

Results of the 1989 CQ World-Wide DX SSB Contest

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

For a couple of years now, your Director, N6AR, has been traveling to Italy on business, hoping to get permission to operate the contest from a rare European QTH. In 1989 I successfully applied for permission to operate Vatican station HV3SJ during the CQ WW SSB DX Contest, thanks to the very kind help of Pino, I0DUD, who made the necessary licensing arrangements with the Jesuit House where the Vatican station is located. This was a particularly exciting proposition, since it meant the first full-scale CQ WW Contest operation from the Vatican!

I arrived in Rome the week before the contest and had a full week of ordinary business to conduct. That kept me busy 12 hours a day, even on the Thursday and Friday before the contest. I was pretty tired at the beginning of the contest. However, when the action began, I forgot all about how tired I was as the excitement of the contest took over. In fact, I managed to stay awake about 36 hours of the 48 hours, with some of the dead time caused by the arrival of Mr. Murphy (of course). There was the interference to the FAX machine downstairs, the linear failure, and the high noise in the direction of the USA on 28 MHz—all normal Murphy visits. The location is only accessible during certain hours, so we had to leave for part of the time. Yet things went extremely well for a first-time operation. It was certainly a delight to give so many contestants a rare multiplier.

HV3SJ is blessed with a fantastic rooftop position high above Vatican City at the Jesuit House, which is located within the extraterritorial limits of the Vatican, as can be seen in the picture. You will note the two-element triband quad just to the right of St. Peter's, which was the mainstay antenna. That was complemented by full-size dipoles on 160, 80, and 40—a fine all band set of antennas in great working order! The shack is located in a small room right next to the antennas on the roof, a nice, quiet, secluded corner of the Jesuit House. During the contest the rig consisted of a TS-930 and KW linear.

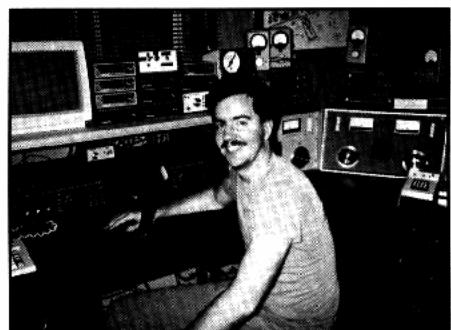
Since most of my operation has been State-side, it was a real eye-opener to participate from the other side of the pile-up as DX for a change. Naturally, I'd been hearing that for years from my co-director, K3EST, who has been active from the Caribbean often over the last 10 years. However, 3500 QSOs, 3.1 M points, and 48 hours later, I had pretty well gotten the message on the differences.



Your SSB WW DX Contest Director, Larry, N6AR, is shown here at the rooftop location of HV3SJ with the two-element quad shown in the background.

I know there are lots of you loyal contesters and readers who never heard HV3SJ in the contest. Well, I really tried to work the USA and Japan through the European pile-ups, but it was tough. It kind of reminds me of an incident a year or so ago in the States. I worked a BY just 10 minutes before the contest on 10 meters, yet never heard him in the contest at all. What a surprise it was when his contest log arrived with all those W's in it. When the curtain rises at 0Z on the day of the contest, all sense of order just seems to be lost. I had a similar experience with the Far East and Japan, particularly on the low bands, where the European pile-ups on me were just incredible. The JA stations I heard were all nice copy, but boy, it was tough. We noticed similar comments from the European winner, Jorma, OH2KI, who had the same problem at ZB2X. Then too who can blame the Europeans, who were doing their best to work the multipliers. Clearly, the rare multiplier in the contest has a very strategic dilemma of determining just how much time to spend running a pile-up and how much time to balance the band-by-band score and multipliers. It's much more of a problem when the choice is between 3 and 1 point contacts, too, as is the case in the Far East and Europe.

Indeed, it is just amazing how sophisticated the WW contesting process has become. Location, equipment, multiplier status, propagation, and other environmental factors are certainly important ingredients of a successful



Phil, K3UA, manned K3TUP for this year's number 2 USA all band entry.

WW contest effort. But it is the strategic skills that really make the difference between the winners in the key categories. These strategic factors have been studied and the results put into practice by a keen group of serious contesters. These fellows have worked out a formula for where to go, when to run, when to hunt and peck, when to make band changes, etc. Even the brevity of the exchange has been fine honed to a science. If you are out to win in a major category, it is going to take several years to learn all these strategies, and to develop the skills with on-the-air practice in the heat of battle. The margin of a first-place ver-

*12041 Walker Pond Rd., Winter Garden, FL 34787

**1816 Poplar Lane, Davis, CA 95616



Guest operator OH8SR is shown here (left) with station owner EA8BPW.

sus a second-place finish is extremely small in most cases, as some of the results from this year show. The sophistication is enough to scare away some of the newer operators. Yet what we need are a few more challengers who have the patience and endurance to develop those skills and strategies. They would certainly serve as better role models than list and net operators!

The fact is almost anyone can have a great time in today's contest. Whether you like to chase multipliers, conquer a band, run high rates, or just mess around for a little bit, the CQ WW will answer your mail. You can even pick a category where with just a little diligence a certificate is yours for the asking. The way the contest is structured today, there are so many categories from which to choose that there is probably one just right for you. For example, there were very few entries on the low bands this year. Everyone piled up on 15 and 10 and left the low bands alone! A good way to enter and have fun for the beginner is to challenge a buddy in a certain category and just compete between the two of you. Before you know it, you'll be ready for the serious categories. Just think—you might be the next N6AA or OH2BH.

The All Band Results

Rich Smith, N6KT, operating as EA8RCT, ran away with the Single Operator, All Band, World High honors with a whopping 9.7 M points, some three million points above his nearest competition. Jorma, OH2KI, finished second at 6.7 M from ZB2X, setting the only Single Operator All Band record of the year. Jorma edged out the 6.5 M 1988 European mark set by fellow countryman Ville, OH2MM, at OH0MM. Rich made excellent use of his 3 point advantage and a 500 QSO edge on 10 meters. VP5T and YJ0R, in that order, fought it out for third place with just over 1000 points separating them at the 6.1 M level. The top 10 was rounded out by VP2EXX, KN0E/KH3, N2NT, VE2ZP, K3TUP, and WR6R/KH6, all above 4.6 M. Curiously, this was the first time in years that a South American station has not been in the top ten. Note that three of the top ten efforts were from Oceania, a welcome breath of fresh air for the Pacific sector. By the way, the very fine effort by VE2ZP represents the first top ten participant from zone 2 in many years, and the highest ever single op score from that region.

How about those two USA scores in the top ten worldwide! The USA high score of 5.4 M was posted by Andy Blank, N2NT, followed by the fine 4.9 M score of K3TUP, with K3UA operating. This was the second year in a row at se-

cond place for K3TUP. Dean, N6BV/1, followed suit at 4.7 M. The W3's took five of the top ten this year, and as has been the case for several years now, the northeastern sector continues to completely dominate the USA results, with nary a 4 through 0 anywhere in sight. These scores are all consistently close to each other as well, with the third through tenth place finishers all within the 4.0 to 4.6 M region. Despite the fantastic conditions on all bands, this was the first year I can ever remember without any USA record of any kind being set.

European single operator scores went down somewhat this year, with the second through ninth scores finishing in the 2.5 to 4 M range. ZB2X, GW4BLE, and OH6JW finished 1-2-3 in that order. All three finished in the top ten for the second year in a row and improved their positions compared to 1988.

We were able to run some key computer checks on the top single operator all band scores this year. In fact, we were extremely pleased with the results of those checks, which showed phenomenally low average unique rates (less than 4) among the US and worldwide contenders. Clearly the attention given to accuracy and log checking in the last couple of years has paid off, as the participants are proving.

Our new Single Operator Unlimited category enjoyed a surprisingly large following considering the late announcement. While most of the logs were from the USA, there were a few from Europe and Asia that were submitted as well. Tine, YT3AA, ran away with the World high with 5.6 M. K1ZM finished at the top Stateside with 4 M, followed by W0ZV at 3.5 M and K3WW at 3.1 M. We realize that this category name was chosen hastily because the "unlimited" term confused many and is ambiguous. We are therefore planning to change the name to "Single Operator Assisted," which carries a much clearer meaning. By the way, this category is open to single band as well as all band entrants, a fact which may not have come across clearly in the announcement.

The High Band Results

The 28 MHz category was extremely popular this year, with propagation open from before first light to well after dark in most places. Three new records were set. First, Bob Alphin, K4UEE, amassed new World and South American single band records with a fantastic 2.7 M score from P40R, the largest single band score ever recorded. He was followed by LR6ETB at 2.5 M, KP2A at 2.2 M, and 5H3TW at 2.0 M. Our congratulations to Tom Warren, 5H3TW, on a new African 28 MHz standard, as he bested the 10-year-old standard set by Ville, OH2MM, of OH2MM/CT3 fame. Two of your records fell this year, Ville.

The USA 28 MHz winner was Ralph, K5GA, who just missed the 1 M level. He was followed by KT4A (870 K) and KS1L (825 K) in that order. The European 28 MHz winner was 4N7ZZ at 1.37 M. YZ6A was second in a real scramble with four other stations; TX7A, DF0DX, UR2RE, and DF0SSB, in that order, all of whom ended up within 70K points of each other.

The 21 MHz competition was also fierce this year, with EL2CX (operated by Carl, K3RV) emerging as the victor at 2.2 M. Second and



PP5JR used ZZ5JR to good advantage as he piled up a fine 1.1 M on 28 MHz.

third place went to Larry, N7DF/NH2 (1.78 M) and Frank, 9Y4VU (1.76 M). The USA 15 meter top gun was W7WA at 843 K. Fifteen meters was the only glory of any kind for the West Coasters this year, as three other W7's and a W6 finished in the top six. UB5WE snagged the European high with 980 K.

Twenty meters saw some strange propagation this year, with mid-day conditions somewhat subdued in many areas compared to other years. Despite the lull, South America's YW1A (1.50 M) and CE6EZ (1.23 M) took number one and two in the World. Third place went to EA9LZ, whose 1.2 M was enough to topple EL2AV's 1981 African record. YU1KQ finished fifth in the World and tops in Europe, well above his closest competition, 4N4I (672 K). W1RR's 706 K and K2HFX's 605 K dominated the USA contingent.

