

Results of the 2010 CQ WW DX CW Contest

BY BOB COX,* K3EST

Expanded Results on the Web

Editor's Note: Having a record number of logs submitted for the CQ WW CW Contest is great, but it does put a squeeze on space. In order to assure that the efforts of all entrants are recognized through the publication of complete line scores, certain other elements of our contest reporting have been moved to the CQ website. Please visit the CQWW DX Contest page (follow the links from <www.cq-amateur-radio.com>) for QRM, expanded top scores listings, and more. —W2VU

Where are you sunspot Cycle 24? We all are waiting. In the meantime, the CQ WW again created its own propagation. You can enter the CQ WW CW Contest and help improve conditions. Once the contest begins, the bands come alive with activity. As Lee, G0MTN comments, "Superb activity levels; seems like everyone with a wire in suburbia to record-breaking superstations; had huge fun." Ed, N1UR, says, "Wow! The best low band conditions ever experienced in a contest." Egbert, ON4CAS, summed up the feelings of many: "Running barefoot into a tribander beam is all you need. I heard rumors that it will take yet another year before we all enjoy the next CQ WW. Please tell me it's not true." The CQ WW is a fantastic competition which brings out the best in CW contesters of skill levels. As Col, VK4CC says, "I have been learning the Morse code for 6 months and this was my first CW contest. I enjoyed it immensely and look forward to the next one."

Just turn on your radio and you can join in the fun. Once you listen to the bands during the CQ WW, you will be hooked. You can be guaranteed to have a good time. Here are presented the results of the efforts the entrants. Read on to see how you and your friends ended up.

High Power

The competition for first place world is always tough. Taking first place this time was Valery, RD3AF, keying EF8M to first place. Not far behind was Jose, CT1BOH, operating from CR3E. Jose always can be found as, or near, the top score in the world. Third-place world went to Yuri, VE3DZ who traveled down to PZ5T from cold Ontario. Again taking first place in the U.S. was Randy, K5ZD. Randy sure has the magic touch. Moving up from last year's finish and taking second place in the U.S. from central Pennsylvania was Alex, LZ4AX, operating from K3CR. Third place went to Doug, K1DG, operating from southern New Hampshire. Top honors in Europe, for several years in a row, went to Toni, OH2UA, operating from CR2X. Second-place Europe went to the fine efforts of Felipe, CT1ILT, at the controls of CR6K. Third place in Europe went to Ranko, 4O3A. Other worthy efforts from challenged propagation areas which should be recognized are K6XX, K6NA, KO7AA, K7RL, VU2PAI, VU2PTT, JE1CKA, JH4UYB, JA6LCJ, JA2FJP, JA7DLE, ZS1EL, ST2AR, 8Q7DV, VK6AA, 9M6/KM0O, 9M6XRO, NH2T, and KH6ZN.

The continental winners were: North America: V47NT (N2NT); Africa EF8M (RD3AF); Asia P3N (R2AA); Europe CR2X (OH2UA); Oceania NH2T (N2NL); South America PZ5T (VE3DZ); Japan JH4UYB, U.S. K5ZD/1.

Low Power

The most popular category in the CQ WW is the low power category. All you need is a transceiver and an antenna. Winning any low power category is a real accomplishment. Ending up on top is very special. Finishing again at the top was a familiar callsign, with Joe, AA3B, operating at V26K. Joe has been number one in the world many times. Moving up from his last year's third-place finish into second place in the world was Julio, AD4Z, operating from the Dominican Republic as HI3A. Following closely in third place was Andrey, RA9CKQ, operating from 3V3A. The 2010 results for the top scores in the U.S. were a carbon



CW5W: Fabiano, PY3VK; Leo, CX3AL, and Jorge, CX6VM

copy of 2009. Again taking the top slot was Ed, N1UR. He took away the low power U.S. trophy, while Art, K1BX, again took second place. Third place in the U.S. again went to Marvin, N5AW, from Texas. Taking first place in highly competitive Europe was Tine, S50A. Tine put his QTH in sunny Turjak to very good use. Again finishing near the top in second-place Europe was Gedas, LY3BA, operating LY9A. Finishing in third position in Europe was Petr, OK2PP, operating the club call OL6P. Operating from challenging locations were N6RV, W7YAQ, K5KLA, W0ETT, J28AA, SU9HP, 5Z1N, V51YJ, 5N7M, 5H3EE, 3V3A, 5X1XA, 9J3A, B4S, VU2BGS, HZ1PS, E21YDP, XV2RZ, and V63YT. Their operations were appreciated.

The continental winners were: North America V26K (AA3B); Africa 3V3A (RA9CKQ); Asia RG9A; Europe S50A; Oceania VK4IU; South America PJ4LS; Japan JA1BJI; U.S. N1UR.

QRP

Running only 5 watts will focus your mind. A whole set of skills are needed to master this category. You learn to avoid packet pile-ups. You learn to choose the right moment to call someone. You can work a lot of stations with 5 watts or less. Our world winner is located in western France overlooking the Atlantic Ocean. His skill and location propelled Laurent, F5MUX, to first place world. Second-place world and first-place USA went to Doug, KR2Q. Doug also holds several QRP world records. You had to travel to Ohio to find the QTH of third-place world and second USA. The honor went to Bill, N8ET. Third-place USA went to Mike, K8CN/1, operating from New Hampshire. Second-place Europe and number four world was Joseph, UU2CW. Fifth-place world and number three in Europe was Krzysztof, SP9NSV. Special mention must be made of the great competition between Izuno-san, JR4DAH, and Manabu-san, JE1RZR, #1 and #2 in Asia, respectively. R9SG, MJ0ASP, UN8PT, JG3CQJ, BA4WI, 7K1CPT, UA0SBQ, JK1TCV, JA0VTK7, JA9MAT, HS8KGG, 4M6CQ, VY1EI, and JA1KEB are to be congratulated for their outstanding efforts.

The continental winners were: North America KR2Q; Africa EA8IK; Asia JR4DAH; Europe F5MUX; Oceania No Entry; South America PY4ZO; Japan JR4DAH; U.S. KR2Q.

Assisted

The new emphasis on the assisted categories has been well received. Rowland, K4XD's comments were similar to many positive messages: "Enjoyed the new category of assisted high power single band—80m!" From Suad, DK6XZ, "Thanks to the Contest Committee for extending the

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awarding/ranking program to the assisted category." With many new awards and records to try to win, the assisted categories are coming into their own. Remember, the use of any QSO spotting tool (Skimmer, any DX spotting help) places you in the assisted category.

The world top assisted spot went to Stefano, IK2QEI, operating from CN3A located in Saffi Morocco, 220 km south of Casablanca close to the Atlantic Ocean. Second-place world and number one in North America was a familiar winner, John, K1AR. Third-place world and

number one South America was P40C operated by Alex, KU1CW. Taking first place in Europe again was Sergey, UT5UDX, at ER4A. Second place in Europe went to Andy, SP8BRQ, using contest call SO8A. Third-place Europe was taken by Marco, S51DS, operat-

TROPHY WINNERS AND DONORS

SINGLE OPERATOR ALL BAND World EF8M (Opr.: Valery Komarov, RD3AF) Donor: K4FW Memorial (Scott Robbins, W4PA)	SINGLE OPERATOR, SINGLE BAND World - 28 MHz PW2F (Opr.: Marcelo Pedretti, PY2NA) Donor: Joel Chalmers, KG6DX	Carib./C.A. ZF1A (Oprs.: K6AM, K5PI, N5D0) Donor: Kansas City DX Club
World - Low Power V26K (Opr.: Joseph Trench, AA3B) Donor: Slovenia Contest Club	World - 21 MHz ZX5J (Opr.: Hamilton Oliveira Martins, PY2YU) Donor: Lew Sayre, W7EW	Africa D4C (Oprs.: IK2JUB, IK2PFL, IK2NCJ, YL2KL, YL7X) Donor: Harry Booklan, RA3AUU
World - QRP Laurent Fontaine, F5MUX Donor: Gene Walsh, N2AA	World - 14 MHz 9Y4W (Opr.: James Neiger, N6TJ) Donor: W2JT Memorial (North Jersey DX Assn.)	Asia C4N (Oprs.: 5B8AD, UA6LP, RN3QY, 5B4AGM, RA6LFO)* Donor: Steve Merchant, K6AW
World - Assisted CN3A (Opr.: Stefano Brioschi, IK2QEI) Donor: Robert McGwier, N4HY	World - 7 MHz Vakhtang Mumladze, 4L8A Donor: Alex M. Kasevich, W1CDC	Europe TM6M (Oprs.: F1AKK, F5TTU, F6FVY, F6IFY, F8DBF) Donor: Bob Cox, K3EST
World - Assisted Low Power Alfredo Velez Ramos, WP3C Donor: CQ magazine	World - 3.5 MHz SN3A (Opr.: Jurek Smoczyk, SP3GEM) Donor: Fred Capossela, K6SSS	Japan JG1ZUY (Oprs.: JG1VGX, JI6CUK) Donor: Madison Jones, W5MJ
World - Assisted QRP OK3C (Opr.: Ludek Odehnal, OK2ZC) Donor: CQ magazine	World - 1.8 MHz Nodir Tursoon-Zadeh, EY8MM Donor: Kenneth Byers, Jr., K4TEA	Oceania - Pacific Rim KH7X (Oprs.: KH6ND, KH6SH, KH7Y) Donor: Junichi Tanaka, JH4RHF
USA Randall Thompson, K5ZD/1 Donor: Frankford Radio Club	USA - 28 MHz Jeffrey W Hartley, N8II Donor: CQ magazine	South America P40L (Oprs.: W6LD, W0YK, KX7M, N7MH) Donor: Araucaria DX Group
USA - Low Power Edward Sawyer, N1UR Donor: North Coast Contesters	USA - 21 MHz Brian J Edward, N2MF Donor: Bob Naumann, W5OV	MULTI-OPERATOR, TWO-TRANSMITTER World CR3L (Oprs.: DJ2YA, DJ6QT, DK7YY, DL1CW, DL5AXX, DL8WAA, K2SX, W2LK) Donor: Array Solutions
USA - QRP Douglas Zwiebel, KR2Q Donor: Gene Zimmerman, W3ZZ	USA - 14 MHz Brooke T. Allen, N2BA Donor: Northern Illinois DX Association	USA N3RS (Oprs.: N2SR, N3RD, NA3D, K3WI, W8FJ N3RS) Donor: Eric Scaee, K3NA
USA - Assisted John Dorr, K1AR Donor: John Rodgers, WE3C	USA - 7 MHz Paul H Newberry, Jr., N4PN Donor: W6AM Memorial (Jan Perkins, N6AW)	Europe IR4X (Oprs.: I4VEQ, I4TJE, I4YRW, I4EAT, I4IKW, I4LEC, I2WIJ, IK4ZGO, IZ4HVM, IZ3EYZ, IK4EWK, IZ4CZE, IK4VET, IK4DCT) Donor: Aki Nagi, JA5DQH
USA Assisted - Low Power James P. Bowman, KS1J Donor: CQ magazine	USA - 3.5 MHz Lawrence F Emery, K1UO Donor: Bill Feidt, NG3K	MULTI-OPERATOR, MULTI-TRANSMITTER World C5A (Oprs.: OK1DIX, OK1DO, OK1FFU, OK1NY, OK1RI, OK8WW/OM2TW, OM2RA, OMSAW, OM6NM) Donor: K2GL Memorial (Doug Zwiebel, KR2Q)
USA - Zone 3 Robert Wolbert, K6XX Donor: Central Arizona DX Association	USA - 1.8 MHz William R. Tippett, II, W4ZV Donor: Jeff Briggs, K1ZM	USA KC1XX (Oprs.: KC1XX, K1FWE, K1TR, N1KWF, W1FV, WA1Z, W2RQ, KM3T, N9NC) Donor: N6RJ Memorial (Bob Ferrero, W6RJ)
USA - Zone 4 Steve London, N2IC/5 Donor: The Society of Midwest Contesters	Canada (14 MHz) VE6JY (Opr.: Gary Caldwell, VA7RR) Donor: John Sluymmer, VE3EJ	Europe DF0HQ (Oprs.: DJ9AO, DL1AUZ, DL1DTL, DL2OBF, DL4MM, DL5ANT, DL5AOJ, DL5MLO, DL5SE, DL7ZZ) Donor: Finnish Amateur Radio League
Canada VY2ZM (Opr.: Jeffrey Briggs, K1ZM) Donor: John Sluymmer, VE3EJ & Jim Roberts, VE7ZO	Carib./C.A. (21 MHz) C6ATA (Opr.: Kenneth Silverman, K2KW) Donor: David Hodge, N6AN	Japan JA3YBK (Oprs.: JG3KIV, JG3MRT, JG3WDN, JF4FUF, JF4ETK, JH4NMT, JR4ISF, JS1PWW) Donor: Masahiro Kitagawa, JH3PRR
Carib./C.A. V47NT (Opr.: Andy Blank, N2NT) Donor: Chuck Shinn, W5PG	Europe - 28 MHz ZB2X (Opr.: Jorma Saloranta, OH2KI) Donor: Jay Pryor, K4OGG	WORLD - MULTI-MULTI SSB/CW COMBINED PJ2T 59,245,312 Donor: W0ID Alpha Award
Europe CR2X (Opr.: Toni Linden, OH2UA) Donor: W3AU Memorial (Pete Raymond, N4KW)	Europe - 21 MHz Ivica Matkic, E73W Donor: Robert Naumann, W5OV	USA - MULTI-MULTI SSB/CW COMBINED K3LR 46,868,406 Donor: N8SM Memorial (Operators of K3LR)
Europe - Low Power Tine Brajnik, S50A Donor: Scott Jones, N3RA & Tim Duffy, K3LR	Europe - 14 MHz CT1JLZ (Opr.: Jiri Pesta, OK1RF) Donor: G3FXB Memorial (Maud Slater)	CONTEST EXPEDITIONS World Single Operator 8Q7DV (Op.: Vitaly A. Afanas'ev, RN4WA) Donor: Friends of Phil Goetz, N6ZZ
Europe - QRP Joseph Semyonovich, UU2CW Donor: CQ magazine	Europe - 7 MHz OH5\$V (Opr.: Jukka Klemola, OH6LI) Donor: Ivo Pezer, 9A3A	World Multi-Operator ZL8X (Oprs.: DJ5IW, DJ7EO, DJ9RR, DK1II, DL1MGB, DL3DXX, DL5CW, DL5LYM, DL5XL, DL6FBL, DL8LAS, DL8OH, SP5XVY, SV2KBS) Donor: Carl Cook, AIGV
Europe - Assisted High Power ER4A (Opr.: Sergey S. Rebrov, UT5UDX) Donor: I4IND Memorial Award (operators of IR4X)	Europe - 3.5 MHz Teemu S. Korhonen, SM0W* Donor: K3VW Memorial (Frankford Radio Club)	SPECIAL - SINGLE OPERATOR AWARD World SSB/CW Combined CR2X (Opr.: Toni Linden, OH2UA) 25,463,656 Donor: Hrane Milosevic, YT1AD
Europe - Assisted Low Power Ricardo Navarrete Lopez, EA4ZK Donor: CQ magazine	Europe - 1.8 MHz Drago Turin, S59A Donor: Pat Barkey, N9RV & Terry Zivney, N4TZ	CLUB World SSB/CW Yankee Clipper Contest Club 373,204,929 Donor: W1WY Memorial (CQ magazine)
Scandinavia OH8X (Opr.: Pasi Luoma-Aho, OH6UM) Donor: W3FYS Memorial (Chas Weir, Jr., W6UM)	Japan - 21 MHz Akito Nagi, JA5DQH Donor: Bob Wilson, N6TV	Non-USA SSB/CW Bavarian Contest Club 273,274,061 Donor: N6AUV Memorial (Northern California Contest Club)
Russia Vadim Ovsyannikov, R9DX Donor: Roman Thomas, RZ3AA	Japan - 14 MHz* Hirofumi Nakamura, JA6WFM Donor: Chris Terkla, N1XS	<i>* Second Place</i>
Africa CR3E (Opr.: Jose Carlos Cardoso Nunes, CT1BOH)* Donor: K5KA Memorial (Ralph "Gator" Bowen, N5RZ)	Asia - 21 MHz 9K2HN (Opr.: Faisal Al-Ajmi, 9K2RR) Donor: Coconut Wireless Contest Club	
Asia P3N (Opr.: Eugene Danielyan, R2AA) Donor: Chuck Shinn, W5PG	Asia - 14 MHz Syuichi Sata, JA7FTR Donor: W5FO Memorial (Ralph "Gator" Bowen, N5RZ)	
Japan Masaki Masa Okano, JH4UYB Donor: Tack Kumagai, JE1CKA	MULTI-OPERATOR, SINGLE TRANSMITTER World P33W (Oprs.: RA2FA, UA2FZ, RW4WR, RV1AW, RA3AUU) Donor: CQ magazine	
Japan - Low Power Taro Asao, JA1BJ Donor: Western Washington DX Club	USA K1LZ (Oprs.: K1LZ, K1VR, N2OW, K3JO, NU5Y, N8BO) Donor: Douglas Zwiebel, KR2Q	
Oceania VK6AA (Opr.: Bernd Langer, VK2IA) Donor: Chris Tran, ZL1CT	Canada VE3EJ (Oprs.: VE3EJ, VE3FU, VE3TA, VE3XB) Donor: Eastern Canadian DX Assn.	
South America PZ5T (Opr.: Yuri Onipko, VE3DZ) Donor: Venezuela DX Club		

