (UA0)	1,195,250
		Ferrara DX Team	1,129,754
		Obninsk "QRU" Club (RA3X)	1,081,224
		Noviomagnum (PA0)	1,054,129
		Radio Am. As. Western Greece	1,014,195
		Activity Group Belarus	905,161
		YU DX Club	646,689
		Tallinn Radio Club	583,897
		NOL (ON)	582,035
		Guara DX Group	555,869
		Scout Club "Spid" (SP5ZDH)	450,893
		ARM (ER)	253,433
		YV Dxperts	213,611
		K DX Group (PY5)	180,869

erally poorer on all bands. A mains power failure at 1300 on Sunday did not help; had to start up the petrol generator and run the station at reduced power for several hours! Thanks to the organizers for another fun contest...**ZL6GH (ZL1AZE)**. Thanks to Steve, G4EDG, for popping down, radiation hardened from ZK3, to help out. I reckon Steve is probably responsible for single-handedly scoring two thirds of our run QSOs, and he carries on what is starting to become a tradition of excellent CW guest ops from G-land. Low point: turning up with a box full of cans of "contest spaghetti" and baked beans and sausage, only to find the microwave oven gone. High point: Tony's wife Mary arriving with a carload of food: Shepherd's pie, bowls with nuts, raisins, strawberries, a huge bowl of lovely creamy desert with bits of kiwi fruit, and, a stroke of genius—a square meter slab of chocolate! Witnessing 15m signals from Scandinavia

wrap around the globe a few times... I quickly recorded a bit of OH1JD in a WAV file. At times the callsign can be heard almost twice...**ZM2K**. 10m conditions made up for the disastrous antenna project and power line noise. I had to snatch some sleep in the middle, but whenever I was awake the band was open to somewhere...**ZS6EZ**. Saturday morning somebody switched the sun off; all bands suddenly died. A great contest though...**Z2Z (PY2YP)**.

USA QRM

Personal best here. Congratulations to all the participants on their fine efforts. Great to hear more participants from Asia. Highlight being called by XV7SW on 15m...**AA4S**. The contest was a lot of fun as usual. I picked up some new ones

and turned in a better score than last year. Thanks to all for the great contest!...**AABUP**. Thanks for a fun contest. I operated QRP with my old Ten-Tec Triton IV at 5 watts out. My antenna is a 105 ft. dipole at 35 ft. center fed with window line. Worked several new countries. I was surprised how easy it was to work DX on 40 meters!...**ABDDF**. I did double my QSOs from last year and 2.5 times the score, so quite an improvement from last year!...**K1EC**. We decided to do a multi-single only about ten days before the contest and it worked! Only had to climb the tower at midnight twice to repair a trap in the tribander. Relatively warm weather (0 degrees C) made it easy!...**K1IR**. This was my personal best effort for the CQ WW CW. Condex were excellent. 10m was hot as a pistol. This is the best fun you can have with your headsets on...**K1RC**. First single op in years. Great conditions meant that there was plenty to do, even with low antennas and 100W...**K1RO**. Excuse: Wish I could think of one! Prepared more for this contest than perhaps any other, but still couldn't get a good run going. Did well in the pile-ups though, and mults were well up on last year. Congrats as always to the winners and I just hope to make the top ten!...**K1VR**. What great conditions and lotsa fun. The only way to describe 10m was *hot!* Great to hear the rare ones answering my CQ's too! This will be a contest to remember!...**K2NV**. Many thanks to K2DM and K3PP for replacing our rotator on very short notice. Without them, the K3PH score would have been zero...**K3PH**.

Great conditions on 10m to Asia for a change. Limited time to operate, but enjoyed contest...**K4LQ**. The CQ WW CW is *the* contest!...**K4RO**. Decent condx Friday night. Saturday night was different story, however. The propagation gods decided to make things very difficult indeed. Signals from Europe were way down (at least 20 dB) from the same time Friday. This took all the 100W EU stations out of the picture. I figure 4 or 5 hours (abt 300 QSOs) worth of EU running were lost. I've come to the conclusion that there is no consistency to the propagation on 40m from one contest to the next (not a big surprise)...**K7EM**. Thanks to Bob, NX5M, for use of his fine setup. I had a blast with the stacked 10m tower. Great conditions. Very surprised that I never heard V26K. Opening the contest with 9M6AAC already in the log at 00:01 was a good sign. Surprised how early 10m opened to Africa (30 min. before sunrise) and also surprised how fast it closed down totally (1 hour after sunset and the switch went off)...**K8EP/5**. Great contest! Nice to work 100 countries on three bands. Once again, the "contest of the year"...**K8GL**. I was portable at my Florida QTH for this contest. Much better propagation than "back

home in Indiana"...**K9BG/4**. Amazing what a few sunspots can do!...**K9MA**. Great fun, and very pleased with my score considering my limited antenna. It was also nice to see most stations took account of the slower Morse senders. Amateur radio at its best!...**KB3EHY**. I didn't know that you could work DX on 40 with a wire in the backyard. Yahoo!...**KC8FXR**. Had a great time. 10m was awesome. Doing search & pounce it took me 2 hours to go from the top of the band to the bottom from all the DX!...**KC9TV**.

Nearly worked 5BDXCC in a weekend; just missed on 80, single op. Best score ever...**KF2O**. Best experience: a wide open 15m and holding a run there for an hour. Second best was being ready to give up with ten minutes to go on 40 CW, then finding five more mults in the last ten minutes of the contest, way high in the band! Worst: Having to delete my only QSO with JT1 because he could not get my call...**KJ9C**. Wow! Saturday AM saw the rate meter over 100 doing S&P...**KM2L**. In 1997 I operated with my old callsign, KG7XC (and even had my photo in CQ magazine!). This year several factors produced a score almost four times greater than 1997. First, the conditions were fantastic! Then, my "new" callsign, KN7Y, is much shorter than KG7XC, and I tried to be more efficient with the exchange. My new antenna is about 15 to 20 feet higher than the one I used two years ago at my dad's home. Also, I used Write Log for the first time in a contest, and think it is great...**KN7Y**. Great contest. The echo on 10 meters made it easy to tell USA ops from the DX...**KW4DA**. This contest reminded me of ice fishing—looking into the hole, jigger the line, and waiting for a big one to bite! Fishing better Saturday than Sunday. Biggest thrill: listening to the operator of T11C copy complete callsigns at such speed...nice job! Great contest...**N8RA**. Personal best, first time over 1 million as single op (any contest!)...**N1AO**. Lots of contacts, Lots of fun, Little sleep!...**N2NU**. This was my first serious single op effort in the CQ WW Contest in over 25 years. I had a blast, but just can't stay up long enough to compete with the younger guys, much less use two radios at one time! Congrats to Charlie, K3WW, for a super effort in the SOA category!...**N3RS**. Wow! Yes, 10 and 15 were terrific, but this was also the first time I've been able to really run on 40...**N4GN**.

What can I say? This was the best of the best. My best in my over 50 years in the hobby. It was one for the ages. You didn't need 1500W and a stack to run 'em this year. This is my favorite test and I can't wait until next year...**N4MO**. First time to break 1,000,000 on CW! The XMatch™ antenna tuners are working magically! Not bad with some sleep...**N4XM**. Wow! My momma always told me that if I

was good and saved my pennies, one day I would get to operate the CQ WW CW at a sunspot maximum with decent antennas, and it would be *fun!* It was...**N4ZR/8**. When condx are good 10 is a low power station's dream! Operated from my parent's old home where I made my first Novice contact almost 45 years ago...**N5AW**. The multipliers and condx were incredible—A61AJ, XU7AAV, SU9ZZ, HZ1AB, A45XR, etc. Wow, what a treat!...**N6AR/4**. We dedicate our score to the memory of Bill Adams, W6BA...**N6AW**. Had a super time. Great condx. Beat my last year's claimed score by 33%. Working VK and KH6 one hour before sunrise on 160! The 80m phased array is very quiet compared to the dipole!...**N6RFM/1**. Best 10 and 15m openings I have heard in a long time. Not as many cases of automatic CQ's being used to hold frequencies as usual...**N8LM**. Almost made DXCC with QRP on 10m. Awesome condx!...**N9CJQ**. Great radio weekend. I concentrated on the mults. Bands either didn't close or closed very late. Like having a nickel to spend in a huge candy store. With all the opportunities I ended up S & P the whole time...**ND5S/8**. My personal best in CQ WW CW. I operated 30 hrs. Wish I had stamina for a full 48...**NX7K**. Great condx to both Europe and Asia. Colorado was a good DX contest location for a change!...**WB7M**. Ten meters was great. Every one that I could hear could hear me! Almost made my goal of 100 countries (well, 95 is close)...**W3CP**.

Contest not for 90 yr. olds...**W3EJVW** (FB job!...ed.). Decided to try single band 40m since I could be on at night. I was influenced by the great signal reports I got out of Europe with the beam and 700W over all this ocean in my front yard. QRN on 40 was tough late Saturday night. And the JA's are great ops! Path to SW Florida is pretty slim on 40, but they stayed with me to get the calls correct...**W4ZW**. First time as a guest op. W6EEN's 40m antenna is a killer. The JA run begins on 40m at W6EEN when you point the antenna at JA!...**W6EEN (K6LA)**. 10m was great fun again, even from out west. As usual, I had trouble getting enough QSOs due to instinctive desire to maximize multipliers instead. What was lost in score was made up in fun...hunting while running, made possible by the stereo in the FT-1000D and a rotary dipole on the same mast, broadside to the Yagi, switched or phased as needed...**W6YA**. Wow, what a difference a Yagi and great band conditions make! I just put up new Force 12 Yagi (in place of my G5RV) two days before CQ WW SSB, so this is my second contest with antenna I can point! I doubled my score over 1998 with the same operating time! 10m was unbelievable! Thanks for sponsoring the best contest going! Us little pistols count the

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Number groups after call letters denote following: Band (A = all), Final Score, Number of QSOs, Zones, and Countries. An asterisk (\*) before a call indicates low power. Certificate winners are listed in bold. (All country terminology reflects the DXCC list at the time of the contest.)