The Low Band Results

The low band results were way down this year, partly because of propagation and partly due to a lack of participation. After all, why struggle with static bursts and marginal signals when you can just keep running your 10 meter station! A flush of Europeans led by DJ4PT at 382 K, I2AOX at 360 K, and HA9RE at 359 K swept 1-2-3 in the World on 40 meters. WQ2M (83 K) and N6BFM/4 (72 K) dominated the USA arena.

On 80 meters HK3MAE ran away with all the cookies, posting a fabulous 414 K, almost three times higher than his closest competitor, YV3A (142 K). UT4UZ led the Europeans with a fine 114 K score, while K4HJJ edged W6RJ with 32 K for USA fame.

Only one record of any kind was set on the low bands this year, and that was on 160 meters, as IV3PRK/IH9 journeyed south into the Italian African Islands to obliterate EA8AK's old 34 K African record with a fine 81 K effort. Otherwise, the 160 meter category was a battle between the Europeans for second place, with OK1DWX leading the pack at 23.5 K. Less than a handful of USA stations even entered on 160. Our congratulations to K5UR on his 5,000 point Stateside effort, a magnificent achievement considering conditions.

The QRPPers

With the fabulous propagation on the high bands, QRPP enjoyed a banner year in entrants, with about 130 entries submitted. Bosko Milankov, YU2TY, led all the competition with a fine 758 K all band entry. He was followed by EA3FBO at 461 K and KD2TT at 371

TROPHY WINNERS AND DONORS

SINGLE OPERATOR, ALL BAND

World

EABRCT (Opr. Rich Smith, N6KT)
Donor: Dave Rosen, K2GM
WA2RAU Memorial

World (Assisted)

Tine Brajnik, YT3AA
Donor: Pavilion Software

World, QRPP

Bosko Milankov, YU2TY
Donor: Milliwatt Books—W0RSP

U.S.A.

Andrew P. Blank, N2NT
Donor: Potomac Valley Radio Club
KC8C Memorial

Caribbean/Central America

VP5T (Opr. Steven H. Dove, NM2Y)
Donor: Alex M. Kasevich, VP2MM

Europe

ZB2X (Opr. Jorma Salaranta, OH2KI)
Donor: Potomac Valley Radio Club
W4BVV Memorial

Africa

Scot F. Dettendorf, 7P8DP
Donor: Gordon Marshall, W6RR

Asia

A. Asai, JA8RWU
Donor: Japan CQ Publishing Co., Ltd.

Japan

Shigeaki Furukawa, JG3KIV
Donor: Japan Crazy Contesters Club

Oceania

YJ0R (Opr. Pekka Kolehmainen, OH1RY)
Donor: Northern California DX Club

South America

Pedro Barroso Vivaldi, CE3BFZ
Donor: CQ Magazine

SINGLE OPERATOR, SINGLE BAND

World—28 MHz

P40R (Opr. Robert C. Allphin, Jr., K4UEE)
Donor: Joel Chalmers, KG6DX

World—21 MHz

EL2CX (Opr. Carl Kratzler, K3RV)
Donor: Peter Munroe, WB1DQC

World—14 MHz

Italo Stradiotto, YW1A

Donor: North Jersey DX Association
K2HLB Memorial

World—7 MHz

Klaus Kuhlemeier, DJ4PT

Donor: Fred Laun, K3ZO
K7ZZ Memorial

World—3.8 MHz

Francisco Javier Monroy Pinzon, HK3MAE

Donor: Fred Capossela, K6SSS

U.S.A.—28 MHz

Ralph W. Bradford, K5GA

Donor: Donald Thomas, N6DT

U.S.A.—21 MHz

Daniel S. Handa, W7WA

Donor: Bill Gioia, K2EK

U.S.A.—14 MHz

John J. Kenny, W1RR

Donor: Southern California DX Club

U.S.A.—7 MHz

Michael B. Jeffrey, WQ2M

Donor: Stanley Cohen, WD8QDQ

U.S.A.—3.8 MHz

Glenn R. Blackwell, K4HJJ

Donor: Arnold Tamchin, W2HCW

Caribbean/Central America

KP2A (Opr. Robert B. Hayes, KW8N)
Donor: Pedro Piza, Jr., NP4A

KP4ES Memorial

Europe—28 MHz (Zone 14)

TX7A (Opr. Paul Granger, F6EXV)

Donor: A. G. Anderson, GM3BCL

Japan—28 MHz

Yasumutsu Kiroswa, JA8NFV

Donor: Take Yokoyama, JL1BLW

Japan—21 MHz

Tom A. Tatomi, JA5OVU

Donor: DX Family Foundation

MULTI-OPERATOR, SINGLE TRANSMITTER

World

P40V (Oprs. AI6V, N6BT, VE7KNI, WA6VEF)

Donor: Southern California DX Club
W6AM Memorial

U.S.A.

KS9K (Oprs. KS9K, K9CJK, K9GS, N9AU,
N9AW, N9GNQ, N9EJ, N19U, NK9I,
NO9F, W9RN)

Donor: Carolina DX Association

Europe

LZ9A (Oprs. SV3SJ, LZ2CC, LZ2PO, LZ2DF,
LZ2HE, LZ2II, LZ2UA, LZ2SC, LZ2KK, LZ2PS,
LZ2DD, LZ2BE, LZ2CT, LZ1NG, LZ2TT,
LZ2XA, LZ2-E-41, LZ2-E-72)

Donor: Bob Cox, K3EST

Canada

VE6OU/XL3 (Oprs. VE2OZR, VE5DX, VE6OU)
Donor: CQ Magazine

MULTI-OPERATOR, MULTI-TRANSMITTER

World

PJ1B (Oprs. WA3LRO, PJ2MN, AI7B, W3UM,
N7ZZ, N7ZR, K3EST, N4RV, W7EJ, K2SS,
OH2MM, N6IG, AA6NT, K2SB, PJ9EE, KB2XZ)
Donor: CQ Magazine—W1WY Memorial

U.S.A.

W3LPL (Oprs. W3LPL, KA1GD, KC3EK, W3EKT,
W3EMH, N3GB, WB3JRU, KX3Q, K3RA,
NM3U, WD4AXM, NW5E, KN5H, N8II,
WA8MAZ, KD9J)
Donor: Operators of K4VX/0

Europe

LX7A (Oprs. DL3LAB, DL4MCF, DL4MEH,
DL5IC, DL5MAE, DL6FBL, DL6NCY, DL6RAI,
DL7AV, DL7MAT, DL8OH, LX1II, LX1MK,
LX1WW, PA3CEF, PA3DWD, DA1DW, DA1KM,
DF2UU, DF3CB, DF3QL, DF7RX, DJ0IP,
DJ1AT, DK1FW, DK2OY, DK3GI, DK5WL,
DK6WL, DK8MZ, DK9IP, DL1SBR)
Donor: Finnish Amateur Radio League

Japan

JE2YRD (Oprs. JH1EAQ, JE1JKL, JA2IVK,
JA2VWG, JA2PHO, JH2BNL, JR2SQU,
JF2DQJ, JF2XJE, JI2KVV, JF2EOC, JG3LZG,
JI3ERV, JI3JGJ, JR9OMD, JA9-10148, Noriko)
Donor: Nippon Television Network Corporation

CONTEST EXPEDITIONS

World—Single Operator

PJ7A (Opr. Bear Yasuchi Kumagai, JA7RHJ)
Donor: Stuart Meyer, W2GHK

World—Multi-Operator

V47K (Oprs. K3NZ, K3IPK, WB2P)
Donor: The German CDXG & SDXG
DJ3NG and DJ4EI Memorial

K. Congratulations on some super scores, fellows. The 10 meter QRP top dog was JR3RWB (227 K), while JA8RJE (105 K) led the pack on 21 MHz. We saw very few entrants on 20, 40, 80, and 160 in the QRPP categories this year.

Multi-Op Categories

The Multi-Single category thrived this year, even with the introduction of the new Single Operator Unlimited category. The Americas dominated the competition, with great scores in the tens of millions. It was the team led by

Carl, AI6V, at P40V that stole the show with a fantastic 18.5 M, new World and South American records. Well done, fellows. The teams at PJ9W (17.7 M), TI1J (14.2 M), FY0P (13.1 M), and 8P9X (13.0 M) followed suit. European teams were led by the fellows at LZ9A with 12.7 M, who just barely squeaked by IQ4A. KS9K's 6.0 M won it for Stateside. It was a real shootout for second place, as N4RJ, K1YR, K1NG, and N3RS all finished within 300 K of each other in the 5 M range.

The Multi-Multi category was extremely well represented on three continents this year, with the Americas and Europe having about the

same relative position as in Multi-Single. WA3LRO's PJ1B team returned for another try at the World record and managed to just miss toppling P40V's mark from 1988 with a fine 48.9 M score. A team consisting largely of W6 contestants journeyed to ZW5B to finish second with 35 M, followed by a very fine 32 M point VP9AD score. Some of the Germans aided home-grown LX operators in their quest for a new European Multi-Multi record, as LX7A amassed a fantastic 26 M to unseat UP8A. Stateside, it was W3LPL all the way with 15 M, as N2RM, NB1H, K2TR, and N5AU fought it out for second place in the 11 millions.

Some Comments on the Rules

A few of you are going to be disappointed this year by the application of a few of our long-standing rules in a number of areas. To minimize the possibility of others failing to follow these rules in the future, we will outline a few no-nos that some of you appear to be toying with.

First, we do not allow the same call to be used in more than one category. Hence, the same call cannot be used for more than one single band entry. For example, we had three different single band logs submitted under the same call sign this year. That is not allowed. Refer to Rule VIII, which states: "A single band log is eligible for a single band award only. If a log contains more than one band, it will be judged as an all band entry unless otherwise specified." We interpret this to mean that a given call is entitled to only one single band entry.

Second, you cannot omit your sent and received exchanges from your log (see Rule XI, 2, where it states that "All sent and received exchanges are to be logged.") You can make an entry on the log which states that the exchange you sent was always the same (if that is the case). However, the received exchange must be logged, including the zone received.

Please note that for a station to be eligible for the reduced penalty structure associated with computerized logging submissions on disk, the complete log data must be submitted. Thus, submission of a disk containing a computerized list of all calls worked on a given band does not qualify for the reduced penalty. We need all of the log data, including times, multiplier and scoring, and exchanges on the disk in order for the submission to qualify as a computerized log. Additionally, even if you send us your log on a disk, be sure to send us a printout as well. Imagine the cost of paper for 3,000 CQ WW contest logs!