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
EF8M	205/14/59	673/23/75	2448/32/103	1363/33/90	1529/32/107	1380/24/101
CR3E	320/17/52	892/25/79	2060/33/97	1354/32/102	1911/27/105	706/23/87
PZ5T	141/17/32	870/25/84	1449/30/103	1879/36/121	1727/36/119	569/24/81
V47NT	438/15/63	752/22/79	2169/32/114	1833/34/106	1747/26/93	354/20/64
P40W	404/18/61	1072/25/82	1324/31/94	1392/32/93	1397/31/93	910/20/68

WORLD TOP SINGLE OPERATOR ASSISTED ALL BAND

Station	160	80	40	20	15	10
CN3A	165/13/58	715/21/85	1304/29/99	1123/34/116	1639/33/124	783/26/95
K1AR	137/15/62	553/29/113	1327/39/138	1122/38/145	932/30/126	77/20/52
P40C	147/18/44	945/21/82	1298/25/85	1400/33/98	997/28/82	580/17/38
CT3KN	65/11/36	738/19/76	1176/25/85	854/27/90	1820/30/105	414/24/78
K3WW	180/20/78	575/27/108	1272/36/130	1170/38/134	740/29/116	63/15/43

WORLD MULTI-OPERATOR SINGLE TRANSMITTER

Station	160	80	40	20	15	10
P33W	387/18/79	1253/29/115	2267/37/151	2554/40/150	1858/37/152	640/30/104
D4C	121/20/83	610/29/112	1703/39/130	1589/37/149	2158/37/150	1873/31/131
P40L	227/18/67	856/29/106	2230/37/137	1694/38/140	1957/35/138	751/21/63

WORLD MULTI-OPERATOR TWO TRANSMITTER

Station	160	80	40	20	15	10
CR3L	415/16/68	1517/26/95	3371/37/123	2784/37/132	2773/30/107	676/27/103
PJ4A	520/14/58	1053/26/96	2934/35/121	2528/36/111	2518/30/100	1210/25/86
9L5VT	212/13/57	952/22/84	1986/33/119	2019/37/126	3015/35/136	1839/22/100

WORLD MULTI-OPERATOR MULTI-TRANSMITTER

Station	160	80	40	20	15	10
C5A	806/22/83	1644/31/103	3444/36/128	4032/40/154	3241/38/151	2011/29/132
PJ2T	1052/22/88	1800/27/108	3278/35/119	2901/37/130	2869/34/124	1463/23/79
KC1XX	584/27/98	2003/34/132	2700/40/162	2525/38/163	1797/36/151	476/25/107

USA TOP SINGLE OPERATOR ALL BAND

Station	160	80	40	20	15	10
K5ZD/1	163/15/57	721/24/90	1350/35/114	1202/35/122	1075/29/106	76/16/35
K3CR	145/16/66	664/27/98	1267/35/120	1154/34/113	946/32/105	61/19/42
K1DG	279/20/80	721/24/89	1120/29/111	1130/33/107	1003/28/107	50/19/40
K1RX	205/17/63	720/23/89	1112/32/97	1207/31/95	895/27/101	51/14/35
K1TO/4	61/17/42	389/23/79	1525/33/109	1174/34/111	612/31/105	179/20/58

USA TOP SINGLE OPERATOR ASSISTED ALL BAND

Station	160	80	40	20	15	10
K1AR	137/15/62	553/29/113	1327/39/138	1122/38/145	932/30/126	77/20/52
K3WW	180/20/78	575/27/108	1272/36/130	1170/38/134	740/29/116	63/15/43
N3KS	12/6/9	281/24/80	780/31/120	869/33/125	750/31/127	57/17/41
K9NW	143/23/68	376/29/106	406/34/123	723/37/138	557/31/119	89/18/53
N1EU/2	70/16/60	215/23/91	508/35/126	816/35/135	521/32/129	57/19/53

USA MULTI-OPERATOR SINGLE TRANSMITTER

Station	160	80	40	20	15	10
K1LZ	262/24/96	898/29/119	1956/39/152	1437/39/155	1233/36/142	112/24/82
K5GO	89/23/78	557/31/117	1245/39/149	1387/38/148	798/33/126	65/22/57
K8AZ	196/19/70	689/28/107	1021/37/137	1176/38/146	926/34/135	61/20/60

USA MULTI-OPERATOR TWO TRANSMITTER

Station	160	80	40	20	15	10
N3RS	181/21/85	1194/31/125	2195/40/151	1868/37/148	1205/36/142	147/21/68
WE3C	130/22/93	1106/31/119	1919/40/149	2172/37/143	1342/34/134	113/23/70
KB1H	71/14/44	901/28/101	1034/35/126	1814/35/138	1177/31/128	98/20/55

USA MULTI-OPERATOR MULTI-TRANSMITTER

Station	160	80	40	20	15	10
KC1XX	584/27/98	2003/34/132	2700/40/162	2525/38/163	1797/36/151	476/25/107
W3LP	651/26/98	1865/35/136	2417/40/159	2772/39/164	1680/37/152	200/24/79
K3LR	546/28/102	1443/35/133	2442/40/167	2729/39/166	1746/36/151	306/24/97



Jerome, N4JF, 4th USA QRP

a new world record, atop of the world standings, was the effort of P33W manned by a fine Russian team. Moving into the multi-single category and taking second place world was the Italian/Latvian team at D4C. Third position in the world was the USA team at P40L. Multi-single is very competitive, especially within Europe. Taking the top European honors was TM6M from Brittany. Finishing second was the Slovak Contest Group, OMA. Third place went to the Romagna Contest Team IR4M east of Firenze in Montecodruzzo. In the U.S., the job done by K1LZ's team was a lesson in how to operate MS. They made an outstanding score and ended up 6-million points ahead. The win for second place went to K5GO out in Arkansas. What a great effort from Stan's team. Third-place U.S. went to the perennial top-placing efforts from Tom's team at K8AZ. Out in the western states, W7DR/6 was on top, followed by N7DD. Outstanding performances were turned in by many teams. A few of the calls appearing in many logs were: D4C, ED9M, B7P, BY8AC, C4N, A73A, UO1P, A73A, HS0AC, AH2R, YE1C, ZM1A, ZM4T, ZK2A, and AH0DX.

The continental winners were: North America K1LZ; Africa D4C; Asia P33W; Europe TM6M; Oceania KH7X; South America P40L; Japan JG1ZUY; U.S. K1LZ.

Multi-Two

The Multi-Two category takes a lot of planning. Not only do you need an excellent team, you also have to time your band moves carefully. Once again team CR3L took advantage of its location to find band openings to the U.S. and Europe. The German/U.S. team of CR3L ran away with world top honors. Second-place world honors went to the U.S. team at PJ4A on the new DXCC country of Bonaire. Taking third place in the world was the Voodoo contesters, 9L5VT. The call sign was in memory of K5VT, one of their members who passed away. First place in Europe went to long-time top finisher IR4T just west of Bologna. Second place in Europe was captured by Philippe's team at LX7I. Located on the beautiful coast of Istria, the team of 9A1P took third-place honors. The battle for U.S. top honors was among Frankford Radio club teams. Coming out on top was Sig's team at N3RS. They were followed closely by WE3C's station also in eastern Pennsylvania. Third place in the U.S. went to KB1H operating from East Killingly, Connecticut. In Japan the teams of 7J1YAJ and JA1ZGP finished first and second, respectively. Several stations put rare multipliers on the air and made big scores. When great operators activate tough places, they make contacts easy:

Taking first-place world in the difficult category was Kyle, WA4PGM, operating from the VP9I club station. Number two in the world and first in the U.S. was Jim, KS1J. Third-place world and first in South America was Alex, PY2SEX. Here in the U.S. second place went to Dan, K2YWE, operating at K3AU. The third position in the U.S. went to Keith, W3KB. Taking away the top position in Europe was Rick, EA4ZK, located in the countryside south of Madrid. The second spot in Europe went to Aleko, LZ3ZZ, near Lake Kaprinka. The third position in Europe went to Sandi, S52OP, operating from the countryside north of Ptuj. Putting in outstanding efforts from challenging locations were 6V7Y, RV9CX, BD1EFO, VR2PX, J11RXQ, JH1RNI, JT0YAB, DU1/JJ5GMJ, W6TMD, N6NG, W0VX/5, WU8B/9, N0HR, and AD1C/0.