### CW RESULTS SINGLE OPERATOR NORTH AMERICA

#### UNITED STATES

K1AR	A	8,046,695	4177	166	519
W1AK	*	7,583,360	4019	165	491
K1ZZ	*	7,099,542	3777	158	499
K5ZD/1	*	6,570,312	3935	152	452
<b>(Op: W2SC)</b>					
K02M/1	*	6,500,892	3671	161	481
K1DG	*	5,942,552	3535	150	466
W1WEF	*	5,718,249	3407	152	451
KC1F	*	4,461,360	2726	145	435
W3RC	*	3,725,384	2900	119	333
K1YT	*	2,377,998	1502	140	427
K5TL	*	2,010,680	1117	150	518
W1ECT	*	1,928,231	1709	103	336
W1TE	*	1,299,080	1230	145	435
W1MT	*	1,326,312	1123	123	384
W1AX	*	1,050,112	875	119	329
W1JR	*	879,814	653	120	374
N0TK	*	740,544	600	120	344
W1WFX	*	639,744	677	90	267
W1ZS	*	547,785	664	83	232
K1W2	*	443,408	679	62	197
K1LU	*	389,025	521	81	234
N1DS	*	329,622	480	67	207
K1BV	*	286,436	481	54	148
W1LLU	*	266,437	429	73	188
K1DOW	*	233,172	395	64	190
W1OHM	*	215,760	345	73	175
W01H	*	130,816	239	59	165
K1W2	*	103,917	209	56	145
K1MW	*	61,456	181	51	133
K1W3	*	52,000	146	36	124
N1RC	*	22,098	133	37	90
W1R1P	*	16,744	83	32	59
KK1L	*	4,830	51	11	35
K1GQ	*	2,546	27	16	22
K1RM	28	789,330	1689	35	131
W1AFCN	*	150,000	492	29	96
W3EP/1	*	138,303	462	32	95
KR1G	7	515,460	1326	33	109
W1MK	3.5	346,332	1031	29	95
K2LP/1	*	12,096	92	10	46
K1VW	1.8	12,696	141	21	48
*K1RO	A	3,021,344	2047	120	406
*K1YU	*	2,555,175	1809	131	394
*KM1X	*	2,256,638	1685	116	362
*K1VR	*	2,142,112	1585	123	388
<b>(Op: W3EF)</b>					
*KB1EAX	*	2,075,532	1569	133	381
*K1ND	*	1,710,912	1415	115	341
<b>(Op: K5FVU)</b>					
*W1ED	*	1,645,440	1250	113	367
*K1HT	*	1,431,792	1074	124	364
*N1GF	*	1,369,669	1011	121	382
*K2A2/1	*	1,252,774	909	131	440
*W0MNH/1	*	1,225,962	1052	113	338
*W1ZK	*	1,152,884	938	118	348
*NM1W	*	917,472	733	108	348
*AE1B	*	885,115	859	108	277
*KA1IS	*	770,408	856	104	320
*K1GU	*	700,362	733	82	287
*W1KT	*	689,605	609	109	318
*NY1S	*	629,180	578	100	246
*K1VJS	*	544,258	718	102	244
*N1HOQ	*	534,087	511	96	297
*W3B/1	*	463,740	528	81	263
*N3CJ/1	*	293,584	401	66	192
*K2M/1	*	256,464	330	78	196
*W1ZZ	*	163,615	270	63	152
*N1EDM	*	148,016	305	62	170
*K1EC	*	140,400	293	63	162
*AA1SU	*	69,275	217	51	112
*K1EP	*	61,420	177	43	105
*ND1C/1	*	24,960	117	23	57
*W1WFF	*	100	89	35	62
*W1PL	2.8	88,508	313	26	78
*K1PX	1.8	2,628	32	15	21
N2LT	A	5,490,882	3119	156	465
K2UA	*	4,921,488	3132	137	435
W2LC	*	3,912,925	2515	132	425
N2NT	*	3,046,749	2305	115	414
K2VU	*	2,952,638	1885	145	414
K2NV	*	2,731,082	1871	132	389
W2EN	*	2,640,949	1799	130	391
K2FU	*	1,614,010	1193	132	383
W2ZU	*	1,524,024	1089	111	377
K2SG	*	1,522,267	1235	111	346
W2AYVA	*	1,323,477	1005	132	347
KW2J	*	1,075,832	1055	91	265
AE2F	*	999,878	722	128	389
K2UO	*	869,820	633	108	312
W2VZQ	*	646,758	683	79	275
N7UM/2	*	617,400	619	103	317
N2MR	*	600,607	635	103	256
W2YK	*	586,560	629	102	288
KE2WY	*	502,000	707	109	291
W2YSJ	*	478,559	641	105	298

NA2M	*	404,482	443	98	233
KB2NMV	*	398,976	505	102	282
K2UF	*	373,644	451	93	228
W2CF	*	330,660	426	87	247
NA1A/2	*	301,264	425	83	221
NW2J	*	272,904	431	57	192
W2EZ	*	221,382	423	64	187
KG2MY	*	24,738	86	37	77
K2FR	*	10,875	129	40	85
K2ZJ	28	542,991	1356	33	108
N2PP	*	529,200	1384	33	107
K2CS	*	34,365	153	23	64
N2MF	21	687,357	1631	39	120
K2BA	14	269,920	641	37	123
W2Z1	*	83,636	316	28	88
N2GC	7	230,445	599	28	107
N2UM	*	27,140	119	20	72
W2UO	1.8	4,230	52	13	32
*N2BA	A	3,347,190	2279	133	406
*N1JP/2	*	1,039,224	807	121	395
*KM2L	*	768,984	771	90	268
*WB2ABD	*	749,992	707	101	288
*N2RD	*	733,752	819	100	287
*K2ZR	*	514,050	560	97	248
*KA2D	*	433,411	519	88	253
*W2CVW	*	410,240	456	83	237
*W2EYA	*	301,350	402	81	206
*W2TX	*	277,303	383	66	191
*W2AG	*	256,850	430	68	207
*N2LK	*	225,398	361	66	185
*WW2J	*	204,180	308	66	180
*W2VQV	*	199,215	344	66	167
*K2DP	*	171,039	387	59	154
*W2UDT	*	118,714	263	40	121
*W2XZ	*	110,550	266	54	111
*W2TZ	*	79,707	174	50	131
*W2FU	*	68,996	150	61	127
*K2UG	*				
<b>(Op: WA2UQK)</b>					
*K2SZ	*	64,020	191	49	116
*K2SWZ	*	55,223	162	50	111
*K2CF	*	53,619	198	45	138
*K2JF	*	26,634	173	62	131
*KG2NQ	*	20,116	79	42	85
*W2B	*	957	20	16	17
*K2MFY	28	173,801	463	34	117
*W2MMD	7	90,415	348	22	85
*WB2DVU	*	83,579	297	24	88
K3ZO	A	5,937,057	3725	143	424
W3BG	*	4,691,051	2720	161	456
W3MC	*	3,735,736	2520	138	430
K03F	*	3,324,490	2425	123	355
AA3TT	*	2,574,759	2012	116	335
K2PL/3	*	2,276,592	1632	132	384
K3ZA	*	1,022,801	1113	92	285
W3FM	*	987,712	999	85	267
W3RJ	*	927,870	988	108	288
K4JLD/3	*	914,544	695	120	344
N3KR	*	833,160	799	103	321
W3AZ	*	809,472	792	103	305
W3FE	*	747,720	969	74	261
N3DA	*	463,256	540	84	232
W3BYX	*	403,144	571	70	252
N3RJ	*	387,450	668	87	228
W2TN/3	*	381,696	508	97	239
N3MV	*	366,018	410	95	223
W2C/3	*	300,564	519	76	200
K3MD	*	211,703	317	81	188
W3TW	*	195,822	325	78	175
K3SX	*	140,694	258	89	173
W3EH	*	114,898	239	58	145
W3EV	*	46,720	183	41	105
K3BX	*	31,892	109	44	75
W3GN	28	101,952	355	31	87
W3VT	*	74,624	264	28	78
K83A	*	21,435	120	23	55
W2FCR/3	1.8	1,722	47	14	27
*N1WR/3	A	1,329,766	1059	107	347
*N3YM	*	679,497	707	100	299
*W3AD	*	504,900	595	75	231
*K3EV	*	300,300	419	75	211
*W7LP/3	*	286,124	364	88	219
*W3BFN	*	206,448	340	76	196
*W3KM	*	140,499	287	52	149
*W3FQE	*	92,018	229	50	89
*K3BAFT	*	69,000	160	63	121
*N8NA/3	*	55,476	146	44	94
*W3GL	*	54,614	175	47	119
*N3VJ	*	6,424	62	33	55
*N3EA	*	3,055	47	20	27
*W3CP	28	107,482	324	29	93
*W3WS	21	432,776	910	37	127
*W3KHQ	14	55,990	208	33	77
*K3BEHY	*	32,220	159	23	67
W4AN	A	8,279,616	4301	175	521
K4ZV	*	5,479,404	3320	151	451
NA4D	*	4,432,022	2810	159	464
W4RX	*	3,633,224	2409	146	423
W4MR	*	3,564,743	2281	133	426
<b>(Op: N4CW)</b>					
K1PT/4	*	3,187,620	2248	147	393
AA4S	*	3,156,825	2213	139	386
N4GN	*	3,127,448	2114	142	387
K4AB	*	3,025,770	2163	139	380
N6AR/4	*	2,853,452	15		