We hope that proper attention to these rules will avoid any further disappointments to entrants in the future. The rules for 1990 can be found elsewhere in this issue. We suggest you read them carefully, as a number of changes have been adopted by the CQ Contest Committee this year.

A Word of Appreciation

We received over 3,000 entries and check logs this year, and about 160 of them were accompanied with disks. These logs were put to the test by our hard-working, expanded WW Contest Committee, with some of our folks concentrating on building the computer data base and performing log checks with it, while others concentrated on our normal log-checking procedures.

This hard-working group deserves special recognition. They are Pat, WA8YVR; Dave, K2SS; Doug, K1DG; John, K1AR; Bill, W2RQ; John, KE7V; Richard, K5NA/2; Ed, N3ED; Fred, AD6C; Jan, N6AW; Glenn, K6NA; Homer, K7RA; Jim, W7EJ; Gene, N2AA; Mike, W9RE; John, K2VV; Doug, KR2Q; and newcomer Randy, K5ZD/3. A special word of thanks to these guys for the long hours they put in.

Now it's time to close up your magazines and fire up the old rig. It's time for the 1990 CQ WW SSB Contest! Good luck to you all for 1990. 73, Larry, N6AR/4, and Bob, K3EST/6

MEASURE PEAK POWER OF SSB AND AM SIGNALS WITH THE MODEL 43P WATTMETER



Get all the measuring capability of our standard Model 43 Wattmeter, PLUS true peak power measurements of SSB, AM and limited pulse signals with the Bird Model 43P. The 43P measures peak power at $\pm 8\%$ full scale accuracy, without affecting CW operation or accuracy. And standard plug-in elements make it

simple to operate. Or add this capability to your standard Bird Model 43 Wattmeter with retrofit kit Model 4300-400. Simple, immediate installation — no soldering, no holes to drill or modifications to make. Contact your Bird distributor or the factory for details on the Model 43P Wattmeter or the retrofit kit.

who else but
BIRD

30303 Aurora Rd., Cleveland, Ohio 44139 • (216) 248-1200 • TLX: 706898 Bird Elec UD
Western Sales Office: Ojai, CA (805) 646-7255

© Copyright 1990 Bird Electronic Corp.

CIRCLE 44 ON READER SERVICE CARD



PacComm

HandiPacket

PORTABLE PACKET CONTROLLER

New!



Current Software Today and Tomorrow

Only 1.3" x 2.6" x 4.5"

User Serviceable Parts

Large 0.5 AH Battery Built-In

All Metal Case

Open Squelch DCD

NOW YOU CAN HAVE YOUR PACKET... AND TRAVEL TOO!

★ "Open Squelch" DCD circuitry for faster, more reliable performance ★ Compact size ★ Attaches to your belt, handheld or handheld computer ★ Rugged construction with superb RF shielding (no birdies in your radio) ★ Standard battery pack provides over 12 hours of operation ★ Advanced Personal Mail Box & KISS mode included ★ 32 k-bytes of RAM ★ Complete with belt clip, cables, battery pack & charger, comprehensive manual ★ 30 day money-back / One year warranty parts & labor

NOW ONLY \$219.95

For complete info & specifications
Call (813) 874-2980 / To Order, Call
Toll Free: 1-800-223-3511
Major Credit Cards Accepted!

PacComm • 3652 West Cypress Street • Tampa, Florida 33607

Please send HandiPacket More Information FREE Catalog

Name _____ Call _____

Address _____ Ph# _____

State _____ Zip _____ Card# _____ Exp. Date _____

MONEY BACK GUARANTEE! Add \$4.00 shipping/handling per order. FL residents add 6% sales tax.
Major Credit Card give number, expiration and signature.
FAX: 813-872-8696

CIRCLE 42 ON READER SERVICE CARD

TOP SCORES

| WORLD | | UNITED STATES | | EUROPE | |
|--|------------|--|------------|--|------------|
| Single Operator | All Band | Single Operator | All Band | Single Operator | All Band |
| EA8RCT | 9,668,988 | N2NT | 5,403,200 | ZB2X | 6,864,906 |
| ZB2X | 6,864,906 | K3TUP | 4,930,510 | GW4BLE | 4,058,880 |
| VP5T | 6,134,480 | N6BV/1 | 4,564,755 | OH6JW | 3,891,888 |
| YJ0R | 6,133,036 | K3OO | 4,533,543 | CT4NH | 3,796,713 |
| VP2EXX | 5,574,680 | K3ZO | 4,163,018 | LY3BA | 3,621,936 |
| N2NT | 5,403,200 | K1DG | 4,153,380 | HV3SJ | 3,198,285 |
| KNØE/KH3 | 5,147,070 | K5ZD/3 | 4,147,902 | OH6YF/OHØ | 2,723,970 |
| VE2ZP | 5,111,140 | N2LT | 4,014,080 | SM5AQD | 2,710,911 |
| K3TUP | 4,930,510 | W3BGN | 3,971,200 | G3SNN | 2,578,834 |
| WR6R/KH6 | 4,796,512 | K1RU | 3,954,090 | OH2PM | 2,264,519 |
| 28 MHz | | 28 MHz | | 28 MHz | |
| P40R | 2,669,580 | K5QA | 983,433 | 4N7ZZ | 1,371,378 |
| LR6ETB | 2,486,304 | KT4W | 869,424 | YU3VM | 1,178,857 |
| 5H3TW | 2,252,900 | KS1L | 825,727 | YZ6A | 1,174,817 |
| KP2A | 2,194,852 | K3ZJ/8 | 806,140 | TX7A | 1,158,614 |
| OHØXX/EA9 | 1,862,287 | WØAIH/9 | 793,507 | DFØDX | 1,132,474 |
| CW8B | 1,545,460 | KM2P | 733,040 | UR2RE | 1,106,065 |
| 21 MHz | | 21 MHz | | 21 MHz | |
| EL2CX | 2,242,968 | W7WA | 842,710 | UB5WE | 980,001 |
| N7DF/NH2 | 1,780,016 | WB7RFA | 726,204 | CS1BOP | 929,176 |
| 9Y4VU | 1,760,520 | NG2X | 687,463 | YU3PV | 894,075 |
| HC1OT | 1,713,762 | W6QHS | 622,909 | OH1AD | 872,784 |
| EA8ACH | 1,279,326 | K7LR | 600,300 | 4N3E | 829,584 |
| FM5EB | 1,242,759 | K7LXC | 514,514 | YU1AO | 813,233 |
| 14 MHz | | 14 MHz | | 14 MHz | |
| YW1A | 1,509,840 | W1RR | 706,986 | YU1KQ | 859,865 |
| CE6EZ | 1,232,242 | K2HFX | 604,945 | 4N4I | 672,606 |
| EA9LZ | 1,213,215 | NQ2D | 535,068 | F2EE | 650,312 |
| ZS6AAO | 962,676 | KV4P | 333,540 | YT3E | 643,656 |
| YU1KQ | 859,865 | N9RD | 283,500 | DF8KC | 624,102 |
| W1RR | 766,986 | N8RA/1 | 266,850 | SM0AJU | 503,366 |
| 7 MHz | | 7 MHz | | 7 MHz | |
| DJ4PT | 382,690 | WQ2M | 83,316 | DJ4PT | 382,690 |
| I2AOX | 360,149 | N6BFM/4 | 71,688 | I2AOX | 360,149 |
| HA9RE | 354,162 | W2SC | 69,930 | HA9RE | 354,162 |
| YY1C | 253,053 | KVØQ | 61,635 | DL8PC | 197,208 |
| JA8XM | 221,180 | AD8C | 44,778 | OH2HE | 182,520 |
| YV5LIX | 214,056 | N6RJ | 34,560 | YO3JF | 112,931 |
| 3.8 MHz | | 3.8 MHz | | 3.8 MHz | |
| HK3MAE | 413,644 | K4HJJ | 32,882 | UT4UZ | 114,855 |
| YV3A | 141,993 | W6RJ | 30,848 | HA8JV | 105,468 |
| IH9A | 127,264 | KG4W | 20,160 | DL2SAX | 99,561 |
| UT4UZ | 114,855 | W5EU | 16,660 | LY2ZA | 91,200 |
| HA8JV | 105,468 | WØCD/8 | 16,043 | RB5DX | 67,275 |
| DL2SAX | 99,561 | N6UC | 2,652 | UR2RME | 64,657 |
| 1.8 MHz | | 1.8 MHz | | 1.8 MHz | |
| IH9/IV3PRK | 81,344 | K5UR | 5,040 | OK1DWX | 23,562 |
| OK1DWX | 23,562 | W2FCR | 2,975 | OZ7YY | 20,608 |
| OZ7YY | 20,608 | AA4MM | 1,755 | LZ1KWZ | 20,295 |
| LZ1KWZ | 20,295 | | | UO2GHA | 14,127 |
| UQ2GHA | 14,127 | | | OZ3SK | 12,384 |
| 4M4A | 12,499 | | | SP5INQ | 11,613 |
| Multi-Operator Single Transmitter | | Multi-Operator Single Transmitter | | Multi-Operator Single Transmitter | |
| P40V | 18,520,488 | KS9K | 6,040,632 | LZ9A | 12,685,140 |
| PJ9W | 17,682,387 | N4RJ | 5,754,606 | IQ4A | 12,668,012 |
| TI1J | 14,224,848 | K1YR | 5,743,854 | GJ6UW | 10,995,216 |
| FYØP | 13,054,368 | K1NG | 5,651,265 | OHØAM | 10,492,220 |
| 8P9X | 13,019,028 | N3RS | 5,474,560 | OL8A | 9,651,293 |
| LZ9A | 12,685,140 | KA1GG | 4,995,220 | OK5R | 9,548,293 |
| Multi-Operator Multi-Transmitter | | Multi-Operator Multi-Transmitter | | Multi-Operator Multi-Transmitter | |
| PJ1B | 48,985,200 | W3LPL | 15,026,970 | LX7A | 26,578,978 |
| ZW5B | 35,830,544 | N2RM | 11,681,488 | RB8M | 19,598,840 |
| VP9AD | 32,003,945 | NB1H | 11,623,745 | IU3A | 15,596,691 |
| LX7A | 26,578,978 | K2TR | 11,559,808 | YT2A | 15,514,674 |
| RB8M | 19,598,840 | N5AU | 11,029,846 | OZ9EDR | 9,446,073 |
| LY2ZZ | 18,272,552 | K5NA/2 | 9,255,843 | UP1BZO | 7,256,860 |



The team at 8P9X used this fabulous location with a view of the Caribbean and Atlantic to finish in fifth place in the world in the Multi-Single category.