The continental winners were: North America VP9I (WA4PGM); Africa EA8BQM; Asia RV9CX; Europe EA4ZK; Oceania DU1/JJ5GMJ; South America PY2SEX; Japan J11RXQ; U.S. KS1J.

Multi-Single

A winning multi-single station takes a lot of thought. A really competitive MS is two very good operators who can run and find multipliers. Setting

EUROPE TOP SINGLE OPERATOR ALL BAND

Station	160	80	40	20	15	10
CR2X	287/16/61	812/25/87	1409/33/111	1644/36/113	1925/36/117	614/21/80
CR6K	440/17/63	1259/23/91	1365/30/112	1216/33/111	1392/31/108	485/21/71
4O3A	197/11/51	954/20/73	2226/33/110	1845/38/115	1094/32/101	169/19/64
T70A	495/14/60	1444/23/85	1342/30/93	1270/28/86	1210/27/94	53/14/30
OE3K	282/14/51	1011/29/83	1631/33/108	1270/30/95	659/34/88	160/14/43

EUROPE TOP SINGLE OPERATOR ASSISTED ALL BAND

ER4A	325/12/59	1060/28/103	1938/35/140	1441/37/125	768/32/133	79/19/53
S08A	152/17/66	1061/30/112	948/36/126	1059/38/137	391/33/143	14/9/13
S59ABC	93/13/54	627/23/82	1129/38/120	1089/35/105	546/37/118	65/22/47
UW3U	151/12/57	705/27/100	1641/36/142	722/38/123	572/36/133	142/18/59
DL8DYL	86/12/52	365/18/89	1114/32/102	1126/32/100	732/37/126	56/17/47

EUROPE MULTI-OPERATOR SINGLE TRANSMITTER

TM6M	320/20/84	968/30/113	1941/39/144	1781/39/132	1378/38/146	225/26/88
OM8A	365/26/92	1247/32/127	1807/40/154	1855/40/149	911/39/152	252/24/85
IR4M	359/20/89	824/26/118	1685/38/148	1532/37/139	1332/38/151	123/28/100

EUROPE MULTI-OPERATOR TWO TRANSMITTER

IR4X	477/19/84	1415/30/123	2161/40/160	1957/40/151	1399/39/158	210/30/108
LX7I	645/17/77	1765/31/118	2253/37/142	2289/39/143	1559/37/145	284/24/90
9A1P	338/16/69	1581/26/100	1827/37/137	1858/38/127	1279/37/140	275/26/98

EUROPE MULTI-OPERATOR MULTI-TRANSMITTER

DF0HQ	1190/23/93	2333/32/130	3060/39/164	2307/39/160	1187/38/163	383/25/112
EA2EA	1162/19/77	2121/32/121	2687/37/148	2864/38/145	1953/39/154	679/27/95
LZ9W	1009/15/77	2357/36/128	3298/38/152	2401/40/150	1463/37/147	444/30/105

9L5VT, VP2E/K1XM, RM9X, TC3A, B1Z, P3F, ZA3HA, KH6LC, and AH0BT all added to the fun.

The continental winners were: North America N3RS; Africa CR3L; Asia P3F; Europe IR4X; Oceania KH6LC; South America PJ4A; Japan 7J1YAJ; U.S. N3RS.

Multi-Multi

Entering the multi-multi category is a real challenge. Look to the multi-multi band-by-band breakdown to see how many multipliers and QSOs were possible to work. Months of planning the station site, gathering operators together, and waiting to see what nature deals you make for a combination of satisfaction and excitement. Traveling to Gambia for a big multi-multi takes months of planning. C5A, operated by the OMØC Contest Team made up of OM and OK contesters, did all the right things to take the world trophy. Great job! The Caribbean Contesting Consortium team, PJ2T, took second-place world from the new country of Curacao. Breaking into the world top three is not easy. Repeating their third place world finish and number one in the U.S. was KC1XX, Matt's team from southwestern New Hampshire. The battle for second place in the U.S. was close. Only 61K points separated the contenders. When all the smoke cleared, W3LPL was in second place. Not far behind, K3LR took third place in the U.S. Both KC1XX (598) and K3LR (597) were just a few countries shy of six-band DXCC! The European crown was taken away by DF0HQ, the Ilmenau Contest Club. Second place in Europe went to the 19-man team of EA2EA located not far from the Bay of Biscay. Third place in Europe went to the LZ Contest Team operating LZ9W. From farther west in the U.S., NR5M, KØRF, and WØAIH/9 again did fantastic jobs. Finishing number one in Japan was the Nara team of JA3YBK, just edging out 8N5A. Putting together a multi-multi from an interesting QTH is tough. The following stations ended up in a lot of logs: ZL8X, HD2M (SK6M contest team), VK1CC (VK contest club), and RA9A.

The continental winners were: North America KC1XX; Africa C5A; Asia JA3YBK; Europe DF0HQ; Oceania ZL8X; South America PJ2T; Japan JA3YBK; U.S. KC1XX.

Team Contesting

A lot of planning goes into the top teams to aim for potential top scores. Teams can be formed with members from anywhere in the world. You

TOP SCORES IN MOST ACTIVE ZONES

Zone 3	K3WW.....8,520,192	UW3U.....5,383,433
K6XX.....3,590,370		RG6G.....4,293,648
K6NA.....3,125,443		RG3K.....3,819,242
KO7AA.....2,948,230		RX3APM.....3,704,184
K6LL/7.....2,847,906		
K7RL.....2,765,696		
Zone 14	CR2X.....10,206,848	
CR6K.....8,691,975		
DL8DYL.....5,318,640		
TM6X.....4,983,927		
DK6XZ.....4,970,368		
GM7R.....3,977,358		
Zone 20	P3N.....11,654,496	
N2IC/5.....6,207,708		
VC3A.....6,179,346		
VE3JM.....6,049,000		
W9RE.....5,273,785		
K9NW.....4,857,065		
Zone 15	4O3A.....7,487,742	
T70A.....5,929,936		
OE3K.....5,849,288		
SO8A.....5,478,840		
S59ABC.....5,460,392		
Zone 16	ER4A.....8,169,728	
K1AR.....9,314,394		
VY2ZM.....8,986,635		
VY2TT.....8,945,230		
K5ZD/1.....8,940,786		
Zone 25	JH4UYB.....3,888,310	
JA6GCE.....3,692,436		
JS3CTQ.....3,075,845		
JA6LCJ.....2,179,455		
JA7DLE.....1,776,649		
		*Low Power

can submit your team list to <teams@cqww.com>. For 2010 CW, top honors went to Team "Pile-Up Survivors" followed by Contest Club Finland Team Sauna and Black Sea Team. Great job by all! The results of Team Contesting are as follows:

- 1. Team "Pile-Up Survivors":** 8P5A (W2SC), CR3E (CT1BOH), PZ5T (VE3DZ), V47NT (N2NT), ZD8O (N5ZO): **57,471,354**
- 2. Contest Club Finland Team Sauna:** 5R8WW (OH2BBM/8), CR2X (OH2UA), OHØZ (OH6EI), OH2BH (OH1WZ), OH8X (OH6UM): **30,512,718**
- 3. Black Sea Team:** 4LØA (UUØJM), ER4A (UT5UDX), TC7M (R5GA), UX5D (UT7DK): **28,160,845**
- 4. WWYC Team #1:** SO2O (SQ2GXO), LN5O (LA6FJA), OQ5M (ON5ZO), NH2T (N2NL), TA3/OZ1AA: **19,118,004**
- 5. Florida Contest Group #1:** HI3A (AD4Z), K1TO, N4UU: **13,985,956**
- 6. Florida Contest Group #4:** K4PB, K5AUP, KE1F, KN4Y: **11,860,023**
- 7. Carolina DX Association:** ISØ/K7QB, N2TU, N4ZC, W3GQ, W3OA: **11,320,594**
- 8. MCC#1:** VE1OP, VE1RGB, VE1DT, VY2SS, VE9MCC: **10,963,768**
- 9. Code Sharks Too:** ZS1EL, ZS4TX, V26K: **9,684,302**
- 10. VKCC Suckers (Short Path):** VK2BJ, VK4IU (VK4EMM), VK6AA (VK2IA), VK6LW: **9,301,370**
- 11. KTU RC:** LY2K, LY3B, LY4T, LY6A, LY9A: **8,825,594**
- 12. Team Contest group du Quebec:** VE2XAA/2, VC2A, VA2EW, VA2SG, VE2FK: **7,542,542**

has its own set of records. The records are maintained on the <cqww.com> website. If you discover an error in the records, please document it and let us know at <questions@cqww.com>. The records for the new assisted categories, low power and QRP are now included. The following stations used their skills to obtain new CW records. Congratulations!

World: L1.8 GW3YDX; A21 HK1R; A14 HK1X; MS P33W. **U.S.:** A K5ZD/1; 7 N4PN; L3.5 NA8V; AA K1AR; A7 K1IG; A3.5 KV0Q; A1.8 K1LT/8. **North America:** A V47NT (N2NT); L7 C6ATA (K2KW); L1.8 C6ARR (S6BT); AA K1AR; A7 K1IG; A3.5 KV0Q. **Africa:** Q21 SU/HA3JB; MS D4C. **Asia:** A P3N (R2AA); L3.5 UK9AA; Q7 UN0L. **Japan:** No records. **Europe:** A CR2X (OH2UA); 3.5 SN3A (SP3GEM); L1.8 GW3YDX; Q7 HG1DX (HA1XR); A21 EA6FO; MS TM6M. **Oceania:** A21 ZL1BYZ. **South America:** 21 ZX5J (PP5JR); A21 HK1R; A14 HK1X; A7 PW2B (PY2HL); A1.8 PV8DX.

Special Mention

"Wow DXCC on 20 and 40 meters," commented AB0RX. "Very pleased with the 96 countries, 25 zones, and 355 Qs with a quarter-wave vertical. Thanks for a great contest," from K2RR. If you want to work rare and interesting places over a weekend, the CQ WW is famous for many DXpeditions. Some of the entrants making the contest more interesting for all of us were: V26K, 8P5A, V31BD, J79WTA, H13A, FS/K9EL, FS/K9NB, J39BS, HR1RTF, TO5T, YN4SU, HK0GU, TO3A, PJ5/SP6EQZ, V47NT, VP5CW, ZD8O, VQ9LA, EA9IB, J28AA, U00HP, 5Z1N, 5Z4EE, 5R8WW, CN2R, CN8YR, V51YJ, 5N7M, ST2AR, 5H3EE, 3V3A, 5X1XA, 9J3A, TC4X, TA3AX, TA3/OZ1AA, 4K6FO, 4K9W, B4S, 4L0A, 4L8A, 4L2M, VR2EH, VU2PTT, VU2PAI, VU2BGS, UO0L, UN9L, 9K2HN, 9K1YM, EX2X, EX2A, OD5NJ, 8Q7DV, JT5DX, A45XR, HZ1PS, 7Z1SJ, 9V1YC, 4S7KM, BU2AV, BW3/DJ3KR, EY8MM, EY7BJ, HS0ZEE, E21YDP, ZC4LI, UK9AA, XV2RZ, 9M2TO, 9M2MRS, C31CT, OY6A, ZB2X, MU0FAL, GD4EIP, GJ2A, 9H1XT, 4O3A, T70A, GZ7V, JW1CCA, ZL7NV, ZL7VR, 9M6/KM0O, 9M6XRO, 9M6YBG, 9M8YY, NH2T, V63YT, R1ANP, PJ4LS, FY5FY, PZ5T, MJ0ASP, SU/HA3JB, VP9I, FM5LD, YS1GR, IH9R, IH9X, J28RO, CN3A, 6V7Y, Z24EA, BD2SH/7, BD1EFO, VR2XLN, VR2KW, VR2PX, OD5KU, JT0YAB, HZ1FS, A65BP, A65CA, XV1X, 3W1M, ZA/HA1ZN, SV5DKL, OY1CT, GU4YOX, MD2C, MD4K, MD6V, KG6DX, FO8RZ, ZF1A, VP2MSC, H7V, D4C, ED9M, 5C5T, 4K7Z, B7P, BY8AC, BA4ALC, BY3CQ, P33W, C4N, VU2RMS, A63A, HS0AC, TA1KB, AH2R, YE1C, ZK2A, AH0DX, VPE/K1XM, 9L5VY, TC3A, B1Z, P3F, ZA3HA, 9H3TX, AH0BT, PJ4A, IH9GPI, C5A, 9M2SDX, ZL8X.