*JP2XYT	481,920	611 107 213	*JA5JGV	1.8	30	3	3	3	*UN7LF	919,524	1146	81	246	EW2AA	176,436	450	39	130	OK1AVY	1,436,400	1442	116	359			
*JADUOT	403,152	630 79 146	J06NAG	A	1,734,700	1678	130	285	*UN9FB	8,528	53	37	45	EW6EU	120,294	516	26	97	OK1DWC	1,041,180	1153	150	405			
*JA9DD/2	341,955	480 93 162	J06BGA	A	294,224	389	94	190	*UN5J	28	124,800	455	30	98	E04EU	70,983	385	24	75	OL4M	985,982	1431	93	328		
*J02QJ	325,380	469 92 173	J06WIF	28	258,298	798	36	106	*UN8PF	21	85,752	330	28	80	EW3EW	217,556	877	35	102	OK1PQ	949,870	1155	103	327		
*J76AAK/2	263,895	350 71 160	JR6LLN	14	72,295	273	29	66	*UN4PG	7	46,872	221	21	72	EW6TU	97,812	852	22	77	OK2ZBR	896,580	1358	82	258		
*JA2BQ	141,382	314 80 143	J06BZ1	7	222,400	618	33	106	*UN20	1.8	45,778	310	12	48	EUSA	7	424,960	1571	39	121	OK2ABU	831,831	1021	92	337	
*JE2HJ	80,276	254 46 76	*JH6OPP	A	734,132	934	103	211	(Op: EU1FC)										OK1DXW	579,012	797	87	279			
*J02QYV/2	51,948	169 48 63	*JA6BGG		97,760	232	67	93	(Op: EW8MW)										OK2SG	450,375	556	74	281			
*J02WIC	43,990	159 41 65	*JA6AKV		50,952	142	50	82	EW50	48,150	455	20	55	EW3LN	22,995	137	20	43	OK2SGY	437,101	817	94	213			
*JA2MZ	42,372	144 47 69	*JA6BWB		7,568	18	12	29	EW3LN	190,670	1218	24	91	EW1WZ	3.5	190,670	1218	24	91	OK2DN	437,052	769	78	293		
*JE2HD	17,976	100 48 59	*J06EDD		2,400	34	17	15	EW8DX	1.8	31,872	546	9	55	EW2CR	A	2,494,010	2535	127	414	OK1FTW	262,492	400	76	128	
*J12VLM	11,312	84 28 28	*JH6TYD	28	57,288	242	26	58	*EU1PA		453,879	883	74	259	*EU1EA		375,624	633	70	212	OK1DVM	217,100	488	64	196	
*J2TKX	9,550	63 32 38	*JA6AVT		28,446	149	21	45	*EW1EA		169,884	307	80	283	*EW8DS		143,780	311	57	125	OK1FRO	73,280	557	46	114	
*J22BP	4,725	41 21 24	*JA6VHN		14,364	92	30	46	*EU1SA		143,780	311	57	125	*EU1NA		30,840	176	37	83	OK2PSA	2,862	51	16	26	
*J2VAK	257,754	794 33 86	*JA6TO		11,408	126	27	65	*EU1NA		143,780	311	57	125	*EU1BA		21,600	109	26	64	OK2RZ	28	780,922	1950	39	134
*JA2DHL	55,825	249 24 53	*JA6ODU		8,073	73	15	24	*EW2CM		27,235	219	20	45	*EW2CM		27,235	219	20	45	OK1KT	347,776	639	40	136	
*JA2GL	53,218	129 26 56	*JM6NJU	14	132	8	3	3	*EU6AA		41,678	351	19	72	*EW8RR	1.8	7,236	197	6	30	OK1AU	185,234	583	37	94	
*JA2TMB	44,499	197 28 63	*JA6WFM	3.5	2,860	47	18	20	*OX2SAT		352,814	980	35	119						OK2BJT	133,176	405	29	95		
*J2NWB	24,830	153 22 43	JH7BZR	A	449,384	755	84	148	OK1PN		35,805	200	28	65						OK1JN	165	8	5	6		
*J2TRC	4,392	46 16 20	JA7MJ		432,740	542	111	197	OK1FZM	21	352,814	980	35	119						OK1FZM	21	352,814	980	35	119	
*J2VSF	4,324	40 16 30	JA7SRA		365,980	485	98	192	OK2SAT		316,687	938	38	123						OK1DVO	280,423	939	34	109		
*J2ZIEU	2,322	30 9 18	JA7IC		322,542	404	107	190	OK2OP		79,076	376	24	82						OK2OP	79,076	376	24	82		
*J2ZFFS	21	175,380	652	30	81				OK1XC	14	109,210	552	33	101						OK1XA	65,665	393	28	87		
*JA2MEI	8,695	71 17 30	JA7GAX		199,820	375	83	123	OK1SGI		36,480	328	14	50						OK1XZD	31,232	316	13	48		
*J2ZQJ	7	64,684	256	28	75				OK1RF	7	1,040,910	2673	39	131						OK1RF	7	1,040,910	2673	39	131	
*JM2RUV	16,401	78 24 53	JH7XGN	28	435,240	1144	35	68	OK2BVG		263,578	1002	32	112						OK2BVG		263,578	1002	32	112	
*JAZKA	15,686	91 22 40	JH7DNO		389,058	1105	33	89	OK2EQ		95,590	600	20	90						OK2EQ		95,590	600	20	90	
*JL2LPX	9,890	90 18 25	JA7JI		137,332	345	36	103	OK1TO	3.5	94,848	710	19	85						OK1TO	3.5	94,848	710	19	85	
			JA7ERJ		44,538	209	26	52	OK1FC		90,616	776	20	74						OK1FC		90,616	776	20	74	
			JA7RZJ		32,196	159	28	49	OK1EW		83,378	842	19	75						OK1EW		83,378	842	19	75	
			JA7XBG	21	517,862	1300	36	110	OK1RP	1.8	61,680	779	12	68						OK1RP	1.8	61,680	779	12	68	
			JA7NI	1.8	8,865	82	23	22	OK2ZU		49,686	633	11	67						OK2ZU		49,686	633	11	67	
			*JATARW	A	223,450	391	97	143	OK1TP		17,918	241	11	51						OK1TP		17,918	241	11	51	
			*JH7MEX		143,634	269	75	147	OK2PWJ		6,552	116	7	45						OK2PWJ		6,552	116	7	45	
			*J7PHE		66,066	206	70	112	OK1DWW		3,136	45	6	43						OK1DWW		3,136	45	6	43	
			*JR0EFF/7		36,924	157	49	53	OK2PP	A	1,875,976	2007	126	431						OK2PP	A	1,875,976	2007	126	431	
			*JH7FJ		11,880	71	30	42	OK1DSC		1,860,089	1678	117	422						OK1DSC		1,860,089	1678	117	422	
			*JF7DXT		10,168	73	31	31	OK1J0C		1,663,088	1727	104	392						OK1J0C		1,663,088	1727	104	392	
			*JF7GDF		8,208	53	26	31	OK1QM		1,554,960	1658	100	365						OK1QM		1,554,960	1658	100	365	
			*JH7GJM	28	122,522	415	35	84	OK1THX		1,291,050	1383	106	367						OK1THX		1,291,050	1383	106	367	
			*JH7IMX		102,212	365	33	68	OK1BA		1,231,194	1322	104	367						OK1BA		1,231,194	1322	104	367	
			*J7DDE		100,556	394	28	64	OK2DX		1,191,500	1363	107	393						OK2DX		1,191,500	1363	107	393	
			*JA7COI		98,532	372	31	71	OK1IYY		760,875	1176	91	284						OK1IYY		760,875	1176	91	284	
			*JA7KM		59,784	230	32	62	OK1FEA		746,760	1038	94	287						OK1FEA		746,760	1038	94	287	
			*JH7FJ		25,915	130	24	49	OK1SI		636,272	1025	84	280						OK1SI		636,272	1025	84	280	
			*JA7AXP		3,364	44	14	15	OK1MKI		625,833	993	79	272						OK1MKI		625,833	993	79	272	
			*JR7XGL	21	20,658	120	24	42	OK1OX		437,437	774	75	224						OK1OX		437,437	774	75	224	
			*J7IFR		3,293	43	16	21	OK1IPN		428,582	859	67	118						OK1IPN		428,582	859	67	118	
			*JF7VVL	14	117	8	5	8	OK2TBC		357,054	637	66	168						OK2TBC		357,054	637	66	168	
			*JA7JHT	7	8,374	68	22	16	OK2PBG		309,180	533	62	208						OK2PBG		309,180	533	62	208	
			JABRWU	A	3,290,800	2514	150	325	OK2BND		269,328	505	65	183						OK2BND		269,328	505	65	183	
			JA8TEZ		2,552	42	12	10	OK2BRV		259,692	686	59	209						OK2BRV		259,692	686	59	209	
			JH8DEH		21,762	142	18	36	OK1FKV		196,784	707	44	207						OK1FKV		196,784	707	44	207	
			*JH8SL5	A	1,680,426	1526	131	283	OK1DWH		172,224	387	57	151						OK1DWH		172,224	387	57	151	
			*JH8MWW		502,227	708	95	172	OK1KZ		127,925	372	48	127						OK1KZ		127,925	372	48	127	
			*JA8JCR		290,783	462	99	172	OK2SVD		127,544	383	48	166						OK2SVD		127,544	383	48	166	
			*JE8KX		25,344	101	44	55	OK2BNC		123,394	272	61	133						OK2BNC		123,394	272	61	133	
			*JA8GG		2,208	23	16	16	OK1DVC		99,718	322	36	110						OK1DVC		99,718	322	36	110	
			*JABLN	28	123,318	382	35	82	OK1PDP		61,308	196	43	88						OK1PDP		61,308	196	43	88	
			*JA8DCG		26,496	147	22	47	OK2BWB		46,645	199	39	56						OK2BWB		46,645	199	39	56	
			*JABAT		5,282	47	13	25	OK2AJ		34,272	182	13	13						OK2AJ		34,272	182	13	13	
			*JA8GT0		209	7	4	7	OK1JDN		7,095	79	14	41						OK1JDN		7,095	79	14	41	
			JA9CJW	A	1,558,374	1581	114	244	OK1GGW		5,936	51	24	29						OK1GGW		5,936	51	24	29	
			*JE9VOI		135,424	280	73	111	OK1JEG		5,120	111	12	52						OK1JEG		5,120	111			