DX QRM

Only two operators and a broken rotator made it tough! ... 8P9X. Great to log on PC this year. Some great runs of JA's ... CF1IDX. How about moving the magnetic pole further south for next contest? ... VE5GF. First contest. Couldn't believe after 36 hours a W6 worked JA and said Thx for new multiplier ... VE7GFC. Imagine the heartbreak of losing power for 12 hours Sunday ... 6Y5X. Suffered lightning strike of 300 foot radio tower, power went out, used car battery and TS-430 for one hour until AC came back. QRN on 160 was 50 over 9 most of time ... V47QQ. JT on 40 meters ... PJ8T. It is really fun and exciting ... BY5RA. We contacted Antarctica station for first time ... BY4AY.

DXers or Contesters? We don't know yet what we were! Viva CQ WW DX re koump'aro!! ... 5B4ES. I Love Contest ... JA6YJS. ZM2A was first special contest call sign issued in New Zealand. We used broadcast antenna on low bands ... ZM2A. Having to deal with newcomers in the hobby. Club station operators having multiple contacts with us ... DX1CW. First experience of our team in multi/single contest. We were in deep Amazonian forest using a generator. Big mosquito pile-up!! ... FYØP. Condx had been expected good prior to the contest, but due to unexpected flare, it was not that good ... JA8SCD. What a shame! I slept two hours during good condx time ... JA8RUZ. Certainly enjoyed contesting with a good sleep on both days, but I wish I could not sleep for 48 hours ... JA8RWU.

Very nice contest ... JA6BIF. Forty meter condx is not so good; could not get a USA station ... JA6WW. I took part in WW test for the first time ... JG4DDN/5. Too much QRM because of good propagation ... JA3XOG. American phone band is very heavy QRM from JA recently. It's BC and jamming sigs ... JA2BAY. Condition was not so good, but I'm happy to meet many stations ... JR2AGL. I have not worked CNØA and V44QQ and conditions to EU and AF was not good in midnight time on CQ WW contest ... JA1USO. A lot of fun. Many thanks to US CQ ... JH1LBR. Thanks you very much for a nice contest. I really enjoyed it ... JR1IJV. Thank you, I enjoyed this contest ... JH1NBN.

The condx is not so good as last year ... JF1SEK. A disaster from start to finish, but still good fun ... GUØUCI. Biggest thrill: watching the clouds and our beam sail over the QTH at 100 mph ... E12VNO. A very fine contest, indeed. Condx better than usual ... LA3T. Bad propagation on Sunday ... IM8A. Propagation good, wx lousy; 100 mph winds damaged our LF antennas but fortunately we had some backup ... GJ6UW. Great signals from JA and USA. First day not very good on 10 meters but incredible the second!! See you next year ... IP4T. This is our first official participation in the WW DX. Betty, F6IOC, our YL operator, discovered HF contesting and had a lot of fun while managing pileups. We'll strike again next year ... F6BGC.

A contest team is a lot more than the sum of the operators; it is a lot of fun, joy, sensations, and astonishment you can share with friends having the same passion for contesting ... ON6NL. Liked the combination of nice DX and hotel by owner OE5NMM and crew ... OE5XGN. It was big fun to be on the air with a brand new call for the first time; each country worked was a new one ... OE2XEL. Antenna rotor didn't turn well. We had to turn 3-element 40 meter with a nylon wire. FB condx

BAND-BY-BAND BREAKDOWN—TOP ALL BAND SCORES

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

WORLD TOP SINGLE OPERATOR, ALL BAND

| Station | 160 | 80 | 40 | 20 | 15 | 10 |
|----------|---------|-----------|-----------|------------|------------|-------------|
| EABRCT | 21/7/21 | 99/14/52 | 388/18/64 | 1451/26/80 | 884/22/103 | 3060/30/112 |
| Z32X | 73/6/31 | 296/18/61 | 433/24/68 | 1248/30/86 | 845/29/93 | 2570/33/99 |
| VP5T | 94/7/15 | 373/8/25 | 550/17/54 | 1024/21/74 | 1578/28/88 | 2067/22/81 |
| YJ0R | 3/2/3 | 34/5/10 | 224/20/32 | 908/31/72 | 2121/31/84 | 2171/32/84 |
| VP2EXX | 11/4/8 | 102/8/21 | 303/12/42 | 785/30/88 | 571/28/91 | 3342/31/107 |
| N2NT | 14/5/12 | 117/15/56 | 180/21/71 | 472/33/110 | 834/30/111 | 1457/33/117 |
| KN0E/KH3 | 41/8/28 | 292/19/23 | 553/26/44 | 525/30/62 | 993/33/70 | 1450/29/62 |
| VE2ZP | 13/1/3 | 99/6/8 | 390/12/50 | 1032/29/92 | 1020/25/74 | 2195/24/91 |
| K3TUP | 15/6/10 | 67/12/40 | 99/16/56 | 677/34/122 | 553/34/107 | 1448/34/127 |
| WR6R/KH6 | 7/2/3 | 98/9/10 | 592/21/40 | 443/26/60 | 797/30/69 | 2503/31/68 |

WORLD TOP MULTI-OPERATOR, SINGLE TRANSMITTER

| Station | 160 | 80 | 40 | 20 | 15 | 10 |
|---------|-----------|-----------|------------|-------------|-------------|-------------|
| P48V | 39/9/21 | 227/13/48 | 668/23/83 | 2738/35/138 | 1996/32/129 | 3460/31/123 |
| PJ9W | 20/9/18 | 112/15/7 | 708/26/93 | 322/3/132 | 1477/32/125 | 3104/31/122 |
| TI1J | 12/6/11 | 252/16/43 | 710/26/87 | 1862/35/131 | 2258/37/131 | 3181/35/138 |
| FY0P | 17/6/12 | 147/14/58 | 319/23/79 | 1365/32/121 | 1969/32/113 | 3026/35/121 |
| 8P9X | 40/8/23 | 164/11/54 | 393/20/88 | 2455/32/115 | 2323/35/110 | 2776/32/110 |
| LZ9A | 110/11/51 | 92/19/77 | 671/35/117 | 1619/39/153 | 1355/38/140 | 2204/38/127 |

WORLD TOP MULTI-OPERATOR, MULTI-TRANSMITTER

| Station | 160 | 80 | 40 | 20 | 15 | 10 |
|---------|------------|------------|-------------|-------------|-------------|-------------|
| PJ1B | 457/12/37 | 973/19/75 | 2019/30/121 | 4707/40/186 | 4305/37/167 | 5714/37/178 |
| ZW5B | 65/14/27 | 156/22/44 | 1306/34/120 | 3362/40/172 | 43/2/40/178 | 4463/39/169 |
| V9AD | 486/14/31 | 1219/18/74 | 1749/29/100 | 5420/40/146 | 4260/37/149 | 3315/34/129 |
| I X7A | 655/7/57 | 1884/18/93 | 2409/34/121 | 3537/40/166 | 3190/39/157 | 3272/37/157 |
| R88M | 1527/13/42 | 911/22/72 | 1507/34/120 | 2523/38/145 | 3013/39/145 | 2415/36/118 |
| LY2ZZ | 686/8/48 | 617/19/74 | 1140/33/117 | 3194/40/148 | 2324/39/143 | 2155/36/127 |

with USA on 10 meters . . . HB9H. Our first attempt in M-S category after our M-M EU record. It was harder this year . . . OL8A. It was really a great pleasure to operate the contest with dipoles and vertical antennas . . . F6HLC.

Only licensed since February '89. Our first contest and we loved it . . . ON4AAQ. Lost our 20 meter ant in 80 mph gale . . . GW8GT. Didn't know a score like this was possible with 100 watts and modest antennas . . . IK0NWD. Biggest thrill: Being called by BY and not realizing it, off back of the beam . . . G0CCH. Station nearly closed down due to telephone interference . . . GM3PXK. Much fun as always . . . LY2WW. Trx nice contest . . . UQ1GXJ. QRP Multi-op station . . . UBAVWA. Computer crashed, voice crashed, but a great contest . . . AL7FQ. More aluminum, more power, more contacts next year . . . 8P6SH. More fun when back home in zone 2 . . . VO2AC/1. Had a blast after a ten year layoff with my old HW-101 and portable whip antenna . . . WA6UJE/VE2.

XL3 was my 25th different Canadian prefix in 25 years in radio . . . XL3XN (ex-VE3GCO). Still trying to figure out what I did wrong. . . VE3RMM/2. Glad to be back after 8 years . . . VE6LB. Started just to play around, but then got hooked . . . TI2KX. The best contest in the best hobby . . . HI8LC. Prepared for a month, but then I had a fever on Thursday, so didn't do as well as expected . . . YS1MAE. Used only low power, but feel good about my first contest . . . 6D2KB. I hope more XE stations will participate . . . XE2HWH. Hurricane Hugo made me work using just a vertical . . . KP4CZ. Used battery power part of the contest . . . WP4QOB. The calypso band next door "jammed" all night, so being on the air didn't bother them . . . J88/W9NSZ.

Due to the hurricane, setting up at KP2A was just like field day . . . KP2A (Opr. KW8N). Enjoyed the contest very much. Hope to be in the multi-band category next year . . . UB5WE. Super contest again, but no new countries for me . . . UA2EC. Nice to work with the new Lithuanian prefix. LY was used before 1940 . . . LY2ZA. I am 15, and have been in radio since 1986. . . UA0OGS. Great fun! Except from when the quad fell down, when the power supply failed, when the transmitter went on strike, and when my newly developed Macintosh computer system didn't work—but I'll be back next year . . . OZ1ADL/P. Again a lot of new DXCC countries and a lot of fun . . . PA3ELD. First time I used a beam, worked quite nice, now only need antenna for 40/80/160 . . . PA3EMN.