Comments

Conditions were excellent to strange. Nevertheless, contesters found a way to extract the maximum CW fun. The low bands were outstanding. In spite of the conditions, the 2010 CQ WW CW contest set an all-time high! We received 6,129 CW contest logs, of which about 6,000 were electronic! Between the SSB and CW WW DX Contests 12,700 logs were received! If you want to have fun and work a lot of DX, the CQ WW is the place to be.

Your continued submission of an electronic log allows the CQ WW CC to process the enormous amount of data received. We have again provided open logs so that you can learn about propagation and how the top scorers do their operating. Thanks to all the contesters around the world who sent in a log. *Please send in your log no matter how small.* Submitting an electronic log is easy. Send your CW log to <cw@cqww.com> (SSB log to <ssb@cqww.com>). Please send your log in Cabrillo format. If you did everything OK, you will get back an acknowledgment. *If your radio has the capability, please submit a log with exact frequencies for each QSO.* Please make sure the correct category is indicated and the call you used in the contest is shown. Enter the contest to have fun, meet friends, perhaps work some new ones, and *fairly compete.* You can see information concerning the CQ WW on the contest web page at: <http://www.cqww.com>.

The announcement last year of an increased award system for assisted entrants was very well received with praise for this change. The assisted categories are fast becoming the place to have fun by using the internet. New trophies and two completely new award programs are now available: low power and QRP assisted. All assisted categories are fully competitive and fun. Maintaining a separation between the assisted and non-assisted categories has been a challenge for the CQ WW CC. The honesty of entrants within the top scores box must be a big priority. The top scores box includes all trophy and many certificate winners. Please remember, the use of QSO help—a spotting network of *any kind*—places you in the assisted category. When you do use a spotting aid, please claim to be assisted. Other entrants are counting on you to do what is ethically correct, and that is to indicate the category you operated. Remember the use of undeclared packet, the use of additional operators for a single operator entry, two signals at the same time on the same band or on separate bands at the same time, if you are single operator, is in violation of the CQ WW rules. Remember, *if you plan to try to make the elite Top Score box, you can count on your log being carefully checked to ensure fair play.* The contesters trying to achieve a position in the Top Scores box must realize the necessity of *honesty in their efforts.* In a perfect world we would not have to spend extra effort to check potential top contenders; however, some entrants feel they must win even if it means not following the

(Continued on page 102)

rules. Those few entrants who make the Top Scores box are important because they set an example of what is possible in our sport. The CQ WW CC fully supports the Contesting Code of Ethics produced by the World Wide Radio Operators Foundation. The code can be found at <http://wwrof.org/contester-code-of-ethics/>.

Recent advances in software and hardware continue to provide new ways to verify an entrant's results. The CQ WW CC has access to the full contest for each band from various recording sites around the world. Aside from providing educational data, we can now check whether an entrant has two signals on the air at the same time on a band. As you can guess, transmissions of this type are against the rules. Many multi-operator stations still do not prevent the chance of two simultaneous signals via an interlock system. A new rule has been written requiring all stations with the possibility of two transmitters on a single band to have a software or hardware interlock to prevent signal overlap. In simple words, if you have two transmitters on a band, you *must* have an interlock.

The new Xtreme category allows for innovation and implementation of new technologies. The results of the Xtreme category can be found on the CQ WW <cqww.com> and CQ <www.cq-amateur-radio.com> websites.

Thanks

The final scores you see in the results are the product of a lot of work. The CQ WW Committee uses many log-checking tools to make sure you are listed correctly and the winners receive proper recognition. The members of the committee who provided insight into many contesting topics are: CT1BOH, DB7MA, DJ6QT, DL6RAI, E21EIC, ES5TV, F6BEE, G3SXW, HA1AG, IK2QEI, JE1CKA, K1AR, K1DG, K3LR, K3WW, K3ZO, K5TR, K5ZD, K6AW, KM3T, KR2Q, KT3Y, LY3BA, LZ2CJ, N2AA, N2NC, N2NT, N3ED, N5KO, N6AA, N6TR, N6TW, N8BJQ, N9RV, OH2MM, OH6LI, PA3AAV, PP5JR, RA3AUU, S50A, US0LW, VE3EJ, W3ZZ, W5OV, W6OAT, W7EJ, W0YK, YU1EW and ZS4TX. A special thank you to Ken, K1EA, who spent countless hours making the CQWW database the best in contesting. We want to thank Barry, W5GN, who has provided the machinery to send certificates to you in a timely manner.

Congratulations to all the winners and entrants! CU in the 2011 contests!

73, Bob, K3EST

Results of the 2010 CQ WW DX CW Contest (from page 39)

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.)

2010 CW RESULTS

SINGLE OPERATOR

NORTH AMERICA

United States

K5ZD/1	A	8,940,781	4587	154	524
K1DG/1	A	8,239,191	4303	153	534
K1RX	A	7,096,752	4190	144	480
K1ZZ	A	6,738,480	3700	140	490
K8P0/1	A	5,962,152	3852	125	427
W1CM/1	A	5,700,550	3561	134	441
W1KM	A	5,564,760	3399	135	452
N1W1/1	A	5,442,720	3788	136	522
W1WFEF	A	5,322,600	3222	120	413
W1FJ	A	3,037,428	2017	127	429
W1CSM	A	2,514,500	1707	125	410
K02M/1	A	2,115,225	1839	105	320
W1CUM/1	A	1,997,632	1149	141	496
W1EQ	A	1,338,705	1179	99	326
K1W8	A	1,268,982	1210	99	275
K10B	A	899,298	1135	73	203
K1A10R	A	897,161	783	109	332
W1CTN	A	616,449	714	100	343
W1HIS	A	731,240	665	78	284
W1UK	A	681,420	611	91	319
K1IB	A	620,679	733	68	245
W1RFZ	A	369,576	529	60	201
W1FM	A	154,804	280	69	160
K310D/1	A	100,219	783	109	332
N4XR/1	A	91,845	212	56	139
K1KI	A	45,320	167	28	75
K1QS	A	31,122	118	29	85
W3Z1/1	A	9,174	70	18	48
W3EP/1	28	24,852	145	19	57
K1UD	7	286,000	311	33	110
W1XW	3.5	258,478	1432	31	108
K1WV	1.8	43,311	277	77	242
N1UR	A	3,826,392	2590	122	434
K1BX	A	3,422,896	2281	120	416
N1WJ	A	1,614,006	1210	106	380
N1US/1	A	1,365,525	1123	105	354
K1BT	A	1,004,782	840	101	321
K1HT	A	850,278	725	97	332
W2UJ/1	A	638,728	762	87	309
W1FA	A	597,677	662	87	263
N1DC	A	595,815	646	82	263
W1WBB	A	585,648	560	102	290
W1CCE	A	561,603	623	75	254
K1VJSJ	A	448,975	540	79	230
N1PGA	A	376,125	534	71	224
K1AP/1	A	283,128	398	58	193
A1JE	A	204,140	361	65	177
N1G1	A	197,340	387	64	182
N1BN	A	192,270	360	40	151
W1AES0	A	182,268	346	70	174
K1EP	A	119,504	247	38	136
N1NN	A	82,500	210	56	114
N1MJ	A	39,360	143	26	82
N1AR	A	17,440	96	36	52
A1YK	A	10,320	52	31	49
W1PD	A	3,192	34	12	47
K1OW	A	3,024	29	17	25
K1BTHU	A	30	3	2	3
W1MW	21	276,086	652	33	113
K1ZR	A	232,509	595	29	115
N1NK	A	178,893	464	29	114
AB1J	7	64,050	225	20	85
W1HN	A	56,100	200	21	81
K1VY	A	10,030	58	13	45
N1XC	A	8,000	58	13	45

*KX2S	A	11,169	55	28	45
*NKN1/2	A	11,136	68	20	44
*WAZBMH	A	5,049	38	19	32
*WZAR	A	45	3	2	3
*K2LP	21	12,875	91	18	50
*W2AW	14	3,023	918	21	50
*W2AB	A	65,12	253	31	73
*W2EG	7	228,186	641	116	100
*N2JUN	A	27,090	128	20	66
*WZMFT	3.5	10,336	69	16	52
K3CR	A	8,433,803	4237	163	544
KAZW/3	A	6,924,771	3998	152	460
AA1K/3	A	4,532,412	2709	149	469
N1WR/3	A	2,415,500	1708	118	382
K3TC	A	1,753,440	1191	135	415
W3LU	A	1,193,777	1085	110	291
W3UJU	A	940,956	759	94	297
N3RJ	A	857,288	850	93	331
K3ONW	A	633,784	691	80	269
WAZC/3	A	399,669	559	74	245
N3CW	A	246,078	325	65	229
N3XL	A	208,362	367	58	173
N3NJ	A	203,550	348	51	179
W3VFT	A	162,268	308	61	165
K2RGM	A	60,489	163	40	133
K3BP	A	48,279	155	25	96
K3RMB	A	19,256	90	28	55
N3RR	7	541,164	1319	33	123
W2E/3	3.5	109,662	419	19	79
N3RW	A	2,670	47	6	24
W3GH	1.8	26,714	148	16	58
K6BLX/A	A	528,390	589	61	261
*W3PZY/3	A	435,276	560	59	241
*N3DE	A	362,544	501	61	212
*K3QLF	A	289,800	422	66	186
*KN3A	A	244,944	367	63	189
*NA3F	A	194,577	312	65	172
*WAILWS/3	A	154,593	293	56	137
*N3ZN	A	132,314	349	54	128
AA3VA	A	126,636	256	53	130
*K2LRS/3	A	127,717	277	53	130
*W3FM	A	91,875	223	35	112
*N3NZ	A	73,800	241	47	103
N3DR	A	51,392	131	47	99
*K3MRG	A	45,466	146	40	87
*N3US/1	A	41,500	132	36	89
*W3DK	A	17,098	117	21	62
*W3OD	A	6,127	51	25	38
*W3WH	A	4,737	33	28	41
*K3KU	A	6,432	48	18	30
*W3RT	A	4,440	45	22	38
*W3CEI	A	3,318	45	26	42
*N3GG/3	A	675	16	10	15
*K2EY/3	A	54	3	3	3
K1FJ/1	21	82,680	273	20	86
*W3PZV/3	A	44,783	199	23	86
*NS3T	7	101,120	301	29	99
*N3YB	3.5	24,871	148	17	60