QZ5MJ	395,648	643	98	254	RZ1ZB	283,024	425	88	216	*UA4NCI	149,796	537	32	114	*F5MFL	82,050	300	34	116	*DF7QK	153,202	494	53	164			
QZ7BW	95,076	229	56	115	UA3PB	254,217	416	84	219	*UA4QK	63,140	237	25	85	*FDZDZ	54,784	220	41	87	*DL1LSZ	151,656	465	56	157			
QZ7YL	55,440	200	37	95	RA3NB	202,566	362	72	246	*RV6AA	37,101	245	22	61	*F5RPP	51,474	172	47	91	*DL3DRD	143,872	281	100	156			
*OZ1AA	<b>1,528,166</b>	<b>1724</b>	<b>109</b>	<b>369</b>	RK3RZ	191,673	506	60	169	*UA4SBZ	24,716	190	17	57	*F5MLJ	32,548	172	24	55	*DL2FDD	142,120	352	64	145			
*OZ5ABD	364,738	801	69	212	RA1TC	167,860	463	60	160	*UA3ABJ	<b>159,800</b>	<b>728</b>	<b>33</b>	<b>103</b>	*F5MNM	30,464	132	51	85	*DL1DTL	133,654	328	73	169			
*OZ0YICT	344,687	620	65	222	RK6BZ	135,252	419	43	161	*RA3SL	<b>136,347</b>	<b>658</b>	<b>32</b>	<b>109</b>	*F5ICX	26,602	177	18	76	*DF1QO	128,679	337	52	125			
*OZ5EDR	251,625	659	61	214	RV1CC	115,774	341	69	145	*RA10K	113,988	495	28	90	*F5AAN	25,125	279	45	80	*DL3BZC	126,584	294	59	108			
*OZ4FF	245,520	451	66	198	RK1QXW	115,752	414	41	115	*R26FZ	91,098	515	32	94	*F5LBB	20,680	220	16	43	*DL3HSC	117,024	340	48	136			
*OZ5UR	168,715	424	52	153						*RA3NX	58,580	333	25	76	*F2FZ	14,247	68	31	50	*DF1LON	114,800	324	53	122			
*OZ7BO	31,680	102	42	68	RA3ANL	115,182	344	66	171	*UA10MG	40,590	314	21	61	*F8BBL	13,662	116	34	32	*DF3OG	111,134	263	63	118			
*OZ5RM	12,096	130	17	46	RZ1AZ	110,320	279	58	139	*RA6LAE	40,495	267	20	69	*F5MSO	11,935	75	31	46	*DL2RTJ	106,500	329	58	150			
*OZ5DX	37,204	200	22	49	RV3DAR	107,598	206	81	146	*RUAPL	<b>324,348</b>	<b>1246</b>	<b>35</b>	<b>116</b>	*F5UB	28	66,576	392	26	50	*DL3KWF	101,722	295	51	130		
*OZ1APA	15,675	120	16	39	RN6HZ	92,984	212	74	123	*RW6AHO	159,345	501	23	80	*F5JY	43,296	239	23	59	*DL2BUM	80,782	266	55	114			
*OZ7JO	3,680	45	13	19	RN1AM	90,948	389	45	87	*RW3DU	30,176	219	19	73	*F5NLX	13,862	100	23	35	*DL2AL	78,900	275	43	107			
*OZ					RU3DX	86,400	282	59	141	*UA3YKG	<b>34,428</b>	<b>305</b>	<b>10</b>	<b>53</b>	*F5NDK	21	54,180	334	21	65	*DL2SA	78,996	220	55	91		
*OZM7GCZ	33,065	203	15	70	UA3JCD	75,438	208	49	149	*RW3DY	28,210	326	11	59	*F5OKR	6,566	117	14	35	*DL2SDA	73,745	215	69	146			
*OZ1BMA	27,060	330	16	66	UA6AAY	54,112	215	59	93	*UA6AKD	27,289	319	12	58	*F5OKT	159,831	<b>719</b>	<b>27</b>	<b>102</b>	*DH3MG	70,800	278	47	153			
					RA3BB	46,592	323	27	64	*UA3TJC	7,742	104	10	39						*DL4AAE	49,749	171	39	64			
					RA1AIM	41,613	239	28	69	*UA3LIZ	5,676	117	7	37						*DL4RCK	49,427	221	44	117			
					RW3LA	38,192	137	50	104	*UA6XT	<b>1.8</b>	<b>2,244</b>	<b>47</b>	<b>27</b>						*DL5WS	47,841	190	35	76			
					RA1ABU	38,007	177	41	82											*DH2UL	42,940	179	35	78			
					RW1QF	14,061	76	40	69											*DF5ZV	36,234	165	40	82			
					RW1QY	950	14	12	13											*DK8IOF	23,250	217	43	107			
					RA3AJ	<b>373,556</b>	<b>969</b>	<b>40</b>	<b>148</b>											*DL4ABR	21,276	157	34	74			
					UA3AB	<b>341,972</b>	<b>883</b>	<b>40</b>	<b>148</b>											*DL9XB	10,152	95	21	26			
					RU4CO	302,560	1076	34	126											*DJ5JK	10,017	73	22	41			
					RV6LOB	2,736	64	10	26											*DK6CO	8,722	77	22	27			
					RV6AB	26	14	24	66											*DL4OCM	8,536	76	30	58			
					RZ3QU	<b>556,864</b>	<b>1580</b>	<b>40</b>	<b>136</b>											*DL5FC	7,592	49	29	44			
					RA6CM	<b>525,278</b>	<b>1515</b>	<b>40</b>	<b>138</b>											*DF5FL	6,812	88	31	41			
					RK6CZ	364,895	1271	38	129												*DL5FO	6,486	74	18	28		
					RV6A3	342,705	1105	37	128												*DL2DSA	4,032	32	21	27		
					RV6B0	298,800	846	38	128												*DL6OZ	1,800	47	15	25		
					RV6X0	137,514	554	29	94												*DL1LH	<b>28</b>	<b>498,750</b>	<b>1247</b>	<b>40</b>	<b>135</b>	
					RK3XWD	131,040	691	30	130												*DJ7IK	<b>318,636</b>	<b>825</b>	<b>38</b>	<b>129</b>		
					RW4AA	<b>504,142</b>	<b>1650</b>	<b>36</b>	<b>130</b>												*DJ9DZ	275,352	756	35	119		
					RV1AC	<b>251,535</b>	<b>1064</b>	<b>29</b>	<b>94</b>												*DL1CW	130,152	416	31	105		
					RK3SWB	116,204	559	34	105												*DL4UL	118,250	454	33	92		
					UA3EJU	42,588	325	20	58												*DL2ZAV	103,170	379	29	85		
					RU3MW	26,939	246	21	58												*DL6UAM	95,400	402	24	76		
					RW1ZZ	<b>270,572</b>	<b>970</b>	<b>36</b>	<b>122</b>												*DL3DTH	95,940	356	31	86		
					RW4PL	<b>147,899</b>	<b>716</b>	<b>30</b>	<b>101</b>												*DL8UAT	68,773	290	25	72		
					RW3FO	<b>127,680</b>	<b>886</b>	<b>22</b>	<b>90</b>												*DK1HO	63,360	244	31	89		
					RA3XA	47,971	391	15	74												*DK5XZ	55,798	298	26	52		
					RA3DOX	<b>1.8</b>	<b>35,668</b>	<b>393</b>	<b>13</b>	<b>61</b>											*DK6HH	37,520	242	23	57		
					UA6LV	<b>34,496</b>	<b>325</b>	<b>18</b>	<b>67</b>												*DL2MH	4,350	33	20	30		
					RA6AX	31,620	291	17	68													*DL3ARK	4,030	59	11	35	
					*RA1ACJ	<b>1,933,792</b>	<b>1668</b>	<b>137</b>	<b>486</b>													*DL2AXM	1,488	30	10	14	
					*RA3AF	<b>1,354,200</b>	<b>1517</b>	<b>114</b>	<b>374</b>													*DK8UN	<b>21</b>	<b>267,274</b>	<b>1106</b>	<b>31</b>	<b>88</b>
					*UA4WAN	<b>1,188,915</b>	<b>1522</b>	<b>117</b>	<b>390</b>																		
					*RV3LO	<b>1,120,560</b>	<b>1437</b>	<b>107</b>	<b>357</b>																		
					*RW3AX	1,117,395	1302	102	363																		
					*RA3NZ	996,030	1265	105	360																		
					*RA3AQY	967,932	1396	89	325																		
					*RA3UT	926,796	1203	111	346																		
					*RU4WE	834,847	1286	101	310																		
					*RNSAY	784,576	1206	101	315																		
					*UA1ANA	748,605	1030	93	336																		
					*RA1OX	722,892	921	98	330																		
					*RK3DK	699,966	1033	91	242																		
					*UA1UAG	663,960	1005	94	346																		
					*RA3IAT	607,131	913	101	318																		
					*UA1RJ	602,316	920	99	297																		
					*GA4KU	546,840	1087	77	283																		
					*UA3XAC	449,540	736	80	258																		
					*UA1OAM	447,432	828	89	220																		
					*RV4LM	398,300	776	78	272																		
					*RN1AO	380,970	998	67	182																		
					*RW3YA	347,065	608	78	249																		
					*RA3NF	326,230	617	85	238																		
					*UA4RF	296,712	530	82	235																		
					*RA4CTR	285,480	553	70	164																		
					*RW4FZ	275,720	595	77	228																		
					*UA3SAQ	269,																					