My 41st CQ WW. Here's to next year . . . GM3BCL. Propagation—what's that? . . . TF3CW. My first contest . . . SM3SJN. CEPT rules make it impossible to get an LX call for foreigners. LX—is not a competitive

USA TOP SINGLE OPERATOR, ALL BAND

| Station | 160 | 80 | 40 | 20 | 15 | 10 |
|---------|---------|-----------|-----------|------------|------------|-------------|
| N2NT | 14/5/12 | 117/15/56 | 180/21/71 | 472/33/110 | 834/30/111 | 1457/33/117 |
| K3TUP | 15/6/10 | 67/12/40 | 99/15/56 | 677/34/122 | 553/34/107 | 1448/34/127 |
| N6BV/1 | 10/5/8 | 102/13/49 | 110/17/58 | 528/34/108 | 524/33/109 | 1486/32/119 |
| K300 | 15/5/10 | 117/13/58 | 100/14/48 | 361/30/94 | 671/35/109 | 1476/33/132 |
| K320 | 18/6/12 | 84/11/46 | 87/17/56 | 522/35/105 | 565/32/102 | 1375/31/104 |
| K1DG | 18/8/15 | 115/15/48 | 103/18/62 | 502/33/108 | 544/30/97 | 1209/29/117 |
| K5ZD/3 | 16/7/12 | 57/12/38 | 111/17/61 | 430/36/106 | 754/32/117 | 1050/34/122 |
| N2LT | 7/4/5 | 58/8/36 | 96/18/55 | 590/35/116 | 499/28/95 | 1222/33/126 |
| W3BN | 14/7/12 | 84/12/39 | 150/20/60 | 714/34/106 | 633/31/84 | 922/31/108 |
| K1RU | 11/4/8 | 46/10/33 | 111/21/63 | 527/34/106 | 646/31/105 | 1091/31/124 |

USA TOP MULTI-OPERATOR, SINGLE TRANSMITTER

| Station | 160 | 80 | 40 | 20 | 15 | 10 |
|---------|---------|-----------|-----------|------------|------------|-------------|
| K59K | 16/9/15 | 43/16/42 | 146/29/92 | 838/39/142 | 558/40/133 | 1282/34/150 |
| N4RJ | 20/7/14 | 54/15/45 | 85/24/77 | 828/36/133 | 714/36/139 | 1156/34/146 |
| K1YR | 10/5/9 | 69/14/52 | 99/24/82 | 845/38/154 | 467/36/138 | 1224/31/155 |
| K1NG | 12/7/9 | 86/16/70 | 123/26/83 | 963/39/159 | 498/37/136 | 928/34/146 |
| N3RS | 14/6/11 | 72/16/58 | 146/23/76 | 655/40/154 | 510/38/142 | 1098/34/154 |
| KA1GG | 10/4/9 | 124/12/59 | 111/22/75 | 430/37/121 | 579/31/125 | 1273/33/131 |

USA TOP MULTI-OPERATOR, MULTI-TRANSMITTER

| Station | 160 | 80 | 40 | 20 | 15 | 10 |
|---------|----------|-----------|------------|-------------|-------------|-------------|
| W3LPL | 72/10/21 | 353/19/77 | 425/29/100 | 1313/40/177 | 1572/38/161 | 2326/36/170 |
| N2RM | 62/9/19 | 234/17/71 | 207/21/75 | 1078/38/155 | 1494/39/149 | 2173/35/163 |
| NB1H | 13/6/9 | 216/16/66 | 254/24/88 | 1254/40/164 | 2142/39/149 | 1252/33/157 |
| K2TR | 50/7/13 | 286/15/73 | 285/26/91 | 1133/39/164 | 1503/37/159 | 1680/35/173 |
| N5AU | 27/9/20 | 108/19/56 | 254/29/97 | 1338/39/163 | 1417/39/159 | 1620/34/159 |
| K5NA/2 | 56/5/11 | 320/17/78 | 200/23/82 | 1205/40/162 | 1008/34/138 | 1425/35/158 |

call! . . . LX/ON4AMT. What about a class for those without big-power amplifiers? Too little power to get a QSO on 80–40 meters! . . . LA4YW. I can't work the Sunday 29 October—elections in Spain . . . EA1BFZ. Conditions fair despite disturbed conditions—shared time between contest and house redecoration . . . EI9FK. My first contest. I hope that this log was correct . . . FD1NEP. Top band must be quoted in megahertz and not any more in meters . . . F6AOJ.

First time I did 10 meters monoband. It was absolutely great! See you in 1990 . . . DF0DX. Our only problem was to find right directions because we had forgotten our compass at home. We'll be back next year. See you then . . . OH6YF/OH0. 100 mph winds caused havoc throughout southern part of U.K. during whole weekend. My tower was no higher than 35 feet! Tree came down at back! Lost 80 meter sloper and 160 wire. Standby Butternut HF2V looked like a boomerang . . . GW4BLE. To be rare one in Europe makes it hard to work DX 3 point QSOs through EU pile-up! Great contest! . . . ZB2X. Fine contest, as usual, with good conditions and a full band . . . OK1ABP. A long time I call stations from the USA on 80 meters, but they did not copy me . . . OK3IAG.

Had a minor problem with the equipment . . . OH1MD. Well, everything was quite OK until the amplifier broke on Sunday morning . . . OH1MDR. You should give me some extra points due to the strong aurora . . . OH6JW. It was a fantastic although trying event . . . SP2EWQ. Murphy hit us hard and fast this year. I got stuck in a traffic jam on the highway, losing almost all Saturday . . . YU1PQ!. 48 hours is too much for a single op! . . . I4FYF. First time up two nights calling like crazy. 40 meter band is terrible—too many kilowatts dancing on the air. But I am happy with the antenna, a full-size 40 meter vertical 5 meters above the ground . . . IN3ZNR. It was funny working W and VE stations on 80 meters using split without a second VFO . . . OE4BKU.

Heard my first BY since being licensed in 1971, but I couldn't turn my beam off of stateside . . . SV0AB. Need a "T" filter. My two-year-old son spilled tea on nearly completed check log! . . . SV0GM/5. Putting HV3SJ on the air in the contest was a tremendous thrill . . . HV3SJ(Opr. N6AR). Hard but enjoyable . . . PT2TD. Missed my trusty old 10 meter band . . . CE6EZ. Band openings around the clock allowed a fairly good score despite antenna shortcomings . . . CW8B. After 12 years of silence I'm back in the contest . . . YV4YC. I blew the house fuses and needed to buy some; unfortunately the police stopped me in my hurry . . . YV5LIX. Very few stations worked from NA, SA, and AF . . . AP2NK. A lot harder from East Africa than it was from OA8V in Peru . . . 5Z4FO.

Twenty-five hours of operation on 160 meters for worst results ever . . . ZS6BCR. Where were all the 75 meter big guns from the East Coast of the USA? . . . AH6JR. With over 4000 QSOs, not a single VK or ZL . . . EL2CX(Opr. K3RV). Just had a few minutes to make these QSOs before leaving New Caledonia . . . FK0AW. DX conditions on 160 meters very poor, but the advantage of 3 point QSOs with Europe were worth the effort . . . IV3PRK/IH9. Many could not copy signals from my 35 watts . . . AT0U. Thunder, lightning, and power outages did not help the score . . . YB3ASQ. (*And just about everyone else from Indonesia had the same comment—ed.*) Many thanks to J37DX, who was pleased to work me . . . ZS6HZ.

USA QRM

Remote transmitters are *not* allowed, why are remote receivers (pkt, spot nets)? All operations should be self-contained . . . W2HPF. Over 100 countries on one band in a contest for the first time . . . N2UN. Ten meters was great! First try at using K1EA—Love it! . . . KQ2O. First time K1EA. All that technology and no JA on 10 . . . WB3FIZ. Police burst through shack door at 2 AM local in response to neighbor's report of unusual activity . . . AA4LH. Too bad our professors didn't realize the significance of this weekend. We could have put a lot more time in . . . W5AC. Propagation wasn't very good, couldn't run Europeans . . . N6MB. Fun watching my 9-year-old son (KC6CNV) run 90 JAs in an hour in his first attempt at contesting . . . W6TMD.

We aren't there yet! . . . W19L. The bands were open all over the world—it was a lot of fun . . . KV5E. Never called CQ—just joined in the pile-ups . . . WK5K. Enjoyed the test . . . KG5EG. First contest—much fun . . . AA5HR. Sure miss my hilltop QTH in NM . . . K13L/5. Quit early last year to upgrade and it helped this year . . . KG5SX. Heard lots of folks talking about the great propagation, but it sure was not here . . . W5CWQ. First and maybe last contest, as I woke up my wife at 3 AM saying 5904 over and over . . . N5NMX. First time contest and can't wait till next contest . . . N5ERC. Heard/missed 5 zones and 12 countries . . . KC5AC. Was going to work all band but 10 was too hot to leave . . . N5HB. Having BY4AA answer my CQ . . . NA4M/5.

Another great test—keep it up . . . WB5UDX. Be sure to sked fantastic propagation for next year . . . KG5VK. Another good contest . . . W5FO. Spent a lot of time listening and calling but 80 was wrong band . . . WB5YLT. Hearing my friend N6AR from HV3SJ . . . W7CB/6. Had to take down 80 meter dipole in wind before it wrecked tower . . . KE6ZE. Thanks for a fun contest . . . W1FEA/6. Conditions weren't as good as last year but still doubled my score . . . K16ZH. After returning from a Halloween party, I operated for about an hour in a bunny suit but no help . . . KG6AO. Working all those new countries . . . WX6G. Really disappointing prop . . . KB6GV. Never heard BY so loud on 80 . . . K6JG. Licensed on July 5, 1989—great contest . . . N6VMS.

Earthquake 7.1 plus S-9 noise tough conditions . . . WA6CTA. Amp problems/computer program crapped out—lucky I have a sense of humor . . . KM4MF/6. No thrills just fun . . . K6DMN. Main rig 930 went out 6 minutes before test; lost day getting auxiliary set up . . . N6BP. Band condx were fair for this sunspot peak . . . W6OVO. The ham in Hawaii arguing for 1 minute with a ham in Ohio about what zone Ohio is in . . . N6UGR. Worked a few new band countries . . . WB6ITM. Had a high SWR. Had to take antenna down during contest . . . KB6PIQ. This was my first contest—lots of fun. I enjoyed beaming around the world . . . N6BN. Having Europeans tell me I sounded like east coast . . . K6SVL. First station worked was BY4SZ. Had potato bug bite me in foot . . . KJ6GO.

A thrill to work over 100 countries on 10 . . . WX6M. Prop not as good on 10 as last year . . . WB6MBF. Was overwhelmed by the number of hams congratulating me for surviving the big San Francisco earthquake . . . W6BIP. My first CQ WW contest . . . KC6ESL. Still operating in the garage—very cold . . . WA6TKT. Licensed on 10/3, on air 10/15, on contest 10/28, love it . . . N6WLF. My first contest, got some nice DX . . . KC6BZO. I didn't get to work the entire period as the XYL had other plans . . . N6TPT. At 82 just making it through another contest is the challenge . . . W6OK. Conditions were terrible 40 meters . . . N6RJ. Conditions were again not good for the phone weekend . . . K5KT/6. Band down this year (7 MHz) . . . K6HAM.