K4PI	A	89,666	333	22	85
N4X4	A	17,280	105	15	49
N4N4	A	1,428	39	11	17
*K1PT/4	A	2,332,408	1626	130	403
*N4DU	A	2,051,784	1494	119	412
*W2W/4	A	1,653,725	1199	128	402
*N5CM/4	A	1,509,599	1502	92	279
*WK2G/4	A	1,509,599	1502	92	279
*N4K	A	1,288,048	1036	105	341
*K4NO	A	1,287,344	1018	117	371
*K4LTA	A	977,784	1087	97	296
*W4YE	A	620,468	626	88	274
*W4B	A	442,659	515	83	238
*K4M/4	A	413,209	489	92	237
*K4G/4	A	374,420	490	224	238
*W4AN	A	314,568	465	66	216
*W4B2PF	A	281,589	418	64	189
*A4GR	A	234,596	325	76	187
*N3GD/4	A	224,775	398	78	165
*N4ES	A	212,472	349	66	168
*K4M/4	A	207,556	352	82	172
*N1D/4	A	187,664	332	55	164
*N2M/4	A	185,928	294	79	175
*N4EK	A	178,560	351	50	142
*W00G/4	A	137,900	355	62	135
*N4WO	A	121,089	251	49	132
*N4HX/1	A	114,048	210	64	134
*N2P/4	A	106,800	225	53	126
*N1UK	A	60,187	159	49	96
*K4FJW	A	98,630	233	61	144
*N4AU	A	93,840	204	62	122
*K54X	A	91,290	202	52	127
*K4AOM	A	74,983	184	49	118
*W4ASM	A	67,424	154	57	115
*K4FTO	A	64,064	199	48	106
*K4SKY	A	61,390	179	31	93
*N4DQ	A	60,437	189	36	98
*W4SUL	A	60,060	168	36	104
*N4Y4	A	48,216	178	63	105
*W4BQJ/4	A	48,150	167	34	73
*W4T/4	A	46,410	152	35	84
*W0OR/4	A	44,405	149	31	76
*W4KRN	A	42,471	129	39	82
*K5AL	A	39,410	121	36	78
*W4BNS	A	36,582	129	42	74
*N4V4	A	34,001	124	36	85
*K04Y	A	33,360	126	39	81
*AA4K	A	31,578	113	41	73
*K4CBN	A	30,591	121	26	73
*K6ETM/4	A	30,450	118	32	73
*W4EA	A	28,296	115	34	74
*K4B2	A	26,780	114	31	76
*K4GCG	A	25,432	109	32	72
*W4EUL	A	23,436	101	29	64
*K4PBY	A	22,618	100	25	61
*K4E2C	A	20,504	88	29	59
*W4B3JK/4	A	20,188	97	38	65
*K4ZMM/4	A	19,671	110	26	53
*K3M/4	A	15,652	76	34	52
*N4GCH	A	14,062	63	32	47
*K2ERM/4	A	12,912	67	22	48
*W4NZC	A	12,250	62	22	48
*N4XN	A	10,075	58	24	41
*W4ZPR	A	9,794	59	18	41
*W4ARM	A	9,648	70	22	45
*W7Y/4	A	9,310	49	24	46
*A4SV	A	8,956	69	16	43
*N4B8	A	8,436	69	12	47
*N4N7	A	8,197	57	27	36
*A4UIN	A	5,985	45	23	40
*W4BK	A	5,052	23	18	18
*K04OL	A	1,550	21	13	18

*JG1TVK	143,220	282	80	137	JISKDH	1.8	7,392	88	17	27	*JH0CCK	68,474	188	53	81	*EA6ZS	Balearic Islands	48,374	223	37	97	*9A2TN	70,195	190	53	86
*JA1AZR	136,325	338	73	102	JHKLUL	A	388,532	623	87	167	*JG0G5I	12,449	91	30	29	*EA6UP	165,888	968	29	99	*9A6Z	47,759	202	50	113	
*JE1RRK	11,148	333	51	77	*JHJNKA	A	344,020	690	76	130	*JAGRCK	3,420	30	17	28					*9A6B	87,580	106	37	83		
*JA1J1Z	75,762	239	58	80	*JO3JYE	A	236,794	512	72	125	*JR0BUL	280	11	6	8					*9A4W	26,862	132	38	73		
*JA1BPN	71,852	230	58	84	*JASJME	A	181,300	428	67	118	*JR0EQO	21	175,490	646	35	74					*9A2GA	14,448	140	21	63	
*JK10XU	70,048	166	72	104	*JH3PTC	A	31,899	150	41	52	*JAD1OF	11,118	122	20	31					*9A2DI	2,484	34	12	24		
*JP1HUJ	67,840	214	52	76	*JH3PLL	A	31,376	139	43	63	*JADNFP	6,048	62	19	29					*9A7B	8,471	133	13	30		
*JH1SWD	65,191	191	58	81	*JEU3HU	A	25,338	137	33	48	*JHBEPI	14	138,870	513	31	74					(OP: 9A4W)					
*JA1UZG	63,175	198	58	75	*JASJND	A	24,928	133	34	48	*JH00AP	527	11	7	10											
*JF1TTN	63,106	205	57	82	*JH0G1I	A	14,539	93	32	35																
*JH1G5T	61,535	207	57	77	*JH3TBB	A	11,592	65	30	39																
*7N40CQ	60,250	209	51	74	*JOSEVM	A	1,952	30	17	15	UP0L	A	6,975,744	4609	138	448										
*JE1LDU	50,304	196	56	75	*JL3RDC	A	1,595	31	15	14	UN9L	A	2,698,240	1959	125	419										
*JA1OHP	48,190	178	54	68	*JEC3YV	A	240	11	8	8	UN9GD	21	560,304	1676	28	116										
*JA1NGW	41,976	155	53	79	*JNV3ZS	A	108	7	6	6	UN9LP	A	350,532	1215	28	114										
*JP1SRG	40,132	168	52	75	*JO3RCK	28	63	4	3	4	UN7PL	14	355,299	921	33	114										
*JA1EMQ	40,014	155	50	67	*JRE0DI	21	133,416	553	33	69	UN7QX	3.5	59,920	355	13	57										
*JM1KNI	32,385	146	38	47	*JF3FS	A	126,100	493	32	68	UN5J	1.8	27,435	219	11	48										
*JA1KPS	28,302	109	48	58	*JA4X1F/3	A	36,883	199	25	52	*UN7FW	A	754,932	1057	76	242										
*JL1LRD	26,226	145	45	48	*JASU9B/3	14	7,488	89	17	19	*UN7PV	A	467,207	484	109	324										
*JA1CPZ	24,601	126	31	42	*JH3MSA	A	4,000	67	16	16	*UN7CJ	1.8	9,540	132	10	50										
*JR1ATA	24,024	104	42	46	*JL3MOC	7	32,193	181	23	50	*UP7C	A	249,800	493	44	156										
*7K4VPV	23,067	105	40	59	*JN3CJN	A	14,260	101	20	42	*UN7CN	A	177,287	329	67	166										
*JE1JAC	22,572	145	34	42	*JAS3PO	A	2,625	41	13	12	*UN0C	A	8,925	54	31	44										
*JH1AVY	18,270	117	26	37	*JAS3RAZ	A	5,367	20	10	11	*UN7TW	A	858	19	16	17										
*JF100K	16,093	93	28	36	*JEC3EV	A	15	507	2	6	*UN7W	A	760	17	7	12										
*JH1KJZ	15,760	124	27	36	*JSEHD	A	220	18	3	2	*UN9Q	28	204	13	10	10										
*JA1WQX	15,360	114	36	44	*JAS3EN	3.5	26,061	146	25	10	*UN7Z	28	55,625	288	21	68										
*JA1HG	13,764	93	29	33	*JG3DOC	A	1,452	36	12	10	*UN2C	14	197,880	555	31	105										
*JH1SAI	12,606	89	29	37							*UN5C	7	115,464	527	26	76										
*JF1DIR	12,489	81	31	38	JH4IUY	A	3,888,310	3219	144	326	*UN7EX	A	39,225	219	11	48										
*JAD0IN/1	11,773	76	28	33	J4A4QR	A	24,759	155	21	42	*UN7FZ	A	9,222	73	14	39										
*JG1AVR	9,690	87	25	32	JM4WUJ	21	68,376	322	30	54	*UP2F	1.8	9,222	73	14	39										
*JF1MAD	9,347	59	31	35	J44X1Z	14	14,802	23	10	11																
*JA1DCL	8,118	49	41	35	*JE4MHL	A	374,088	578	95	169	*UN7CH	1.8	5,566	121	5	17										
*7L3DGP	7,729	75	28	31	*JH1MTR/4	A	89,847	250	60	89																
*JF1AZQ	7,274	61	23	30	*JR4PDD	A	67,375	247	55	70																
*JK1SDQ	5,715	54	22	23	*JA4BDY	A	1,210	24	11	11																
*JH1UDD	5,125	52	21	20	*JF4XUT	A	658	24	8	6																
*JAS1NF/1	4,847	60	18	22	*JH4JGD	21	3,255	43	13	18																
*JH1FGZ/1	3,403	31	19	19	JR4GPA	14	95,288	431	25	61																
*JH1RUMU	2,940	28	16	20	*JH4CD/4	14	73,710	355	29	61																
*7N4CPZ	2,522	24	14	12	*JA4AVO	7	7,203	95	18	91																
*JK1JHB	1,728	41	11	7	*JR4VEV	A	3,162	48	13	18																
*JN1NCB	1,265	21	11	12	*JH4CES	3.5	9,776	102	17	35																
*JO1VDJ	1,081	17	9	14																						
*JA2IKK/1	933	11	9	8	JESJHZ	A	169,945	334	69	136																
*JR1AHP	298	7	7	7	J45JG5	A	13,376	84	31	45																
*JA1WWE	28	486	3	8	JAS5DU	21	416,760	1150	36	102																
*JL7FB/1	21	116,808	504	30	63	*JG5DHX	A	119,377	598	33	159															
*JH1SIFK	108,474	461	33	68	*JISNWO	A	19,890	120	36	49																
*JR1BTG	84,812	383	29	62	*JAS5RB	A	5,995	54	27	28																
*JH1SBE	35,728	201	27	50																						
*JP1IXV	33,552	198	24	48	J46LCL	A	2,179,455	1970	138	327																
*JA1DBG	9,212	89	20	27	J46WHF	28	23,814	198	24	39																
*JF1LEO	6,768	69	17	30	J46SHL	7	112,658	487	27	64																
*JH1BD	5,940	56	18	26	*J46JFK	A	198,677	107	82	125																
*JH1BBN	5,896	70	17	27	*JR6AWO	A	130,476	334	62	138																
*JG1WKM	2,100	32	10	15	*JESGIM	A	105,248	248	70	114																
*JK1NSR	1,566	33	13	16	*J46WVW	A	32,550	126	41	64																
*JH1FNU	1,196	24	11	12	*JH6WHN	28	10,192	95	21	31																
*JH8SEC/1	1,152	24	12	12	*J46TWO	21	22,464	137	22	42																
*JF1HXJ	931	19	9	10	*J46WFM	14	169,916	656	31	76																
*JH1LAI	697	15	9	8	J46RIL	7	1,300	26	12	14																
*JH1EHC	8	5	3	5	*J46JFC	A	1,895	102	23	42																
*JH1DQ	14	52,734	227	30	64	*J46GFC	A	7	168	7																
*JA1BFN	15,625	163	21	42	*J46PCH	A	3	3	3	3																
*JR2TMB/1	23,092	103	20	29																						
*JA1KEV	13,409	154	19	34	J47DLE	A	1,776,649	1991	109	244																
*JF1TEU	6,048	64	20	28	J47BME	A	862,868	981	117	215																
*JN1BBO	238	7	7	7	J47ACI	A	572,634	873	93	168																
*JA1XMS	7	125,888	454	31	81	J470CM	A	558,480	906	94	146															
*JA1DZ	25,886	137	26	33	*J47JLC	A	825,746	786	106	171																
*JF1KFT	22,258	154	19																							