<b>IRELAND</b>				LY2VAD	1.8	90,440	854	19	66	SP2HPM	218,535	560	65	190	*Y09HP	14,040	111	23	37	EA1FEL	28	229,500	848	33	102		
EI8IC	28	115,772	508	24	79					SP6VVF	178,838	340	71	171	*Y03FF	513	11	9	10	EA7AKJ		99,360	448	28	80		
*EI4DW	A	844,190	1225	80	210					SP9FT	151,287	341	61	150	*Y05AJR	21	98,770	380	30	89	EA1JJO	21	193,664	663	32	104	
<b>ISLE OF MAN</b>				*LY3BA	A	2,352,674	2227	115	423	SP3CYY	101,700	409	57	123	*Y04BBH		96,600	500	24	81	EA3BHK		167,500	638	34	100	
*G04UOL	A	1,770,952	2808	83	299					SP6CKX	76,038	245	48	90	*Y09FJW	7	78,800	693	16	67	EA3FEU		52,326	302	26	88	
<b>ITALY</b>				*LY2GV		1,302,980	1466	103	351	SP5BNB	73,575	216	56	109	*Y02GJX		53,000	386	21	79	EA1BK	7	42,126	538	14	45	
IK1YLL	A	205,446	462	99	254					SP7BDS	17,388	111	32	60	*Y05DAS	3.5	17,004	301	8	44	EA7GSU	3.5	46,284	359	15	87	
IF6DJ		107,787	398	54	129					SP3FAF	16,119	74	35	46	*Y05OHO		15,390	262	7	47	EA2BNU	A	969,289	1316	90	301	
IV3RLB		92,749	287	54	83					SP2GKQ	4,165	66	13	36	*Y09AGI		14,080	300	7	37	EA5YU		793,848	1127	88	300	
MDZ		66,234	234	42	91					SP8BRQ	28	345,481	900	39	134	*Y02BEH	1.8	3,382	88	5	33	EA2AZ		784,160	1129	85	292
IK0YUT		32,190	218	48	97					SP5DDJ		258,390	740	35	110						EA7AJR		652,492	1173	77	237	
IK1YEE		11,988	37	30	44					SP5JAF		193,011	542	34	113						EA18XW		615,330	872	77	241	
I21DFI		5,782	149	24	74					SN9R		39,270	219	22	87						EA2BDS		384,300	860	64	180	
I24COW		4,500	35	23	27					SP9CCA		594	34	3	3						EA7GXX		231,336	470	63	141	
IK8YFW		1,079	29	7	6					SN8V	21	423,540	1505	37	113						EA1FBJ		200,928	599	57	167	
IK4MED	28	421,070	1141	38	120					SP4JWD		82,490	310	28	85						EA5LA		170,382	380	65	154	
IBRIZ		279,990	906	33	102					SP2FAX	14	974,880	2546	40	140						EA4BSC		110,271	230	78	189	
<b>ISRAEL</b>				LX4B	21	580,863	1767	38	130	SP2FAX	7	432,124	1372	35	126						EA5FJD		97,728	373	49	143	
IU2C		174,811	670	31	82					SP9NKL		88,494	571	19	79						EA7FZ		83,226	280	54	116	
IU0PAW		140,192	665	28	76					SP3CW		82,917	372	23	88						EA1FAE		60,000	167	59	103	
I2DAIS		102,102	464	30	72					SP9ABU		82,917	372	23	88						EA7CA		58,006	167	59	103	
IK4ZHH		69,218	320	28	78					SP3HRN	3.5	40,014	441	13	68						EA4AQT		44,888	220	35	91	
IO5Z		31,720	244	20	41					SN3A	1.8	158,445	1180	22	83						EA2GAR		44,690	198	33	76	
<b>JAPAN</b>				*Z31GB	A	1,850	25	14	23	SP5JTF		10,092	226	8	40						EA5AFH		42,822	160	55	128	
IU2X	14	240,751	1003	40	123					SP6MQO		3,783	101	5	34						EA7GVW		33,562	150	35	62	
IK5DQE		214,011	1083	33	96					*SP2OCH	A	1,842,176	1872	119	393						EA40A		32,364	169	38	86	
I22AHF		6,300	83	13	23					*SN7N		1,745,100	1841	121	404						EA1FBB		31,096	146	37	67	
I11H	3.5	173,600	1133	22	90					*SP1AEN		1,153,129	1304	103	396						EA4AES		13,482	86	25	38	
I23ALF		69,006	632	18	75					*S09BZK		879,208	1326	100	312						EA5EDN		9,180	81	19	35	
*IKBYVV	A	2,439,444	1814	148	530					*S09BZK		632,576	1219	79	274						EA1DFP		6,667	43	20	39	
*I3JSS		2,323,517	2314	116	395					*SP6CPO		477,620	637	90	244						EA4BNO		792	30	4	14	
*IK1RQO		1,482,286	1659	115	381					*SP9RTI		344,568	561	85	209						EA7ASZ	28	154,671	580	29	100	
*IV3TGE		1,086,442	1182	124	373					*SP8BVN		332,592	542	77	251						EA5ABH		95,500	480	24	76	
*IK4EWX		735,200	612	93	307					*SP9GKM		325,941	645	58	191						EA4AHD	21	122,544	811	22	70	
*IK3ORD		379,224	612	69	207					*SP7LEO		270,429	596	79	248						EA71L	14	92,929	731	19	54	
*I4FGG		295,260	601	67	218					*S09CAQ		239,104	548	60	196						EA5AWJ		90,797	525	27	92	
*IK7JWY		273,664	578	72	184					*SP3HC		228,375	544	48	127						EA4BWR		27,888	343	19	64	
*IK2AIT		179,133	444	56	157					*S02HEB		179,332	482	56	158						EA1ND		20,435	240	18	43	
*IQ3X		172,044	401	17	172					*SP5ICS		178,672	422	52	156						EA3AR	3.5	14,212	248	7	37	
*IK2NCF		115,440	297	58	150					*SP8FJH		165,186	548	63	203						EA7AIN	1.8	1,020	24	6	24	
*I2DANC		99,538	332	45	112					*SP9ADV		106,590	291	47	118												
*I4JEE		99,294	293	45	187					*SP9KJU		103,180	301	54	100												
*IK2WYI		99,280	348	38	108					<b>NETHERLANDS</b>				*SP2MKT		76,002	240	46	113								
*IN3NR		93,687	311	44	123					PA0RCT	A	1,587,765	2155	102	351							7S5A	A	2,155,136	2620	121	331
*IKNWX		51,069	230	35	52					PA3HBB		732,824	1279	85	291							SM5CLE		1,023,120	1187	100	320
*I4SADS		44,000	170	41	69					PA0LOU		412,290	537	105	300							SM7EH		535,131	750	81	252
*I25BRW		40,000	215	30	70					PA0ADP		334,312	767	73	246							SM6WOB		379,130	728	71	239
*IK5RLS/2		38,612	182	35	63					PA0MBD		206,724	387	78	198							SM0NZJ		121,914	365	58	176
*IK6WV		18,316	123	27	49					PA3CAL		208	8	8	8							SM7BVO		111,800	322	46	84
*IK3SSJ		15,080	101	27	38					PA0CLN	1.8	35,719	411	13	69							SM6GST		80,910	275	38	107
*IK0STB		9,108	169	33	66					*PA3BFH	A	980,875	1170	92	321							SK7AX		41,455	165	45	90
*IK3SCB		3,534	38	25	37					*PA3EMN		778,516	1139	88	294												
*I4KJSE		2,680	31	16	24					*PA0MR		753,472	1001	87	299												
*I3MLU	28	105,149	386	30	91					*PA0JR		551,520	808	84	276							SM5RE		25,956	263	31	96
*I02X	21	145,768	609	37	96					*PA3GRM		296,934	745	72	170							SM7BOZ		20,400	109	34	66
*IK3OAR		110,109	467	32	95					*PA0HOR		202,725	455	73	192							SM2EKM	28	921,193	2214	40	151
*I50OV		19,620	152	18	42					*PA7AA		130,625	1356	87	338							7S5D		305,394	1086	33	105
*IK3HUG	14	108,655	698	24	79																						