Terrible conditions . . . W6RJ. Software worked great! Had excellent time despite 20 over 9 QRN both nights on 160, 80, and 40. QSO totals too low . . . K7RI. Kept waiting for the bands to open to EU, but the runs just weren't there . . . NN7L. It was great seeing 10 meters open—both days! Thanks for another good contest . . . KC7UO. Sure wish there was a rule that all stations must ID after each QSO! . . . KS7T. QRM I can work. It's QRN I hate! . . . NY7T. With help, got my two-element quad up about one hour before the contest began . . . WA7FAB. Working a new

country on both 80 and 40 despite poor antenna for those bands . . . W7GUR. Fabulous European opening and African openings to west coast—best in 30 years! . . . KC7DB. Four China QSOs? Wow! . . . N7ENU.

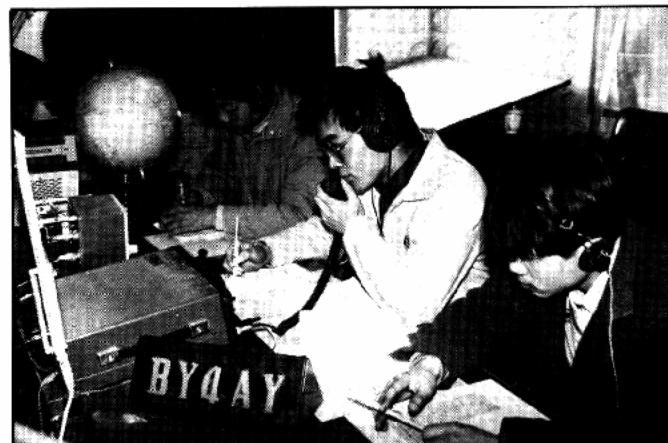
Good condx. As usual—fun! . . . KA6V/7. Good contest. Band conditions were pretty good . . . W7QN. My XYL, N7KOV, kept the rig all to herself Saturday to boost her country total . . . KR7L. Working musician at night and a football fanatic during the weekends, but love this contest . . . N7LOX. The most fun you can have without laughing! . . . W7WHY. Great to be back after 6 years of inactivity . . . KD7C. Working J37DX after a 4 hour chase . . . WA7TUX. A solar flare a day keeps the good scores away—blah! . . . K7LZJ. As usual, roaring pile-ups on double multipliers Sunday . . . W7TJ. Computer logged for first time. Thank you, K1EA. It was a pleasure to have the logs done ½ hour after the contest. Condx over the pole stunk . . . K7LXC.

Condx were great. Where were zones 34 and 39? . . . NQ7M. Could sure use a good computer logging program! . . . NW7Q. Exceptional band conditions. Never intended to enter contest, but condx remarkable . . . WY7U. First contest submittal since winning for W7 all bands in 1959. Looking forward to next year . . . W7UPF. Hurricane Hugo cancelled my VP2MBA operation . . . W7FP. Rotor broken, spare broken, amp stuck in xmit, neighbor called about TVI, a great contest anyway! . . . AG7J. Stayed home because of business at last moment. Look for me in 1990 from a DX spot . . . WB7RFA. Watching OM Bill "twitch" when he knew I was calling in a pile-up . . . KB7RF.

Glad to finally have all equipment work all weekend. First time for computer logging—fantastic . . . WB3KKX/8. Never heard the bands so crowded! Just couldn't get a decent run started . . . KC8JH. Ten meter condx great, but 80 meters not so great . . . KD8KX. Bad polar path propagation into USSR. Only worked six QSOs in zones 16–19 combined! . . . N8AGU. Thrill was to break pileups with just 100 watts . . . WA8MEM. Finally nailed a JT1 in contest . . . W8YGR. Just looking for new band countries and prefixes. Thanks to all for QSOs . . . WA8YTM. Conditions way down from 1988. Score just 25% of previous year (3.5 MHz) . . . W8CD/8. Did anybody work any VNs or TFs on 10? Ouch! . . . N8FEH.

Do I get three extra multipliers for working the neighbor's three touch lights? . . . WG8M. Footswitch failed 1800Z Sunday and mike not wired for VOX, touched two wires together to TX rest of contest . . . K3ZJ/8. Had fun. Looking forward to next year . . . KA8VPL. Looking forward to next year's contest. Had a ball this year . . . WA8NDE. Many thanx to WA8OSE for letting me use his station—thanx, Dad! . . . N8JEC. Murphy stayed away from my gear, but managed to strike me with a 20 over 9 toothache! . . . N8EXS. My first ever CQ WW. I'm hooked! Thanks for a great weekend . . . KC8FS. Too bad there is no Novice category. This score was accomplished using only 28.3 to 28.5 MHz! . . . KB8HZE.

Who said verticals don't hear well? I heard lots of noise with the best of them! . . . WR8K. Working 100 countries in a weekend was great . . . KF8K. Ten meter DXCC in 9.5 hours! Was it worth it? You bet! . . . W0AIH/9(Opr. N0BSH). First time using K1EA software but my computer outsmarted me. It reset UTC for Daylight Savings to Standard time on Sunday morning! . . . W0ZV. 22K for my first test, look for more next year . . . KB0ENE. Eight new countries, 600 points more than last year



The fellows at the youth club (average age of 17) in Shanghai, China put BY4AY on for the CQ WW for the first time. They say they will be back with higher power and better antennas next year.

on a tougher band . . . **WB0YWO**. After 11 yrs a ham, worked my first KH8. Thanks for the new one . . . **KK9G**. Antenna stuck in south direction . . . **WD9FEN**. Bad band conditions . . . **KA9JOL**. Beating my last year's score . . . **KD9HT**.

Biggest thrill was on Saturday evening when TL8SC called on the back of my beam while I was working JAs! . . . **KD0ZR**. Completed WAZ by working Mongolia (zone 23)—**JT1KAI** . . . **K9YNF**. Contacts made. Probably highest score made in contest. Didn't use full time . . . **W9TNZ**. First contest for me (licensed 9/89). Should have separate awards for Novices. Surprised to get through pile-ups with 80 watts! . . . **W9YB** (*Opr. KA3VCJ*). First contest since being licensed this year. Great condx. Looking to break 100K next year . . . **N9ITX**. First contest that I ever worked 100-plus countries on 10 meters . . . **W19H**. First contest! . . . **WA9GON**. For 34 years I have always wondered what percentage operators tune up the band vs. tune down . . . **W9GXR**.

Good contest conditions on higher bands . . . **K0TLM**. Great contest! Ten meter condx to 9-land were super . . . **K9MDO**. Great idea—single op unlimited. Give us true single ops a chance! . . . **WE9R**. I forgot how great barefoot was on 10 meters! Best pile-up busted was calling **6W7OG** in French and getting right through! . . . **WB9JKI**. I was still putting up antennas after the contest started . . . **AD7G/0**. International communication creates fun and good will! . . . **NY0R**. Less than 10 hours of op time—still enjoyed . . . **W0OSK**. Line noise, bad amplifier problem, QRM! This may be my last contest—until next year . . . **N4CC/9**. Lost good op time to go to Packer game, but they won so that's OK . . . **N9ICH**.

Lousy band condx plus equipment trouble plus family emergency equals a poor contest in 89! . . . **W0BWJ**. Many stations identify their calls poorly and not often enough! . . . **W0ACT**. My first contest effort and it was very difficult to log any contacts until Saturday afternoon . . . **KA9HDN**. Never worked so hard only to be thwarted by the almighty solar monster! . . . **K4VX/0** (*Opr. W00G*). Nice country array . . . **W0LC**. Rain and lightning all weekend. Could only operate half the contest . . . **KB0G**. Should have put up that extra 10 foot section . . . **KK9L**. Terrible conditions on 80! . . . **AC0S**. Thanks to **W0AIH** for use of the aluminum! . . . **W0AIH/9** (*Opr. KB9S*). This is the greatest of all contests! . . . **WB0GFV**.

When 10 meters pops, it really pops. Sometimes I couldn't find anyone on 20 meters! . . . **N19C**. Where was Europe on 14 MHz on Sunday? . . . **K9CAN**. With all the openings on 10 and 15 we did not see as much this year on 40 . . . **KV0Q**. Worked 5 new countries . . . **K9BQL/0**. Worked TF3CW for new one . . . **N9ACD**. Worked zone 19 last for WAZ . . . **KB9AIT**. You know the band (10 meters) is in good shape when you work all continents in 1½ hours barefoot to a vertical! . . . **W9LYN**. Fantastic conditions. . . **AK1A**. Was on my way to best score ever, when laryngitis stole my voice after 20 hours. Spent rest of contest in search and pounce mode, hitting voice keyer buttons. . . **K1VR**.

Happiness is being called out to work 45 minutes into contest. Darn it! . . . **KC8PE/1**. Great fun! 10 meters was hot! . . . **KC1EO**. Big decision which spot to work next . . . **K1GW**. Having packet really slows down the QSO rate, but oh what multipliers! . . . **AD1C**. Working over 100 countries on 10 meters. . . **KA1MDG**. Computer logging and packet make phone more fun! I nominate K1EA for CQ Contest Hall of Fame . . .

W2GD. Finally got my QSO-to-TVI complaint ratio to below 200 to 1. Broke 1 Meg for first time . . . **WB2K**. My personal all-time top score—twice more than I ever made! . . . **N2VW**. Kudos to the excellent YCCC PacketCluster. Single Op Unlimited is a great category . . . **WG2E**.

Ten meters fun. Be a lot more fun without unusual prefixes . . . **KB2XL**. Finding ZS8MI high up in the band on 20 meters and working him for a new country . . . **WM2D**. Hearing the DX packet callouts come out on the voice repeater with a synthesized voice. Hi! . . . **K3RL**. Just one year after the heart transplant and my score increased by a multiplier of 17X! . . . **NU3Y**. First contest from home QTH. It was great fun and conditions were great! . . . **KA3PLS**. My wife putting up with me and fielding some TVI complaints from a neighbor . . . **KB4NJ**. Ten, 15, 20 were just wonderful, but 40 and 80 were disappointing here . . . **K4PR**. **XYL** (**KB4SSS**) has Quad on 20-15-10 so I used vertical . . . **K4DLI**.