*OK1MAW	25.155	307	10	55	UA30GT	386.116	736	82	250	*R3JUY0YU	166.941	536	52	177	*UAGARR	2.660	49	7	21	DL4ME	651.196	1152	79	285
*OK1JK	22.506	344	10	52	RV8YB	371.778	945	57	205	*RK1NA	162.720	503	53	173	*RK45A	206.850	866	31	119	DL6EZ	526.064	800	74	234
*OK2BU	21.987	367	7	29	R30F	361.718	948	114	207	*UAKC	141.440	478	146	29	*RK44T	123.444	746	29	98	DL6JZ	480.150	840	56	291
*OK1KZ	2.079	68	4	29	UA4AC	366.165	803	62	247	*RA4CBN	161.210	443	60	175	*RK3DXB	72.072	512	23	81	DL1STG	476.736	560	104	312
					RU4CO	339.968	690	85	247	*RA3MD	159.408	446	54	189	*RK6AX	68.250	407	23	82	DL0MFL	343.560	1075	47	163
					RK3DK	323.615	781	66	229	*RA3LO	139.097	397	57	160	*UA3DOK	49.104	408	21	72					
Denmark					RK4S	306.150	698	73	252	*RZ3OS	137.970	486	44	166	*UA3DOU	32.870	273	21	74	DC9ZP	334.647	686	66	243
OZ7RQ	1.031.835	1053	97	368	RA6GW	294.450	690	88	237	*RA6AS	135.600	319	58	168	*RV7A	19.584	137	21	75	DM4FZ	260.337	412	75	268
OZ8SW	447.720	647	66	230	RZ3V	264.805	743	63	188	*UA1ATF	134.719	239	78	163	*RK3FM	15.340	107	11	49	DJ3PK	212.238	421	67	167
OZ2BKX	344.884	769	75	237	RN3BO	270.258	670	65	212	*RV3UW	120.345	402	51	162	*RU3UW	9.600	9	15	45	DL9EO	210.089	399	69	200
OZ2EA	237.820	300	12	109	RV4LC	220.730	492	20	189	*RD3AD	101.556	423	24	160	*R03DK	3.483	78	4	39	DL9RA	207.849	199	68	200
OZ7EN	8.000	91	27	53	UA4HP	218.540	618	54	191	*RA6FUZ	119.364	342	54	149	*RV3DHC	9.0	5	4	35	DD04A	188.435	504	52	171
OZ7YL	31.442	174	20	59	RT3N	207.669	647	51	180	*RN3ZR	119.119	297	62	159	*RA3XM	110.212	719	24	94	DL7YS	153.615	419	61	170
OV3X	124.108	559	29	113	UA3DU	184.440	359	80	185	*RZ3GV	118.144	352	52	156	*RK3FY	83.720	739	17	74	DJ2JA	150.696	310	75	159
					(OP: OZBAE)	151.726	412	58	156	*RU3XB	112.778	387	51	163	*RA6V	61.803	557	14	67	DF6RI	132.225	408	46	159
*OZ7BO	471.920	1028	61	211	RZDW	149.292	283	77	209	*RQ4N	110.814	325	60	159	*RA3AV	57.174	556	12	66	DL6ZGX	131.648	511	46	141
*OZ4FF	177.888	463	49	169	RZ6AK	135.135	576	43	152	*UA3DSS	110.760	310	56	157	*R445N	28.638	231	15	71	DL6DVH	124.068	396	56	155
*OZ3SM	158.697	590	50	181	RW2Z	101.325	384	40	153	*R2CA	101.556	372	56	126	*UA3DTT	7.222	116	8	44	DL6BVB	122.148	392	55	139
*OZ1NF	84.960	326	42	138	RW2A	91.489	448	38	113	*UA4FRJ	100.910	390	47	165	*RZ3BW	7.520	126	8	39	DK8EY	108.410	328	44	141
*SP5U	58.500	266	45	135	R3BT	83.265	179	67	116	*UA4FTA	99.450	289	60	163	*RX3AP	7.213	147	7	36	DL2RTL	105.600	296	63	137
*OZ7TIT	26.000	166	27	77	UA1ZCT	79.120	329	38	77	*R4WT	95.940	433	47	131	*RZ3AUL	36.112	393	14	60	DK9HE	110.008	321	59	155
*OZ4RT	22.386	135	23	59	UA6GX	73.670	248	54	85	*RW3XZ	93.150	194	75	155	*R1DZ	34.224	519	11	51	DJ5CL	95.976	295	53	119
*OZ5RM	13.338	129	23	55	UA3P	56.457	243	39	114	*RN3AAB	91.264	358	47	137	*RM5Z	16.632	258	8	48	DF8AA	94.085	297	41	114
*OZ5RJ	6.667	53	24	35	R3CW	56.092	226	41	107	*RX3XCZ	91.000	350	44	156	*R1AZ	15.000	301	7	43	DL3CA	73.920	196	49	91
*OZ1DQ	4.944	90	12	50	UA4CZ	53.675	359	28	85	*R7NA	88.704	246	74	157	*RZDU	6.650	103	8	42	DJ1XT	71.160	272	34	86
*OZBAE	17.440	212	10	50	UA3AGW	48.657	116	51	83	*R3UCR	86.240	322	52	152	*R30KE	5.472	148	6	34	DL3MEV	65.411	150	70	130
*OZ7OE	3.5	16	2	2	RD3DS	45.288	257	33	120	*R3LUR	85.738	397	36	127	*RV3MR	4.800	106	6	32	DL8EAQ	54.683	344	101	110
*OZ7OB					UA3LIA	40.656	143	39	93	*UA3TAO	83.433	229	58	145						DD8JJ	54.285	194	101	110
					UA3EAY	45.136	100	54	90	*UA4HJ	80.411	298	42	129						DL3YA	49.973	215	33	88
					RA3IS	27.270	118	42	78	*RV3DZ	77.920	477	31	149						DL4MHA	42.642	140	45	58
England					UA3AAB	26.126	185	33	83	*UA3UHZ	77.748	250	55	154						DL2FK	41.280	195	35	94
GHY	2.742.111	2676	110	437	RU3UN	26.100	125	32	84	*UA4NBA	71.309	245	43	124						DL2AN	35.383	151	40	47
GRXP	1.378.776	1989	77	271	R30FC	25.078	156	24	87	*RX3AC	69.692	243	43	126						DJ4OC	35.328	142	44	94
MZA	1.372.184	1152	112	391	UA3PDM	18.887	78	38	87	*R3UAP	67.840	406	34	124						DL3BM	2.898	251	37	71
G3JF	709.800	2034	70	259	RA6EE	17.554	164	19	48	*R05O	65.486	199	45	92						DM1LM	22.345	126	34	75
G3ZC	576.408	1132	10	359	UA3QNS	16.065	106	49	86	*UA1JUL	64.962	191	54	108						DL9BT	20.315	131	24	61
G3UF	418.263	689	76	245	RV6SAU	16.058	81	31	43	*RN3DDR	63.075	290	42	128						DL7BA	18.557	101	27	50
G4HZ	361.855	714	61	186	RW3XM	15.789	142	18	39	*UA1OEX	62.307	259	37	124						DL3XM	15.840	90	26	34
G4SG	350.150	843	53	182	RU4HY	14.885	80	34	55	*RV3TG	61.761	306	25	94						DJ8OA	13.884	133	17	35
G4FK	264.040	567	60	170	RA1TW	14.668	145	15	61	*RW3W	57.632	278	33	101						DL7VEE	3.922	32	21	32
G3PMS	232.650	545	63	219	UA1JG	8.772	64	25	43	*RA4H	57.069	243	42	111						DL2AM	2.898	251	37	71
G6FE	202.452	577	50	187	RA1TV	7.644	56	31	47	*UA6FZ	55.062	275	35	103						DL9KW	28	666	13	5
G0AZH	109.360	422	44	144	UA6JG	7.425	63	34	41	*UA3YFL	50.830	206	39	94						DL4LB	179.820	544	10	13
M9WLF	140.600	322	49	136	RJ3A	4.144	45	18	38	*RZ3DA	49.680	187	54	126						DL2DXA	10.323	109	14	23
G0BNR	71.400	230	63	141	RA3SS	3.608	84	22	60	*R7MA	48.513	148	55	102						DF1AQ	14	100	482	23
G4ELZ	24.700	252	14	62	UA4NC	3.367	37	16	21	*R3EVE	47.573	183	37	76						DF2OZ	24.178	142	18	59
G4EVE	28	18.490	116	20	UA1ORX	238	12	6	11	*RA3EV	47.573	183	37	76						DK5JM	3.5	127,776	1052	20
M3W	21	343.944	1146	34	RA3UT	238	12	6	11	*R445N	47.573	183	37	76						DJ5CT	9.840	186	10	36
					(OP: G4FAL)	238	12	6	11	*RD4AA	47.573	183	37	76						DK7AN	1.8	1,928	27	8
G0ORH	268.226	1033	31	88	RA3UT	238	12	6	11	*R06HJ	47.573	183	37	76						DL1NK	1,088.692	1521	95	359
G1N	174.724	609	217	104	RK6CM	3.949	113	27	12	*R06HJ	47.573	183	37	76						DF1MM	1,040.230	1457	89	333
					(OP: G3MZU)	3.949	113	27	12	*R06HJ	47.573	183	37	76						DF5BM	651.608	966	82	294
G3GL	2.442	48	8	29	RZ3AV	76.581	346	30	97	*RA3VE	38.064	286	25	97						DL5ARM	561.608	966	82	294
*G0MTN	1.244.252	1895	80	314	RD3PX	71.712	359	25	83	*R445N	36.260	237	51	134						DK8NT	586.105	1038	74	281
*G0HVC	489.584	911	69	227	RM4N	7.923	110	12	45	*RA3VE	38.064	286	25	97						DF3AL	586.105	1038	74	281
*G3LVK	435.105	713	66	227	UA1ZZ	349.856	1596	28	88	*R445N	36.260	237	51	134						DF5AL	586.105	1038	74	281
*G4DZX	416.232	915	65	217	RT3A	340.792	1246	35	129	*R445N	36.260	237	51	134						DM5JBN	529.750	890	78	247
*G4WGE	404.892	898	59	217	UA1T	227.220	961	30	110	*R445N	36.260	237	51	134						DL1TRK	396.576	773	68	238
*G4DLI	347.864	775	58	210	RM6AH	195.360	568	14	93	*R445N	36.260	237	51	134						DK5IM	393.966	984	53	205
*G4CMQ	230.822	489	63	209	RV3IC	37.521	183	24	86	*R445N	36.260	237	51	134						DL4ZA	379.350	961	65	216
*G3MPB	225.456																							