HB9IAL	13,377	97	27	64	
HB9PHN	12,337	59	30	43	
HB9ODZ	19,100	87	24	76	
*HB9ARF	<b>A 1,285,380</b>	<b>1487</b>	<b>97</b>	<b>347</b>	
*HB9CBB	401,289	680	78	213	
*HB9CVO	230,000	450	68	182	
*HB9RE	51,084	209	39	60	
*HB9DOT	6,780	55	23	37	
*HB9HOX	28	16,800	153	17	43
*HB9APJ	1.8	7,524	252	5	39
<b>UKRAINE</b>					
UX7IA	<b>A 2,431,765</b>	<b>2546</b>	<b>129</b>	<b>466</b>	
UR3QCW	<b>926,280</b>	<b>1024</b>	<b>104</b>	<b>361</b>	
UX3ZW	696,541	969	103	330	
UX7QO	503,625	540	102	323	
UR6J	328,095	609	80	237	
UR6QS	158,175	414	44	141	
UU0JX	134,974	291	82	135	
UY5YY	90,396	242	56	130	
UT5JAP	89,585	182	69	136	
UU2JZ	87,636	295	44	90	
UT3OT	70,192	165	50	105	
UR4VA	61,628	300	36	106	
UUAJPE	22,814	155	34	88	
UT5HP	16,137	78	39	60	
UT7UW	15,035	63	37	60	
UT5UGO	750	14	12	13	
EM8I	<b>28</b>	<b>192,725</b>	<b>796</b>	<b>31</b>	<b>107</b>
<b>(Op: UT8IM)</b>					
UX5UO	<b>185,712</b>	<b>568</b>	<b>35</b>	<b>111</b>	
UR3IOB	148,400	473	35	105	
UT2ID	137,196	576	36	112	
UR5ZEL	104,129	317	34	103	
UT4EK	68,805	324	25	74	
UX2FX	54,366	321	25	57	
<b>(Op: UR5FGN)</b>					
UR5WCW	<b>21</b>	<b>182,204</b>	<b>488</b>	<b>39</b>	<b>125</b>
UX3HA	66,976	365	26	66	
US0MR	<b>14</b>	<b>98,805</b>	<b>617</b>	<b>30</b>	<b>75</b>
UU1JO	31,816	240	18	64	
US5WE	<b>7</b>	<b>602,140</b>	<b>1770</b>	<b>39</b>	<b>131</b>
UX1UA	<b>501,981</b>	<b>1616</b>	<b>31</b>	<b>118</b>	
UY5OD	435,480	1494	35	117	
US2IR	392,418	1397	39	130	
UX2MM	297,432	1162	34	119	
UR7QM	136,141	725	24	85	
UT4NW	79,768	331	24	94	
UT9F	<b>3.5</b>	<b>158,771</b>	<b>1001</b>	<b>25</b>	<b>93</b>
<b>(Op: UR5FCZ)</b>					
US2IZ	80,898	678	18	79	
UY2UZ	54,219	472	18	75	
UR3OT	51,840	530	15	66	
*US3IZ	<b>A</b>	<b>602,962</b>	<b>862</b>	<b>98</b>	<b>326</b>
*UT4UM	<b>590,010</b>	<b>951</b>	<b>86</b>	<b>340</b>	
*UR9MM	<b>523,032</b>	<b>1020</b>	<b>77</b>	<b>295</b>	
*UY5ZJ	500,864	955	89	258	
*US9QA	481,983	915	89	255	
*UY5TE	445,550	883	69	266	
*UT8IT	354,246	644	71	231	
*UY4LI	293,813	770	57	176	
*UT4XU	230,864	475	37	234	
*UY5WA	155,338	485	44	158	
*UY2RO	142,560	335	60	204	
*UX2RY	65,221	159	59	114	
*UR5ZPK	29,715	160	23	82	
*UY5JRW	23,312	89	44	80	
*UR7QJ	12,980	78	26	33	
*UR5EIT	12,807	122	40	86	
*UY5MX	4,293	95	30	51	
*E01I	<b>28</b>	<b>247,040</b>	<b>1049</b>	<b>30</b>	<b>98</b>
<b>(Op: UT1IA)</b>					
*UT1FA	116,607	344	36	105	
*UX3MO	76,941	392	31	72	
*UR4QOS	69,252	437	23	64	
*UT3FM	59,360	253	27	79	
*UT3JZ	56,814	255	27	75	
*UU4UNY	7,380	58	20	40	
*UR3PFI	5,520	78	12	15	
*UR8RF	<b>21</b>	<b>134,696</b>	<b>469</b>	<b>37</b>	<b>115</b>
*UX5EF	101,315	405	31	84	
*UR5TAU	55,247	292	30	71	
*UR5MKD	44,460	258	23	67	
*EN1I	<b>14</b>	<b>316,800</b>	<b>1191</b>	<b>36</b>	<b>124</b>
<b>(Op: US1ITU)</b>					
*UT7EG	50,140	376	19	73	
*UY3OW	44,311	512	17	56	
*UY5YA	21,138	166	18	60	
*UT3EK	9,230	86	14	51	
*UR4IH	<b>7</b>	<b>29,716</b>	<b>206</b>	<b>21</b>	<b>55</b>
*UR3PDT	<b>3.5</b>	<b>56,056</b>	<b>518</b>	<b>15</b>	<b>76</b>
<b>WALES</b>					
GW3KOB	<b>A</b>	<b>752,388</b>	<b>814</b>	<b>112</b>	<b>395</b>
GW3YDX	<b>28</b>	<b>990,120</b>	<b>2444</b>	<b>40</b>	<b>145</b>
GW3JXN	<b>21</b>	<b>388,088</b>	<b>1325</b>	<b>35</b>	<b>104</b>
*GW3JNW	<b>A</b>	<b>943,008</b>	<b>1402</b>	<b>84</b>	<b>292</b>
*GW3SYL	<b>719,394</b>	<b>1032</b>	<b>86</b>	<b>313</b>	
*GW3JUN	155,530	427	53	153	
*GW0KZW	52,083	253	31	62	
<b>YUGOSLAVIA</b>					
4N9BW	<b>A</b>	<b>5,269,900</b>	<b>3960</b>	<b>153</b>	<b>545</b>
<b>(Op: YU7BW)</b>					
YZ9A	<b>28</b>	<b>678,600</b>	<b>1679</b>	<b>39</b>	<b>135</b>
<b>(Op: YU1NW)</b>					
4N1N	223,080	670	30	113	
<b>(Op: 4N1LB)</b>					
YU1RE	131,412	461	35	106	
YU7SF	98,252	342	30	86	
YT7KF	<b>21</b>	<b>624,242</b>	<b>1911</b>	<b>39</b>	<b>122</b>