Only 7.7 hours of operation. Worked 100 countries on 10 meters in 5.2 hours! . . . **WB4QNP**. The new Single Op. Unlimited mode has put a mega-dose of fun into contesting for the average ham. I love it! . . . **KD5GD**. Winds to 45 mph, all kinds of QRN. Winds quit at 0030—30 minutes after test over! . . . **K6EID**. K1EA software was a lifesaver . . . **N6SRT**. Although I wasn't serious, Murphy still came in the form of 60 mph wind blowing down 10 meter vertical. He sure knows how to spoil the smallest of efforts! . . . **N6TIB**. First DX contest ever! It helped that I upgraded from Tech to Advanced the previous weekend . . . **KC4IRP/6**. Beating N6RO in a pileup. Working 9M8XX in last 4 seconds of contest . . . **KA6ING**. Wow! Lots of fun with PacketCluster and K1EA software. Thanks for new category . . . **K13V/7**.

My Heathkit equipment of 21 years still getting me through my 21st CQ WW contest! . . . **K2MFY**. Lots of fun to work 46 countries on 10 meters with a dipole inside my apartment! . . . **WA2OJK**. Nothing blew up! . . . **K2SWZ**. My first contest; been ham 4 months! . . . **KB2HZI**. My first contest, age 14! . . . **KB2HNY**. First try with K1EA program. My fingers hurt for the first time in a phone contest! . . . **N2BA**. It's a completely different contest for the mobile op! . . . **N2KW**. CQ WW—What a contest!! (apologies to Yakov Smirnoff) . . . **K7TD**. Using K1EA and computer for the first time! . . . **W3BGN**. Having YI1BGD call me! . . . **W2AX/1**. Where did KP2A learn to talk so fast? . . . **W1HUE**. Murphy strikes! Blew two amps! . . . **KS1L**. My wife would like to request that the contest not be held the weekend prior to Halloween. It interferes with parties! . . . **N3GMG**.

STATION OPERATORS Multi-Op Single Transmitter

A35VB: OH2BGO, OH2VB, AA4LH & WA4NAT, AA4NC & AA4GA, AH2BE/KH9: AH2BE, N8BJQ, **AK1L** & KA1FBY, KA1MI, KA1X, **AZ4F**: LU1JH, LU1FOW, LU1JRL, LU2FID, LU2FYA, LU4FDV, LU6FN, LU7FL, LU9FFU, **BY1PK**: BZ1AA, BZ1AB, BZ1AI, BZ1AJ, BZ1AL, BZ1FB, BZ1HAM, **BY1SK**: Gong Ke Ou, Chen-Wang, Li Yan (YL), **BY4A**: BZ2AA, BZ2AYL, BZ4CC, BZ4CD, BY1SZ: Zhang Dong, Zhaic-Jiren, Shen Qinlin, Wang Xiao Ru, Lihua Xing, Cai Yan, Zhu Yan, Wu Zhi Yuan, **BY5HZ**: Li Hong, Liang Li, Feng Xin Shan, Han Ye, Xian Yin, **BY5QA**: Lian Huan, Liu Hui-Lu, Wu Xiao-Yi, Chen-Yin, Tan-Zhang, **BY5RA**: Sali Bao, Zhonghan Cai, Huqiang Cheng, Wei Huai Hou, Lan Lin, Shaowen Lin, Minghui Shi, Chaoping Wang, Zhixian Wang, Dawei Zhang, Ye Zhang, **C30EEA**: C31LDN, F6FNL, F610A, FD1LM, FD6ITD, CS3FW & CS3FV, **CE2AA**: CE2BMM, CE2EN, CE2EPB, CE2FT, CE2HXK, CE2HN, CE2NHW, CE2W0, CE3SV, **CE4MW** & CE4PB, CE4PBG, **CF1DX**: VE1ARW, VE1AWZ, VE1BIG, VE1B1G, VE1BUN, VE1BZO, VE1CIT, VE1DX, VE10FR, VE1UA, **CU3URA**: CU3AA, NM5M, **DFMCBG**: DB2IR, DB7UU, DD9UD, DF2AO, DF2AQ, DH0IAY, DK9UV, DL1AIC.

DFBRN: DK1IT, DL3YQJ, DL5JO, **DF1RR**: DJ0GK, DK6QI, DL4FT, DL7AEN, DL7AKC, DL7ALM, DL7ANR, DL7APU, DL7OD, DL7ON, DL7PV, DL7RT, DL7SI, **DL1HT** & DL1EFD, **DK6NP** & **DF4RD**, DL3NCI, **DK8IN**: Club, DLKBNM & DJ7IK, DK9ZT, DL1FC7, **DL1NDAS** & **DK4DX**, DK9OL, **DL3NBL** & **DL6NA**, DL8NCG, **DL9RL**: DE8AN, DJ1VJ, DL2AZ, **DL9WH**: DF6IH, DF7IT, DK8IT, **DX1A**: DU1AHS, DU1AU, DU1SAN, DU1SW, DU1TDY, **DX1CW**: DU1COP, DU1CWJ, DU1CWO, DU1CW7, DU1CWY, DU1DSP, DU1EAA, DU1ECR, DU1EFS, **FA1TAED**, 4F1AOC, 4F1ARC, 4F1ASM, 4F1BYN, 4F1CJC, 4F1CRU, 4F1DMB, 4F1DMD, 4F1EBC, 4F1FZ, **EAT1MC** & **EAT1AX**, **EAT1AGE**, **EAT3EZD**: EA3TZ, EA3CCN, EA3EBN, EA3EZD, **EA6FD** & **EA6FB**, EA6QB, **E01SML**: EA1EV0, EA1EVR, **E03N**: EA3IN, EA3CI, EA3DMN, **E03DD**: EA3WB, EA3BX, EA3DGQ, **E06WD5**: EA5ESE, EA5EVG, EA5FYI, **ED7WV**: EA7D0V, EA7GTG, EA7GTF, **EI2VNO** & **NN5O**, **F6BGC** & **F6BNH**, F6IOC, **F6LHH** & **F6D1H**, **F61OB**, FF10AZ, **FF2LY**: F1JFT, F1JPJ, F6CUD, F6DKJ, F6DQX, **FF5KK**: F6HHU, FD1LMW, FD1MWA, **FF6KPQ**: F6CTS, F6DZD, F6ETI, F6IPW, FB1LWX, F11AEH, F11HMB, F11HEE.

FV9DX: EA9E, F6BBJ, F6BEE, F6CTT, F6HSV, F5JBL, **FY1P**: F1DUX, F1LGQ, F6AOI, F6AUS, F6BFH, F6BUM, F6FVY, F9IE, FY5AN, **G3SZA** & **AA6MC**, G8LKH, **G8CSR**: G1CY, G4XWK, G6GFF, GM1JJY, **GJ5UW**: G3CQV, G3JML, G3XTT, G3ZAY, G4AZN, G4BUO, G4DSE, G4JVG, G6IBI, G3JYHU, G4J1CD, GM3YOR, **GM3PKM**: B64LDU, GM4WQO, GM4ZGU, GM0ARD, GM0EGI, GM0LR, GM0LYM, **GM4AGG/P**: GM3CIX, GM4NUN, GM0EFH, GM0FHJ, GM0GMO, GM0HNV, **GM0IZS**: GM0FKP, GM0JFH, GM0KV1, GM0RJX, **GU1JCI** & **GU7CQN**, **GW8GT**: 5B4LP, 5B4MF, G3OAY, G9KVB, G9W3KYA, GW3NWS, GW4IGR, GW4J3B, GW4TTU, GW5WF, GW6ZUO, **GW8MAW**, **HAK3GC**: HA3FT, HA3HV, HA3HA, HA3IW, HA3HK, HA3IB, **HA3KNA**: HA3NS, HA3NU, HA3OU, HA3OV, **HAK5DB**: HA5MY, HA5KQ, HA5BBC, **HAK5KB**: HA5DA, HA5KB, HA5NK, HA5NG, HA5BIE, JA7JBF, **HAK6KNX**: Jozsef, Zsolt, Nandor, **HAKCK**: HA8DT, HA8DZ, HA8EK, HA8FT, HA8FW, HA8KH, **H89AGC** & **H89AIC**, HB9AJM, HB9ALM, **HB9H**: HB9BLQ, HB9CAT, HB9CIP, HB9CXZ, HB9DD0, HB9STI, HB9STL, HB9YC, Emanuele, **HC2T**: HC2AGT, HC2BZ, HC2AI, Neza, HC2AS, HC2PC, HC2LZ, **HD1S**: HA1TJ, HA1DA, HA1SV, HA1AL, HA1DAC, HA1AH, HA1TD, **HG4P**: HA4WQ, HA4XH, HA4XZ, HA4ZD, HA4WZ, HA8LKK, Tibi.

HG5A: HASAWH, HA5BNL, HA5FM, HA5GF, HA5IW, HA5LN, HA5MK, HA5ML, HA5OM, HA5UA, HA5WE, HA7RY, **HG5C**: HA1AG, HA3OS, HA5MO, HA5G, HA5WU, HA7AD, HA7SB, HA7XQ, HA8UB, **HG6N**: HA6ND, HA6NF, HA6NQ, HA6NY, HA6ON, HA6Q, HA6PX, **HG8X**: HA8DU, HA8LC, HA8LO, HA8MK, HA8MM, HA8NNN, **HI3UD**: HI3JMP, HI3LFE, HI3LRR, HI3MBO, HI3NIE, HI3NMU, **HI9UD**: HI3AMF, HI3ARQ, **HI2AB**: DU1CSU, K1BVM, WB4CVH, **IKN8WD** & **IKN8WE**, IT9LCM, **IM8A**: IBBYG, IBEZW, IBIYW, I8KPV, I8QLS, I8ULL, I8UZA, IK8DOI, IK8DUR, IK8ETA, IK8HVH, **I09JKY** & **IT9BCC**.



Here's the gang from multi-op HI3UD. Standing left to right are HI3LRR, HI3JMP, and HI3NIE. In front are HI3LFE and HI3MBO.