GM5X	"	3,282,541	3627	120	389	*S57U	"	233,426	970	28	99	*S47TZK	"	9,434	91	23	66	*UT4NY	"	185,032	557	49	153	VK2GR	"	601,506	891	91	191
GM3WUX	"	1,783,964	2801	82	295	*S52GO	"	104,451	513	25	86	*S45ACN	"	7,548	83	24	66	*US6CO	"	183,272	537	62	186	VK2PN	"	504,804	857	80	156
GM3W	"	660,597	1468	64	185	*S57NAW	"	78,588	395	28	94	*S5MDFM	"	3,999	44	16	27	*UT4XU	"	179,424	362	72	280	VK7GN	"	50,986	296	28	46
GM4SD	"	564,816	1275	62	225	*S57I	"	127,050	620	25	96	*S37RPU	"	3,520	39	15	34	*URSXM	"	115,107	394	51	171	VK6LW	21	998,200	2492	32	108
GM3NHQ	"	373,410	8282	57	213	*S59N	3.5	82,280	1015	18	67	*S6AGIN	"	2,814	35	16	26	*UX8IR	"	175,463	412	76	225	VK3TDX	"	430,164	1382	26	82
GM3X	14	641,763	2348	34	105	*S58MU	"	32,361	386	11	56	*S3MRAB	28	165	9	4	7	*URSUX	"	170,558	470	56	158	VK4BU	"	156,279	483	32	81
*MM0R	A	93,522	357	36	107	*S51DX	1.8	54,599	673	11	60	*S6M10D	21	13,860	125	14	41	*URBEO	"	138,408	415	61	176	*VK4JI	A	1,976,728	2098	101	231
*GM0WED	"	77,818	1468	64	185	*S57WJ	"	21,181	336	8	51	*S6M6ZV	14	47,718	233	23	76	*UR3DD	"	137,088	483	49	143	*VK2BJ	"	620,658	860	86	175
*GM0TTY	"	16,058	112	26	48	E2AZU	A	1,584,206	2401	91	247	*S6M8DS	14	19,116	161	15	44	*UYOCA	"	131,338	374	55	139	*VK6GH	"	251,100	416	77	148
*GM40	14	120,050	763	22	76	E2AZU	A	1,584,206	2401	91	247	*T75V	7	38,808	401	16	61	*UR4XU	"	121,800	490	39	164	*VK3FM	"	99,110	232	65	105
*GM3C	"	47,196	356	16	40	E2AZU	A	1,584,206	2401	91	247	*S4SA	"	12,600	143	30	46	*URSXM	"	115,107	394	51	171	*VK4EJ	"	56,064	201	52	73
*GM4UBJ	1.8	12,210	191	9	46	E2AZU	A	1,584,206	2401	91	247	*S5M7U	"	3,160	66	9	31	*UX4FC	"	106,741	236	56	117	*VK4TT	"	36,378	149	43	81
YU7AF	A	41,697	289	33	90	E2AZU	A	1,584,206	2401	91	247	*S3M3AGO	"	702	15	9	9	*URSJK	"	105,672	279	53	151	*VK4VX	"	20,097	98	41	58
YT4W	14	607,068	2305	36	110	E2AZU	A	1,584,206	2401	91	247	*S6M6GOR	3.5	3,358	97	8	38	*URSIN	"	104,384	291	64	160	*VK3BYR	"	12,925	97	24	31
YT7A	7	295,738	1320	33	101	E2AZU	A	1,584,206	2401	91	247	*S5M5MX	1.8	41,616	512	11	61	*USL8M	"	102,985	269	65	150	*VK4TC	"	4,080	46	23	28
YU1AAV	A	71,894	466	21	82	E2AZU	A	1,584,206	2401	91	247	*S6M6C	"	2,666	50	7	36	*UYQJQ	"	94,168	231	52	106	*VK2AD	28	38,772	259	19	35
YT4T	3.5	271,648	1772	22	92	E2AZU	A	1,584,206	2401	91	247	Switzerland						*USJUN	"	88,595	490	28	117	*VK4YD	21	203,895	667	30	85
*YT9M	A	2,718,060	1935	73	324	E2AZU	A	1,584,206	2401	91	247	H9BAZ	A	221,605	455	66	169	*USMNV	"	86,884	254	47	156	Chatham Islands					
*YU1FG	"	534,264	934	75	264	E2AZU	A	1,584,206	2401	91	247	H9B9AZ	1.8	87,220	735	18	71	*UTSUN	"	79,278	205	55	91	7L7NV	14	508,896	1277	35	109
*YU5W	"	270,075	499	79	198	E2AZU	A	1,584,206	2401	91	247	H9B9CZ	A	979,875	1432	83	292	*UT0CK	"	78,057	342	40	137	*ZL7VR	21	554,692	1985	28	75
*YU4DFN	"	189,900	438	58	167	E2AZU	A	1,584,206	2401	91	247	H9B9CB	"	271,338	647	58	188	*UY2IZ	"	77,082	295	42	132	(OP: DH1VR)					
*YU7KM	"	181,440	574	63	217	E2AZU	A	1,584,206	2401	91	247	H9B9DE	"	62,237	287	32	87	*UTWMR	"	74,880	336	42	118	East Malaysia					
*YU10C	"	175,070	361	73	232	E2AZU	A	1,584,206	2401	91	247	H9B9DY	"	37,719	218	32	95	*UTSUD	"	74,074	252	44	110	9M6KM00	A	3,062,856	2165	124	284
*YU8NU	"	22,848	205	23	79	E2AZU	A	1,584,206	2401	91	247	H9B9EJ	"	23,958	108	35	64	*UT0UA	"	110,730	245	63	142	9M6XR0	"	1,005,888	1157	98	214
*YU5ZM	28	20,992	137	24	58	E2AZU	A	1,584,206	2401	91	247	H9B9FK	"	23,958	108	35	64	*URSEIT	"	63,921	227	47	102	9M6YBG	"	690,880	929	105	167
*YT1Q	21	121,044	437	31	101	E2AZU	A	1,584,206	2401	91	247	H9B9GA	"	13,920	115	30	66	*US8IB	"	62,100	162	65	115	9M8Y7	3.5	79,477	325	27	62
*YT1MN	"	11,826	167	17	37	E2AZU	A	1,584,206	2401	91	247	H9B9HJ	"	8,640	122	13	51	*UT0JX	"	61,920	187	58	122	(OP: JR3WX)					
*YU5C	14	8,476	148	11	41	E2AZU	A	1,584,206	2401	91	247	H9B9JL	21	1,782	37	9	13	*UT3UJ	"	59,048	194	43	78	Guam					
*YT4R	7	165,280	742	17	69	E2AZU	A	1,584,206	2401	91	247	H9B9KQ	"	101,612	476	35	156	*US3TA	"	48,320	189	53	107	NH2T	A	7,289,464	4879	163	364
*YU5W	"	56,158	742	17	69	E2AZU	A	1,584,206	2401	91	247	H9B9LX	"	101,612	476	35	156	*UT5ZJ	"	47,352	193	25	86	(OP: N2NL)					
*YU2FG	"	55,269	395	19	70	E2AZU	A	1,584,206	2401	91	247	H9B9M	"	126,179	383	55	174	*UTSUN	"	44,238	324	30	103	Hawaii					
*YU5T	3.5	86,182	913	14	68	E2AZU	A	1,584,206	2401	91	247	H9B9N	"	126,179	383	55	174	*UXSTO	"	41,712	181	38	94	KH62N	A	5,147,415	4313	145	274
*YU1ED	"	81,770	687	15	70	E2AZU	A	1,584,206	2401	91	247	H9B9O	"	126,179	383	55	174	*US8IPD	"	37,632	281	27	101	(OP: N6AA)					
*YT5N	"	45,024	611	12	55	E2AZU	A	1,584,206	2401	91	247	H9B9P	"	126,179	383	55	174	*UT5ZJ	"	37,632	281	27	101	*KH6CO	A	97,680	304	54	78
*YU7RL	"	23,694	328	10	57	E2AZU	A	1,584,206	2401	91	247	H9B9Q	"	126,179	383	55	174	*URS8W	"	47,352	193	25	86	*KH6OA	"	4,370	55	22	24
*YT4A	1.8	71,485	665	17	68	E2AZU	A	1,584,206	2401	91	247	H9B9R	"	126,179	383	55	174	*UTWNI	"	33,280	430	32	98	Indonesia					
*YU1AST	"	1,232	55	4	24	E2AZU	A	1,584,206	2401	91	247	H9B9S	"	126,179	383	55	174	*US8EEK	"	31,624	141	39	79	YB1AR	A	53,544	232	63	131
GZ7V	A	3,010,392	3556	113	391	E2AZU	A	1,584,206	2401	91	247	H9B9T	"	126,179	383	55	174	*UR3LD	"	26,378	195	22	67	YB3AKM	21	107,580	393	31	79
GAZ5Y	"	11,315	130	22	51	E2AZU	A	1,584,206	2401	91	247	H9B9U	"	126,179	383	55	174	*UR3LTD	"	26,378	195	22	67	*YB8AKM	A	159,844	325	58	120
Scily						E2AZU	A	1,584,206	2401	91	247	H9B9V	"	126,179	383	55	174	*UT3BI	"	25,109	129	40	79	*YB3KTH	"	54,329	186	44	77
*IT9AJP	A	97,341	240	60	153	E2AZU	A	1,584,206	2401	91	247	H9B9W	"	126,179	383	55	174	*UT3BU	"	23,608	101	35	69	*YB3KJ	"	57	25	28	
*IT9RKR	21	28,208	202	21	65	E2AZU	A	1,584,206	2401	91	247	H9B9X	"	126,179	383	55	174	*UT3CX	"	23,608	101	35	69	*YB3LX	21	122,378	528	23	63
*IT9LXK	"	18,963	128	24	39	E2AZU	A	1,584,206	2401	91	247	H9B9Y	"	126,179	383	55	174	*UT3EJ	"	23,608	101	35	69	*YB3M	"	57	25	28	
*IT9LZY	"	18,837	149	24	67	E2AZU	A	1,584,206	2401	91	247	H9B9Z	"	126,179	383	55	174	*UT3FK	"	23,608	101	35	69	*YB3N	"	57	25	28	
*IT9ORA	"	736	39	4	12	E2AZU	A	1,584,206	2401	91	247	H9B9AA	"	126,179	383	55	174	*UT3GL	"	23,608	101	35	69	*YB3O	"	57	25	28	
Slovakia																													

PY3DX	14	848,585	2123	38	119	S59D	96,409	337	64	165	JH7RTQ	54,180	272	27	59	M0CEP	156	17	2	11	N3AD	2,988,765	1905	130	455
PV8AD1		18,666	225	12	22	SM6CPY	95,285	846	17	58	UAF5F	51,156	22	22	65	VASWPV	136	21	2	2	K3ZZ	2,794,047	1638	143	518
PY2SP	1.8	40	4	1		HG5G	92,192	414	4		UEAFS	48,770	190	23		HEBM	56	4	4		K3OF	2,324,721	1701	510	
*PY2YM	A	1,533,870	1633	99	243						PY6KY	32,509	221	22	37						K300	2,060,136	1148	146	493
*PY5MM		554,664	875	65	177	NDDC	90,972	207	56	115	JR1NKN	31,124	213	22	40						K3PP	1,919,097	1093	146	511
*PR7RH		86,229	274	43	100	S66C	87,024	411	34	114	VZUZR	21,251	123	23	56						NA3M	1,712,348	1157	125	421
*PUSAAD		56,202	198	38	76						RZGHX	19,355	140	20	59						WB3FZ	1,552,288	1021	116	426
*PY2FN		26,344	178	38	51	E1A8T	80,822	349	40	121	DF3SM	19,296	180	15	33						K3NV	1,446,806	887	141	506
*PY2TI		16,745	76	34	51	DL8AWK	78,240	413	29	134	RN9MR	18,996	155	12	45						K3NM	1,480,410	1150	101	357
*PY2XAT		13,943	122	26	47	Y05FR	74,710	318	36	110	WAF6V	17,568	112	19	42						K3PK	1,394,784	106	106	358
*PY7QJ		8,286	53	8	35	01TCO	72,933	205	64	122	GW7X	16,800	(OP: G3WJ2)								R3MX	992	271	373	
*PV8AAS		7,872	57	27	37	K10G5	63,984	205	64	122											NE3H	1,276,352	1173	105	343
*PU20TN		6,090	74	17	25	N14TS	63,540	241	52	128	EASON	15,860	145	16	45						N3ZA	1,269,950	850	122	428
*PY3/PY1AMF		3,976	92	26	30	O24CG	63,339	368	25	104	SP5DDJ	15,080	127	17	41						K3TN	1,191,762	941	102	361
*PR7PO		2,700	31	17	19	PE2PK	61,798	299	30	76	JH8FAJ/1	15,080	117	22	36						K3ND	1,148,349	849	120	383
*PY2RX		1,863	39	14	13	K2KY1	61,490	238	37	106	N1VVV	14,700	87	17	53						W9GE/3	1,003,030	816	101	344
*PY2MTS	28	174,561	666	27	66	PY4Z0	59,160	196	47	89	RW9R9	14,350	122	12	38						W3CC	884,535	670	115	430
*PV8ABC		0	4	1		Y05DH	58,695	352	26	103	VE3WB	13,984	93	16	43						W3EA	858,450	717	109	376
*PY1NK	21	537,280	1174	34	126	OK2BLD	57,820	345	29	111	V3JRJ	13,098	85	14	44						K3TEJ	828,352	682	96	352
*P5PKR		351,633	1497	23	70	N4J4	53,237	161	43	96	RV9AZ	13,083	107	13	36						A4AK	637,698	555	103	338
*P5YBLG		34,472	196	16	46	VE3GTC	52,920	172	39	87	JH3HYT	10,206	92	22	32						W3GK	580,736	614	79	270
*ZYG6	14	29,370	211	23	43	PC2F	52,260	261	29	105	UA9UHN	8,060	83	19	33						W0BR/3	496,920	460	91	319
*PY4ZF		24,461	158	21	40	PA1B	51,870	173	57	73	OK1AJ	7,790	99	13	28						N3NA	418,859	404	93	278
*P5PZJ		575	18	11	14	Y03DB	50,250	327	24	110	NH1/7	7,130	57	15	31						W6AU	400,804	414	99	289
*P7P7L	7	17,095	95	20	45	Y03DB	44,387	334	19	100	WY6DX	5,750	54	19	31						W3A0/3	379,222	472	82	244
						Y03DB	42,804	138	112	SP2MM	6,314	51	11	28							K3FG	376,996	477	73	234
						Y03DB	42,483	248	33	73	W0SBAH	2,496	38	13	26						W1M0	368,112	421	259	89
						Y03DB	42,205	176	39	76	G7PVZ	2,378	33	12	17						W3E0	302,976	422	66	222
						Y03DB	41,697	246	33	90	RK0AB	1,890	35	13	17						N3NL	254,700	316	83	217
						Y03DB	41,478	210	29	64	WASRML	1,316	24	12	16						W3UR	240,350	365	71	182
						Y03DB	41,400	189	34	66	JA1KPF	1,140	22	9	10						N3ST	229,710	344	62	185
						Y03DB	39,900	222	30	110	JR0QRU	1,080	25	7	11						W3MC	190,020	272	37	137
						Y03DB	39,396	377	15	83	EAB8PV	882	17	7	14						N3RP	133,962	294	41	125
						Y03DB	39,032	139	43	93	DJ3EJ	570	25	10	15						W3B	130,876	282	43	111
						Y03DB	35,340	197	30	84	W4TGL	242	10	6	5						K3GMT	96,640	278	35	93
						Y03DB	33,756	175	43	73	HS4JYX	225	23	0	3						KD3TB	64,476	153	14	114
						Y03DB	33,354	120	46	63	KJ1VOZ	70	4	3	4						K3FM0	62,050	152	53	117
						Y03DB	32,946	174	32	82	WN7Y	0	0	0	0						W3SQ	46,636	191	29	102
						Y03DB	30,150	302	15	75	I0UZF	114,383	581	23	84						KD3RF	10,703	66	28	49
						Y03DB	29,440	106	39	76	U5SUX	109,361	463	26	93						W3WF	269,040	759	34	118
						Y03DB	29,116	236	22	94	OLAW	89,397	511	21	78						W4A3AN	125,190	386	25	92
						Y03DB	28,188	231	29	88	RD3CX	83,412	368	19	63						W2CD0/3	96,630	282	43	111
						Y03DB	26,751	109	36	75	LZ1VB	80,300	499	24	76						W3NO	162,812	418	30	113
						Y03DB	25,109	214	27	92	JR3RWB	73,186	350	26	60						K3TM	149,370	420	29	101
						Y03DB	24,804	216	35	82	SP4GFG	69,825	427	23	72						K3STX	73,439	255	19	84
						Y03DB	24,250	145	30	67	G3LHJ	67,660	427	17	68						K3AU	2,047,520	1433	109	427
						Y03DB	22,881	112	32	55	RL3KO	62,720	364	24	17						(OP: K2YWE)				
						Y03DB	22,644	195	24	87	M/Y04RDW	49,612	385	17	62						*W3K	1,428,313	1000	121	409
						Y03DB	20,412	158	30	78	HAT7W	46,460	215	25	76						*W3C	1,012,638	845	101	357
						Y03DB	19,600	111	46	67	ORZF	43,290	309	18	61						*W3E	960,530	789	85	324
						Y03DB	18,624	111	46	51	(OP: ONBLS)										*N3KY	310,050	468	56	178
						Y03DB	18,232	98	26	60	SMS8RG	39,591	265	16	67						*W4E/3	201,815	340	64	159
						Y03DB	18,147	154	25	44	VA2NB	39,200	221	19	61						*K3BEMU	129,151	232	46	153
						Y03DB	17,928	98	35	48	RA9MU	35,945	218	13	52						*A3DF	116,025	242	35	160
						Y03DB	17,226	83	42	57	JH8DB1	34,300	203	21	49						*W3AG	47,705	123	92	316
						Y03DB	16,926	86	26	52	G3R	31,464	312	16	53						*W3FG	25,908	92	36	66
						Y03DB	16,720	98	40	55	J03DAC	29,944	256	19	63						N2TU/4	2,319,816	1295	143	509
						Y03DB	16,432	80	23	52	N12DR	22,578	138	15	56						W3G0/4	2,136,582	1365	128	430
						Y03DB	15,756	112	29	72	JH1EVD	18,564	144	20	32						N4Z0	2,047,300	1083	151	543
						Y03DB	15,486	110	26	63	L8AWG	17,995	173	43	46						K4SV	1,941,120	1214	120	456
						Y03DB	15,120	85	26	54	OH6CO	12,903	170	10	41						N3MK/4	1,883,745	1141	133	482
						Y03DB	14,615	207	20	17	DL4DO	12,190	170	12	41						AA4NC	1,839,726	1203	135	427
						Y03DB	14,400	92	24	56	SP6BXM	9,600	140	11	37						N4VV	1,789,812	1081	133	466
						Y03DB	14,350	103	32	50	N8XX	7,660	76	14	37						W4PG	1,767,216	1175	115	413
						Y03DB	14,322	166	20	73	ON7SS	6,458	53	14	20						W3D44	1,709,544	1041	115	368
						Y03DB	14,196	81	30	54	SP4JFR	4,488	53	14	20						KR4F	1,691,250	986	143	482
						Y03DB	14,196	81	30	54	SP4JFR	4,488	53	14	20						AA1AR	2,170	89	55	75
						Y03DB	14,196	72</																	