YU1KX	445,315	1434	39	130	
YU7FN	<b>14</b>	<b>12,078</b>	<b>109</b>	<b>14</b>	<b>47</b>
YT7A	<b>7</b>	<b>468,022</b>	<b>1770</b>	<b>36</b>	<b>133</b>
<b>(Op: 4N7WD)</b>					
YT1BB	424,528	1744	35	122	
YZ6A	<b>3.5</b>	<b>178,365</b>	<b>1226</b>	<b>26</b>	<b>89</b>
YU1KR	125,208	1064	19	75	
YT1V	120,736	844	22	90	
YU1EY	<b>1.8</b>	<b>20,090</b>	<b>391</b>	<b>10</b>	<b>60</b>
*YU7WJ	<b>A 1,360,348</b>	<b>1524</b>	<b>101</b>	<b>372</b>	
*YU7LS	298,506	552	81	186	
*YU1OU	139,416	386	46	111	
*YU7WW	<b>28</b>	<b>344,396</b>	<b>1048</b>	<b>36</b>	<b>112</b>
*YU1OJ	<b>306,384</b>	<b>1000</b>	<b>36</b>	<b>120</b>	
*YT1MP	212,076	695	36	115	
*YU0C	78,750	349	27	78	
<b>(Op: 4N7KA)</b>					
*YU7KM	71,757	268	33	86	
*YT0C	<b>21</b>	<b>508,546</b>	<b>1390</b>	<b>40</b>	<b>138</b>
<b>(Op: YU7CB)</b>					
*4N1FG	169,752	696	32	100	
*YU1OW	101,556	396	30	87	
*YU1HFG	<b>14</b>	<b>160,776</b>	<b>986</b>	<b>28</b>	<b>98</b>
<b>(Op: 4N1FT)</b>					
*Y21EZ	62,150	398	30	83	
*Y21ZF	<b>7</b>	<b>258,150</b>	<b>1149</b>	<b>33</b>	<b>117</b>
*YU1EA	200,046	846	34	120	
*4N7A	90,720	508	23	89	
<b>(Op: YT7KM)</b>					
*YU1FG	41,820	281	17	65	
*YU1JW	2,025	74	9	36	
*YU1YV	<b>3.5</b>	<b>64,032</b>	<b>551</b>	<b>16</b>	<b>80</b>
*YU1CC	<b>1.8</b>	<b>18,550</b>	<b>290</b>	<b>7</b>	<b>55</b>
*YU1AST	6,864	122	7	41	
<b>(Op: YZ1EA)</b>					
<b>OCEANIA</b>					
<b>AUSTRALIA</b>					
VK2IA	<b>A 2,312,019</b>	<b>1789</b>	<b>135</b>	<b>342</b>	
VK8AV	1,372,572	1196	123	303	
VK4EMM	<b>14</b>	<b>704,184</b>	<b>1707</b>	<b>35</b>	<b>113</b>
VK5GN	<b>3.5</b>	<b>21,960</b>	<b>154</b>	<b>23</b>	<b>38</b>
*VK7WB	<b>A 119,658</b>	<b>286</b>	<b>63</b>	<b>91</b>	
<b>(Op: W6FA)</b>					
*VK4XW	5,616	36	24	28	
*VK4ICU	<b>28</b>	<b>170,746</b>	<b>536</b>	<b>32</b>	<b>86</b>
*VK4IT	33,894	170	22	41	
*VK2BNG	28,194	165	25	49	
*VK3TZ	<b>3.5</b>	<b>12,095</b>	<b>129</b>	<b>18</b>	<b>23</b>
<b>EAST MALAYSIA</b>					
9M6NA	<b>A 7,402,265</b>	<b>4211</b>	<b>169</b>	<b>442</b>	
<b>(Op: JE1JKL)</b>					
9M8YY	<b>21</b>	<b>620,964</b>	<b>1523</b>	<b>35</b>	<b>106</b>
<b>(Op: JR3WX)</b>					
<b>GUAM</b>					
KH2/K4ANA	<b>A 1,297,115</b>	<b>1670</b>	<b>100</b>	<b>195</b>	
KH2/N2NL	<b>3.5</b>	<b>261,352</b>	<b>939</b>	<b>28</b>	<b>76</b>
*KH2D	34,850	157	39	43	
<b>HAWAII</b>					
KH7R	<b>28</b>	<b>1,420,825</b>	<b>3152</b>	<b>38</b>	<b>123</b>
<b>(Op: KH6ND)</b>					
AH7DX	<b>21</b>	<b>986,030</b>	<b>2335</b>	<b>38</b>	<b>113</b>
KH7Q	<b>14</b>	<b>553,410</b>	<b>1550</b>	<b>35</b>	<b>94</b>
<b>(Op: KH7U)</b>					
KH6CC	<b>1.8</b>	<b>41,616</b>	<b>408</b>	<b>15</b>	<b>19</b>
AH6OZ	8,866	198	14	12	
*WH6DGA	<b>28</b>	<b>79,470</b>	<b>346</b>	<b>29</b>	<b>61</b>
<b>INDONESIA</b>					
YB0UNC	<b>A 642,488</b>	<b>906</b>	<b>100</b>	<b>198</b>	
YB5OZ	429,006	853	80	174	
YB0AVK	<b>28</b>	<b>324,650</b>	<b>786</b>	<b>37</b>	<b>114</b>
YB0LOW	<b>1.8</b>	<b>100</b>	<b>12</b>	<b>4</b>	<b>8</b>
*YB2UO	<b>A 1,576,422</b>	<b>1916</b>	<b>97</b>	<b>236</b>	
*YB1SFF	34,768	169	45	61	
*YB1BGG	22,536	217	20	16	
*YB2YX	<b>21</b>	<b>63,492</b>	<b>487</b>	<b>23</b>	<b>21</b>
*YB2UDH	14	19,725	111	23	21
*YB1KOR	18,270	119	26	64	
<b>MARSHALL ISLANDS</b>					
*V73CW	<b>A 1,922,760</b>	<b>2274</b>	<b>118</b>	<b>197</b>	
<b>MINAMI TORISHIMA</b>					
*JD1BIC	<b>A</b>	<b>129,648</b>	<b>802</b>	<b>51</b>	<b>60</b>
<b>NEW CALEDONIA</b>					
*FK9HC	<b>28</b>	<b>661,055</b>	<b>1659</b>	<b>35</b>	<b>110</b>
<b>NEW ZEALAND</b>					
ZL6OH	<b>A 2,213,710</b>	<b>2090</b>	<b>119</b>	<b>267</b>	
<b>(Op: ZL1AZE)</b>					
ZL3JT	<b>28</b>	<b>71,295</b>	<b>323</b>	<b>29</b>	<b>76</b>
*ZL2AL	<b>A</b>	<b>393,952</b>	<b>699</b>	<b>74</b>	<b>134</b>
<b>NORTHERN MARIANAS</b>					
KH0CE	1,610	53	25	21	
WH0BV	<b>28</b>	<b>355,264</b>	<b>1092</b>	<b>35</b>	<b>87</b>
NH0E	<b>21</b>	<b>336,875</b>	<b>1016</b>	<b>35</b>	<b>90</b>
<b>PHILIPPINES</b>					
DU3NXX	<b>A</b>	<b>368,212</b>	<b>713</b>	<b>75</b>	<b>119</b>
DU10DD	<b>28</b>	<b>18,816</b>	<b>205</b>	<b>21</b>	<b>43</b>
*4F1RWW	<b>A 1,100,682</b>	<b>1381</b>	<b>102</b>	<b>195</b>	
*DU10DX	<b>21</b>	<b>151,281</b>	<b>462</b>	<b>34</b>	<b>83</b>
*4F2KWZ	<b>14</b>	<b>79,622</b>	<b>395</b>	<b>28</b>	<b>54</b>
<b>SOLOMON ISLANDS</b>					
*H44MX	<b>A 3,715,320</b>	<b>3043</b>	<b>136</b>	<b>284</b>	
<b>(Op: K1XM)</b>					

<b>SOUTH AMERICA</b>					
<b>ARGENTINA</b>					
LU9APM	<b>A</b>	<b>91,938</b>	<b>588</b>	<b>21</b>	<b>45</b>
LU7YS	87,710	336	41	57	
LU4AXV	58,520	271	40	55	
LU1OH0WW	32,994	126	35	59	
<b>(Op: OH1BE)</b>					
LU1XS	11,147	102	25	46	
LT5F	<b>28</b>	<b>1,029,078</b>	<b>2837</b>	<b>35</b>	<b>118</b>
<b>(Op: LU4FPZ)</b>					
LU6UO	537,044	1672	31	93	
LU7AWP	499,488	1455	35	94	
LU5CW	270,972	838	30	87	
AY1I	<b>21</b>	<b>1,317,400</b>	<b>2833</b>	<b>37</b>	<b>138</b>
<b>(Op: LW9EJ)</b>					
LT1F	<b>14</b>	<b>713,236</b>	<b>2191</b>	<b>37</b>	<b>127</b>
<b>(Op: LU9AY)</b>					
LO1F	391,552	1497	34	94	
<b>(Op: LU1FAM)</b>					
*LU1EWL	<b>A</b>	<b>901,424</b>	<b>1310</b>	<b>87</b>	<b>147</b>
*LU1AEE	<b>657,408</b>	<b>1247</b>	<b>64</b>	<b>175</b>	
*L50V	285,239	746	54	97	
*LU7DIR	198,015	428	71	144	
*LU5GPL	54,780	179	38	72	
*LU3HIP	<b>207,416</b>	<b>1272</b>	<b>31</b>	<b>93</b>	
*LU4FAK	11,336	80	19	20	
*LW8EXF	3,552	40	17	30	
*LU5FF	<b>21</b>	<b>373,575</b>	<b>1122</b>	<b>36</b>	<b>109</b>
*LU1FNH	308,050	1099	33	89	
*LU1BW	25,900	128	24	58	



**BELGIUM**  
OT9P 2,186,522 2415 127 405  
OT9K 1,153,240 2091 111 329

**BULGARIA**  
LZ1ABC 1,203,039 1467 106 353

**CROATIA**  
9A7A 7,594,566 4662 174 624  
9A7P 1,760,889 2110 109 380  
9A1CMS 1,299,641 1660 95 306  
9A1CIG 40,872 283 20 84

**CZECH REPUBLIC**  
OK5W 7,946,523 4293 193 704  
DL3A 6,857,484 4285 183 644  
OL5O 4,275,722 3431 138 445  
OK1RR 4,213,008 2822 173 643  
OK2KOD 1,307,124 1319 120 374  
OK2KDS 1,338,040 1237 102 358  
OK1KAO 351,528 787 74 228  
OK1KCF 108,997 329 46 115  
OL5DX 100,762 333 46 120

**DENMARK**  
OZ/DJ9RR 3,275,965 3256 139 496  
OZ5WQ 2,732,960 2905 149 471

**ESTONIA**  
ES5Q 6,917,295 4558 177 618

**EUROPEAN RUSSIA**  
RU1A 11,360,022 5251 202 737  
RW4LYL 5,147,874 4132 174 600  
RZ1AWO 1,406,684 1815 100 346  
RK6AYN 1,260,504 1712 114 390  
RK3QWM 865,788 1168 109 353  
RK4FPX 795,644 1762 88 273  
RW3WWW 781,862 1458 89 271  
RK3UWA 760,864 1101 99 317

**FINLAND**  
OH7M 9,140,535 4513 193 694  
OH1F 8,957,646 4554 196 725  
OH6K 2,417,097 2151 152 517

**FRANCE**  
TM2Y 10,893,247 5578 193 694  
F5SSG 1,926,332 2611 112 327  
F8KHZ 753,375 1079 88 287  
F6KRR 433,836 955 83 241

**GERMANY**  
DK6WL 8,593,500 4512 180 670  
DL10X 3,394,593 2423 160 553  
DF1LX 2,693,194 2106 151 507  
DJ5CL 2,690,980 2135 144 484  
DFOAT 2,483,264 2087 144 500  
DK1I 2,226,276 1854 146 493  
DF0CI 1,576,638 1544 147 455  
DK0TZ 1,098,000 1269 112 338  
DK0RE 504,340 1028 91 243  
DK0RFO 371,952 710 77 259

**ITALY**  
IR4T 9,772,505 5077 195 700  
I04A 9,506,760 4768 192 716  
I02A 6,354,810 3960 174 612  
I12K 4,105,045 2940 148 517  
I11R 3,525,180 2954 145 470  
I02L 276,900 716 58 137  
IR1S 1,440 45 13 23

**LATVIA**  
YL4U 7,327,140 4679 193 677

**LIECHTENSTEIN**  
HB0/HB9LF 5,693,028 4646 135 514

**LITHUANIA**  
LY3AV 2,513,215 2604 152 509  
LY2OM 704,770 1033 97 333

**LUXEMBOURG**  
LX/DL4SDX 3,089,268 3511 127 406  
LX9DIG 2,307,893 3439 108 379

**MACEDONIA**  
Z30M 4,263,942 3648 146 532

**MONACO**  
3A/WBYR 4,629,456 4707 139 485

**NETHERLANDS**  
PI4CC 4,241,538 3513 151 535  
PI4DEC 2,219,580 2051 121 410

**NORWAY**  
LA8W 7,458,836 4597 177 617  
LA9GX 6,272,162 4299 171 590  
LA1K 858,750 1480 88 287

**POLAND**  
SP3KFH 2,270,846 1943 133 421  
SP1PEA 2,178,280 1921 141 427  
SP9KRT 999,750 1145 102 328  
SP1PLA 24,840 86 47 68

**ROMANIA**  
Y08KOS 1,049,092 1326 120 332  
Y0SKAD 75,660 296 44 11

**SCOTLAND**  
GM6NX 4,496,224 3993 144 452

**SLOVAK REPUBLIC**  
OM8A 9,799,288 5300 191 683  
OM7M 7,758,036 4514 177 645  
OM5M 7,673,988 4181 186 682  
OM3A 7,065,162 4080 180 651  
OM3KZA 44,478 128 51 75

**SLOVENIA**  
S520P 3,242,941 2961 143 476

**SPAIN**  
EA5BY 4,371,066 4029 141 473  
EA5CW 1,148,674 2048 88 294

**SWEDEN**  
SK3W 8,604,576 4524 190 676

**SWITZERLAND**  
HB7OGR 433,521 1092 74 245

**UKRAINE**  
UT7Z 5,327,079 4060 162 537  
UT7L 1,980,027 1867 138 455  
EM4E 1,624,656 2088 120 408  
UR4MWU 468,452 848 74 258  
UR4LWY 162,048 294 80 176  
EN5J 43,964 216 38 78  
UU5J 3,104 47 13 19

**YUGOSLAVIA**  
YZ7A 1,499,950 1933 107 351  
YT1Z 1,041,600 1558 95 325  
YU1AOI 192,160 1012 35 125  
YU1IND 172,250 811 65 185

**OCEANIA**  
**EASTERN KIRIBATI**  
T32PO 3,252,678 3084 128 246

**EAST MALAYSIA**  
9M6AAC 6,443,980 4488 162 428

**GUAM**  
AH2R 9,244,890 4728 180 515

**HAWAII**  
NH7A 6,940,420 4682 167 381

**INDONESIA**  
YB3ZES 96,832 287 49 87

**NEW ZEALAND**  
ZM2K 6,329,375 4217 145 388

**SOUTH AMERICA**  
**ARGENTINA**  
LU8XW 357,304 1208 28 90

**BRAZIL**  
PY3MHZ 2,340 57 9 9

**CHILE**  
CE3F 7,367,487 4547 164 469

**URUGUAY**  
CX50 124,936 545 61 123

**SOUTH SHETLAND**  
R1ANF/A 1,072,000 1701 87 163

**MULTI-OPERATOR  
MULTI-TRANSMITTER  
NORTH AMERICA**

**UNITED STATES**  
24,602,524 9580 213 770  
W3LPL 23,539,901 9101 211 772  
K3LR 23,379,714 8997 211 752  
K9NS 16,032,942 6902 210 699  
K1TTT 14,223,600 6626 195 683  
K2LE/1 13,651,588 6198 185 636  
K1RX 12,979,325 5994 193 672  
W3PP 12,968,464 6023 185 663  
W4MYA 11,779,772 5172 193 681  
K4VX/0 11,680,785 5865 182 583  
W8AV 10,272,170 4899 191 644  
K0RF 10,213,672 5068 197 619  
W3EA 8,962,008 4510 181 637  
W0AIH/9 8,812,804 4301 184 597  
W7RM 8,568,775 5000 192 533  
N6AW 7,888,810 4208 186 524  
K8CC 7,861,690 3820 177 601  
NR4M 6,941,493 4113 171 540  
K3II 5,594,875 2962 162 553  
N3AD 5,386,536 3171 166 545  
W3MM 4,938,165 2277 181 620  
W2CG 4,273,997 2339 156 545  
N2BIM 3,487,950 1999 157 533  
N1RR 3,189,760 2010 143 497  
W6DAT 2,757,989 1706 162 439  
W1QK 2,565,792 1693 136 468  
WU3M 991,827 715 142 429  
NM3K 765,519 946 96 295

**ALASKA**  
KL7Y 25,276,806 13490 193 590

**ANTIGUA**  
V26K 13,232,820 8135 151 494

**CANADA**  
VE5FN 1,739,025 2366 112 235  
VE5RI 1,633,020 2348 110 230  
VE2CQ 90,202 340 44 75

**GRENADA**  
J3A 19,555,200 11028 181 595

**AFRICA**  
**CHAGOS ISLANDS**  
VQ9IO 5,027,589 3548 150 417

**CEUTA & MELILLA**  
EA9EA 30,316,678 13450 181 645

**GHANA**  
9G5AA 34,918,107 13798 195 708

**MOROCCO**  
CN8WW 70,713,270 23068 219 843

**ASIA**  
**JAPAN**  
JA5BJC 15,256,054 7362 201 580  
JA3ZOH 13,923,768 6908 197 579  
JA3YKC 2,170,896 2617 96 240

**MONGOLIA**  
JT1JA 6,224,829 6406 152 427

**UNITED ARAB EMIRATES**  
A61AJ 38,789,751 15812 213 788

**EUROPE**  
**4U-GENEVA**  
4U1ITU 309,524 820 57 166

**BEARUS**  
EU5F 3,311,905 3368 127 466

**CZECH REPUBLIC**  
DL7W 6,147,740 4249 158 587

**DENMARK**  
OZ5W 7,127,278 5083 160 538

**DODECANESE**  
J45T 8,265,895 9306 153 532

**ENGLAND**  
M4T 209,440 619 53 167

**EUROPEAN RUSSIA**  
RS3A 11,568,934 7499 192 706

**FINLAND**  
OH2U 22,244,067 10956 211 786

**GERMANY**  
DF0HO 20,013,588 10671 209 757  
DLOKF 6,262,656 4776 162 590

**HUNGARY**  
HG6N 15,457,260 9603 190 704

**KALININGRAD**  
RW2F 21,568,933 11101 218 789

**LITHUANIA**  
LY7A 10,484,880 7016 182 658

**NETHERLANDS**  
PI4COM 12,721,272 7976 186 690

**SCOTLAND**  
GM7V 16,595,772 10054 197 729

**SPAIN**  
EA4ML 11,286,669 8030 169 602  
EA4RCV 110,715 551 50 133

**SWEDEN**  
SM5HJZ 153,846 283 81 144  
855X 141,255 281 80 139

**UKRAINE**  
UU7J 3,023,924 3000 185 587  
UX8IXX 140,504 1155 88 298

**SOUTH AMERICA**  
**NETHERLANDS ANTILLES**  
PJ4B 47,516,600 17889 208 757

**PARAGUAY**  
ZP6T 7,958,104 4983 165 451

**VENEZUELA**  
4M7X 40,142,880 15763 203 712

Disqualified: HG1S (HA1TJ) single op with multiple signals & multiple time modifications.

**CHECK LOGS**

Our thanks to the following stations who sent in check logs:  
9A40E, AA5WE, AA9IV, CT1DUJ, DF6SW, DL1ARK, DL2ARG, DL2HRE, DL2HWI, DL2VER, DL5DWW, DL6AP, DL6MWW, DL7AOT, DL7UAW, DL8MTG, DL8TL, DL8UFO, EA10S, EA1VM, EA2CKP, EA3AEI, EA4FW, EA5FFC, EA5OI, EA7HDW, EA8AF, EA9AA, EW10C, EW6BI, HA5AEX, IT9GXE, K3APM, K3SWZ, K6VL, K030, KR0I, LA1FW, LA2TD, LA4KF, LA4LN, LA4XFA, LA5RIA, LA5ZC, LA7SI, LA8CD, LA8LA, LA9HF, LA9VA, LY1FM, LZ1JZ, LZ2AG, LZ2DB, LZ2DD, M0AVN, N2AU, N9JZ, OH2PR, OH3LXW, OH3TY, OH6UC, OK1AYU, OK1DDV, OK1DMP, OK1DSU, OK1XJ, OK2HFC, OK2PKY, OK2XVM, OZ7QB, PA0JUV, PA3CNI, PA5TT, PA7XG, PY1ADG, PY1ARS/A, PY2AER, PY2FFW, PY2SP, PY2SY, PY3AU, RA0ZN, RA3AD, RA3XR, RA9HDM, RK3AY, RK9AA, RN3FN, RN6CH, RU3DG, RV6BM, RZ45WM, RZ4UZ, SK5PZ, SM0CSX, SM0XG, SM2JWW, SM5APS, SM5BEU, SM5BUH, SM5CVC, SM5ENX, SM5LI, SM5NDI, SM5OL, SM6CDN, SM6CZU, SM6DUA, SM7CZC, SP2BMX, SP2FMN, SP3ESV, SP3NX, SP4DZT, SP5AHZ, SP5ANX, SP5CEQ, SP5FLB, SP5XSB, SP6AU, SP6BEN, SP6CES, SP6CIK, SP6SYF, SP6YGB, SP7DTP, SP7FGA, SP7HQ, SP7HT, SP8FHM, SP8HKT, SP9DTH, SP9LAS, S05TT, UA0CA, UA0VF, UA0ZC, UA1ABO, UA1CEC, UA3AFJ, UA3UBT, UA9MBX, UN6T, US40Q, US7QO, UT2XU, UU4JL, UU9JX, VE1ACU, W8ROV, W8O0TV, Y05AY, Y05BIM, Y06LV, Y07BKU, Y08CRU, Y08DHD, Y09BGV, ZW2A.

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TOWER MODEL	Height Feet	Top To Rotor	Base Width	Max. Ant. 87mph	In Sq. Ft @ 100mph	112mph	Max Ant load	Wgt Lbs.	Price w/ UPS
RT-424	4.5	34.75	24"	6	4.5	3.6	100 lbs.	18	\$162.00
RT-832	8.0	43.75	32"	8	6	4.8	120 lbs.	30	\$234.00
RT-936	9.0	43.75	36"	18	13.5	10.5	130 lbs.	54	\$394.00
RT-1832	17.5	37.62	32"	12	9	7.2	110 lbs.	60	\$528.00