*ZA/HA1ZN	A	1,070,732	2846	77	272	*OK7T	"	130,180	1099	16	76	RW6AN	"	7,242	123	8	43	DK6XZ	"	4,970,368	3102	160	594	*DD11M	"	38,850	213	18	57
						*OK1AY	1.8	34,009	384	11	60	*R2AAG	A	1,353,534	1520	118	400	DC4A	"	4,453,230	2761	168	522	*D13BRA	"	19,856	143	24	44
												*R2AAL	"	1,292,218	1327	103	363	DF3CB	"	3,373,330	2071	161	569	*D04B	14	367,982	1213	36	122
												*R3K3M	"	1,241,704	1316	118	459	DJ50V	"	2,995,100	2429	134	476						
OE4A	A	4,625,864	3407	161	551	OZ40	A	26,780	173	26	77	*UA4AL1	"	866,176	1335	92	316	DJ50V	"	2,691,370	2398	128	441	*DL4FN	"	146,128	569	28	100
						OZ5BD	A	231	21	7	14	*R3VO	"	834,477	990	116	387	DJ50V	"	2,691,370	2398	128	441	*DL7SW	7	147,740	480	37	129
OE3ZK	"	873,208	1198	103	331							*R4KYJ	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL3VZL	7	147,740	480	37	129
OE3GCU	"	422,832	689	96	287							*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
OE2GEN	"	307,020	454	74	227							*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
OE5QHD	7	915,081	2611	39	152							*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
OE3KAB	7	231,408	1017	31	113							*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
OE3I	3.5	382,264	1860	31	111							*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
OE3GSA	"	180,240	1155	25	95							*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
OE4VE	"	91,002	795	17	70							*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
*OE8Q	A	1,432,106	1670	119	375							*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
*OE6IMD	1.8	49,555	470	15	70							*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
EA6F0	21	950,796	2532	39	157							*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
EA6UR	7	765,698	2574	38	135							*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85	283	DJ50V	"	2,691,370	2398	128	441	*DL2XC	"	142,091	553	31	120
												*R4Y4J	"	474,352	990	85													

*I24AKO	700	22	8	17	SN7Q	21	391,140	1003	36	144	*OM8LA	A	878,555	1196	91	324	UY8FB	*	456,487	526	120	359	PR7AR	14	196,672	930	29	83	
*IK0BX	1.8	36,120	325	16	68	SP1NY	*	237,180	615	36	142	*OM8D	A	613,800	810	80	316	URSMB	*	197,508	495	57	161	PY2JK	*	18,648	115	20	30
Kaliningrad																													
*UA2FT	1.07	17	9	12	SP3SXH	*	61,050	237	30	81	*OM8YC	A	300,000	612	79	221	UT3WX	*	124,832	395	55	133	PW2B	7	343,564	1051	30	96	
*RK2FWN	14	14,338	121	12	55	SN2M	*	15,800	93	23	56	*OM5UM	A	166,212	498	59	175	UX0X	*	123,375	377	61	174	*PV8DX	1.8	24,380	212	13	33
Latvia																													
YL2KO	A	4,409,721	3490	163	566	SN3X	7	422,541	1832	37	134	S59ABC	A	5,460,392	3549	168	526	UR5FB	*	92,916	376	48	143	*PY2SEX	A	2,241,308	1558	142	396
YL6W	A	3,174,048	3001	139	477	SP4TKR	*	418,644	1477	37	137	S58N	*	3,622,280	2678	149	536	UY7ON	*	90,428	339	42	106	*PY3OZ	*	319,495	728	54	103
YL4U	*	3,152,100	4138	116	416	S05M	3.5	336,050	1609	27	103	S550	*	654,126	1335	82	236	UXOFF	*	68,808	256	64	124	*PY2DY	*	20,520	100	44	70
YL0Y	*	2,699,487	2980	124	443	SP7LO	*	143,925	1164	17	84	S57Q	*	2018,720	2018	91	260	UY7SY	*	22,156	83	44	72	*PY2XK	28	56,952	312	24	48
YL9T	*	978,738	1294	105	376	SP70A	*	4,140	51	13	33	S57Q	*	407,564	591	81	286	UY7SE	*	7,755	76	20	35	*PY2TM	21	188,595	801	25	74
YL5M	*	58,208	404	21	86	SP6AXW	1.8	31,800	332	11	64	S57S	*	89,586	354	47	115	UY7XP	*	2,014	50	9	29	*PUBTEP	*	11,505	129	16	23
YL2PP	*	47,712	130	62	106	SP3BJK	A	669,916	1224	72	266	S57T	*	543,705	1315	39	162	UT11A	28	7,626	81	14	48	*PU4HD	*	4,914	53	12	30
YL2BJ	21	299,184	589	35	149	*S05STS	*	294,577	765	65	206	S58Q	*	278,400	1216	33	117	UY5OZ	*	6,555	79	16	41	*PY4XX	14	49,980	259	30	72
YL9W	7	327,930	1707	37	133	*S05TZ	*	105,820	211	58	127	S53F	3.5	273,750	1486	27	98	UI01D	21	404,028	1392	33	129	*PY1Z	*	16,720	124	27	53
YL3FX	3.5	445,480	1894	32	116	*S05B	*	85,140	328	40	132	S57M	1.8	165,996	1179	24	84	UI5FX	*	389,880	1254	33	138	*PP5AX	*	9,240	114	18	26
YL2PJ	1.8	147,000	1108	19	81	*S09IWT	*	74,850	225	47	103	*S20P	A	1,901,025	2426	111	386	UZ0U	14	497,439	1576	38	133	Chile					
*YL2TB	A	646,191	1214	67	284	*S09FX	*	74,124	209	54	88	*S54X	A	985,508	1285	95	338	UY57M	*	41,760	219	25	85	CE3FZ	28	217,035	848	23	68
Lithuania																													
LY80	A	3,835,865	3127	153	566	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	CEACT	3.5	6,500	55	17	33
LY2F	*	882,980	1351	84	287	*S09IWT	*	74,850	225	47	103	*S54X	A	985,508	1285	95	338	UY57M	*	41,760	219	25	85	*CE1CR	28	21,115	222	17	24
LY2TS	*	611,100	1147	74	276	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	*CD1R	21	77,686	479	21	41
LY2VU	*	428,740	940	56	235	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	*CE1URJ	(OP: CE1URJ)				
LY2G0	*	216,030	736	93	194	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	*XR3A	14	283,608	982	32	76
LY3CY	*	187,666	654	41	165	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	*CE1TBN	7	4,446	58	18	21
LY3XC	*	171,578	415	66	176	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	Colombia					
LY2C0	*	119,140	589	35	123	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	HK1R	21	1,278,560	2923	37	123
LY2AW	28	24,905	226	20	65	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	HK1X	14	1,419,471	3013	39	132
LY3W	7	53,856	218	28	104	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	HK3Q	21	70,085	276	24	83
LY7M	3.5	171,215	992	25	96	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	Uruguay					
LY3BG	*	77,341	613	14	75	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	CW7T	A	622,918	763	82	211
LY2J	1.8	30,420	284	17	61	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	*CX5TR	21	261,997	999	27	70
*LY3BY	A	851,400	1446	79	308	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	Venezuela					
*LY2RJ	A	539,874	1169	77	285	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	YW5T	A	210,512	371	75	161
*LY2SA	A	519,984	1169	77	285	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	ORP ASSISTED					
*LY2BVB	A	196,947	478	66	211	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	ORP ASSISTED	A	1,385,265	1619	96	405
*LY20M	A	127,100	450	43	162	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	N1TM	*	627,900	671	83	262
*LY1G	3.5	102,114	650	24	98	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	HA1ZH	*	623,610	836	85	246
Luxembourg																													
LX1KC	7	425,075	1934	37	138	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	UR5LAM	*	60,900	1044	87	283
Macedonia																													
Z35X	14	445,096	1591	39	125	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	RW5D	*	547,150	559	79	274
Z37M	3.5	523,728	2300	32	112	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	US27Z	*	543,752	654	74	260
*Z35T	7	489,294	1979	33	120	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	RW9A	*	419,580	696	60	255
Moldova																													
ER4A	A	8,169,728	5611	163	613	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	SM6EQ	*	406,260	905	63	242
*ER0FEO	A	1,752,457	2133	120	433	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	UY1QL	*	279,300	765	61	99
*ER3DX	*	1,250,788	1343	117	407	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	RU9I	*	286,098	494	63	183
*ER6A	*	390,420	1213	64	206	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	ORP ASSISTED					
*ER5DX	*	221,000	399	68	192	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	HA5BA	*	253,532	730	57	181
*ER3ZZ	*	87,200	220	61	139	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	DL5JAG	*	208,101	654	44	169
*ER3MM	3.5	38,800	444	12	60	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	W400	*	190,624	279	69	190
Netherlands																													
PA5KT	A	1,786,410	2359	96	318	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	HA7YS	*	182,922	507	65	193
PA3FO	*	436,208	989	72	202	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	IV3AOL	*	170,156	344	54	182
PA3BWK	*	382,930	1182	52	205	*S09IWT	*	74,850	225	47	103	*S56A	A	1,901,025	2426	111	386	UY57M	*	41,760	219	25	85	RNSANT	*	92,538	268	66	133
PA3A	*	141,987	628	32	127	*S																							