I9FTN, I9LJM, I9MUO, I9YXO. **IP4:** I2EOW, I2ZKJ, I2VXJ, I4JHY, I4UFH, I4USC, I4YSS, IK2BKK, IK2FGL, IK4IEI, IK2CFH. **IQ4:** I4VEQ, I4LCK, I4S2O, I4IND, I4IKW, I4TJE, I4EAT, I4RNL, I4YWR, I4LEC, I4KCFZ, I4KNPD, I4KEWK, I4KGKM, I4WANY, I4V3W& / I43DXW, I4V3HWT, **I4FGM:** I4FGG, I4JEE, I4RXB, I4XNN, I4KDC, I4KJW, I4K4NOQ, I4KNOT, **JA1YXK:** JA1IST, J4SSBN, J4H0WG, JH7JVR, J01VVT, JQ1VN, J4UPJ. **JA1YXP:** J61TNX, J4ZDQH, J1UTP, JO1JZ, J01SBZ, J1PSMR, JQ1UXN, J51DR, JS1NN. **JA2YDC:** JE2EZD, Fushimi, S. Hirooka, Y. Kimata, Y. Mogi, A. Moroto, K. Torai, K. Uno. **JA3YBF:** JJ3IMX, JJ3KGS, J03VUZ, J4FUF, J64CLV. **JA4YJA:** JJ3LJU, JM3ILK, J03GPL, JF4BVU, JF6BLP, Genzo. **JA5YAP:** JL3DUU, JL3UUU, JF4XYI, JR5FHC, JR5RSQ, JR5VMR. **JA6YBR:** JEGWME, JF1DEA, JF1DHS, JGGNRR, J6BRRB, J16RDX, JR6GKT.

J4YCL: JE6EKC, JF4CZL. **J4YJJS:** JF4ETK, JG4SVN, JI6KYX, JM2RWM, JQ3BAM, JS1PWV.
J4YAA: JE7HL, JE7JZC, JE8AWL, JH0RWR, JX3CNL. **J4YAJA:** JE6NSE, JH9WER, JK2OWL, JN3CQB, JR9DKU, JR9HIX, Yutaka Kawakami. **J4YAK:** JE7GVO, JH8VYG, JR6DUM, JS1PTU, JT1ED, JH8RGJ, JR8HYT, JR0FOU, JE0FMT, JG7JMO, JK2PVL, JE0DUA, JR6EMM, JR9KPO, Yamakura. **J4BZHY:** PI1GO, PI1NOM, JR8TGT, JR8SXK, JH5XDD, JI2VAN, JN1JVA, JI1HGL. **J3EZFS:** JK3HZH, JI3CMC, J03NZW. **JH1YDT:** J01IDB, Hidekazu Naguchi. **JH1YHS:** JF1MIA, JR7GGO, Yoshida. **JH8YCT:** JE8BFO, JE8RAH, JE8URM, JF7LGH, JR8GPT, JR8WLI, JR8XWU. **JJ3YBB:** JA3AHL, JA3FHL, JA3PJJL, JE3TXA, JH3F0P, JH3UHG. **JR7YFCM/7:** JAT7ZT, JE7WOR, JF7KWM, JF7RDN, JG7LBD, JH7NPF, JR7PC, JR7RXV, JR7WFC. **J1TKAI:** J. Ceden-Ish, B. Zaisan-Baror, J. Sukhe, S. Dortsalam. **JT1:** JT1BV, JT1BX, JT1-183, JT1-210. **K1U & K2DSX, NS11. K1NG & K1UO, KB1EM, K1IG, Kim, K1TD & K1KI, K1XA, KA1CI, KA1JNR, KA1VC, N01K, NJ2L. K1YR & K1CC, KA1ION, KB1WH, N1GK, K20R & KA80DT, N2HBW, NV2Z, NW2K, WA2DKJ. **K3ANS & K2BPP, K3YD. K3IV0:** KA3SCY, K3YDX, KA4RHS, N2GAR, N3CQB, NN30, WA3ZR, WB8VGJ, W3IP.**

K5BDA & **W5PWG**, **WE5P**, **K5RVK** & **K5GN**, **N5EA**, **NR5M**, **WS4SP**, **WA9VLI**, **KUUSH** & **NGRSZ**, **K6ZM** & **C3EAO**, **K8AZ** & **K8BL**, **K8NZ**, **KQBM**, **N8ATR**, **NDMM**, **WT8C**, **WT8F**, **KBCS** & **A8O1**, **KB8U**, **N0FVG**, **W8TN**, **W8TK**, **KAR16** & **K1J7**, **KC10H**, **NTA18**, **N1ZE**, **W1KM**, **K1A0FC** & **K1MP1**, **KC1LN**, **KA1X** & **A1K1**, **KA1FBY**, **KA1MI**, **K3DI** & **NV3V**, **NG1W**, **N3FZB**, **K5DX** & **W05W**, **KCBLX** & **KQ0NS**, **KD9MF** & **KASJAZ**, **K9VPI**, Crissara, **KE4QL** & **N4NSL**, **WD4Z**, **KE6WL** & **KD6NT**, **KFH** & **KZ0C**, **WD0EW**, **K01F** & **K1PR**, **K1XM**, **K020** & **K28K**, **KHBB** & **AF9T**, **K0II**, **KJ0B**, **N8BL**, **N8BKL**, **WJBM**, **KS9K** & **K9CJ**, **K9GS**, **N8AU**, **N8AW**, **N8GNQ**, **N8HJ**, **N1U9**, **NK9I**, **N0F9**, **W9RN**, **KU2C** & **KB2HZ**, **K2E6H**, **KY20**, **N2GST**, **WA2MKM**, **KX6L1** & **KX6GL**, **KX6HE**, **KX6LS**. **L1H**: **LA2MV**, **LA5NM**, **LA6EDA**, **LA6VDA**, **LA9NGA**, **LA9PEA**. **L1T**: **LA3CX**, **LA4BQ**, **LA6OV**. **L3T**: **LA5QFA**, **LA5SFA**, **LA5W3A**, **LA60EA**, **LA7SP**. **LT5F**: **UF5CI**, **UF5FIC**, **UF5HN**, **LU1KFR** & **LU1FTC**, **LU2F**. **LY1BYK**: Club. **LY18ZB**: **LY2BBF**, **LY2BFK**, **LY2BLA**, **LY28N**, **UP2-438-2518**, **UP2-438-1157**, **UP2-038-2528**. **LY1BZR**: **LY3BFL**, Club. **LY2WW**: **LY1BA**, **LY2BIJ**, **LY2BKW**, **LY2BRP**, **LY2PX**.

L1Z1KBG: Dimitar, Ivan, Rusan **L1Z1KKR:** L1-C-53, L1WL **L1Z1KNP & L1-N-143:** L1-Z-N-151.
L1Z1KSP: Maria, L1-E-229, L1Z1C1, L1Z1W1 **L1Z1KXA:** L1B1B, L1Z1HA, L1Z1HK, L1Z1O, L1Z3Z, L1-A-1154,
L1-Z-1159. **L1Z9A:** SV3SJ, L2ZCC, L2ZPO, L2ZDF, L2ZHE, L2ZII, L2ZUA, L2ZSC, L2ZKK, L2ZPS, L2ZDD,
L2ZBE, L2CTC, L1NNG, L2ZTT, L2ZXA, L2-Z-E-41, L1Z-E-72. **NL7KJ & NL7BJ, NL7KE:** N2SS & W2GMA.
N2UN & A6ARX: N3ARK & K3E1, K3B3M, N3BNA & K0DCN. **N3RS & WA3V0X:** N3RS & K02M, WB3KTX,
N4QWL & A84MG: KC4HNS, KC4LB, WA2GYM, WF2G, N4RJ & K3JT, KM9P, N4NX, W8ZF, **N6MB &**
WA6IET. **NR6D & K6TMB:** W6GGG, W6ZSN, WB6OKK. **NR70 & K2C7GX:** N7MMH, W7EKM, WA7ZWG,
WB7CLU. **N9BBNG & K0ET:** KA8JYV, KA8YFN, KB8LC, K0D8C, KS0T, VE3KRP, VE3M0E. **N0ICI & K0J8HG:**
N0ILS & N0IOS. **N0ZA & NN0M:** NC3C & N3DXY. **NF6S & KF6VU:** N6SKF. **NK7U & KG6LF:** KH6WZ,
N7GPO, NI7T. **N07F & K7GWK:** KF7DO, NH7GJ. **N1UPB & K8VM:** K0VZR, N0SM, NC0O, W0IZ, W0WP,
WE0M. **O2EXEL:** O2D2VL, O02EJN, O02GEN, O02LCM, O02MON, O02SCM, O02VEL. **DE5XGN:** O3GEA,
O05VBL. **OH4AB & OH4EA:** OH4YR, OH4NGW, OH4MLX, CH4TY.

OH5NQ: OH5K5S, OH5NW, OH5TS, OH5XL. **OH9AR:** OH9KK, OH9MBS, OH9MV, OH9RJ. **DH0AM:** OH1EH, OH1JJ-0H1NOA OH2BV, OH2JA. **OK1KJA:** OK1AJN, OK1FGC. **OK1KNC:** OK1FWQ, OL3BUF. **OK1KNR:** Club. **OK1KD0:** Club. **OK1KP0:** OK1D0Y, OK1DXJ, OK1JO, OK1JPY. **OK1KQJ:** OK1AYP, OK1AZG, OK1BV, OK1DXS, OK1IMP, OK1RR. **OK1OFM:** Club. **OK2KBA:** Club. **OK2KDS:** Club. **OK2KHD:** Club. **OK2KJU:** Club. **OK2KMR & OK2BQJ:** OK2BQZ, OK2-30624. **OK2KOD:** OK2BHM, OK2WAZ. **OK2KV:** Club. **OK2KYC:** Club. **OK2RA8:** OK2PDK, OK2PEM, OK2HBY. **OK3KGX:** Club. **OK3SK3:** Club. **OK3KUN:** Club. **OK5R:** OK1ADM, OK1ADS, OK1ALW, OK1AWZ, OK1DIM, OK1RI. **OL4A:** OK1AEZ, OK1CF, OK1JB, OK1JKT, OK1TA, OK1TN, OK1WT, OK1ZED. **OL8A:** OK2PZW, OK3CBU, OK3CDV, OK3CZM, OK3EA, OK3GI, OK3JW, OK3LA, OK3LU, OK3LZ, OK3NA, OK3PC, OK3TAP, OK3TM, OK3YEC, OL8CLU. **ON4AAQ &** ON4AFZ, ON4EJ, DN6UL, ON6VK. **ON6AH/A & ON5AV:** ON5IO, ON5MH, ON6OR, ON6VL, DN7PC, DN7ZV. **ON7UN & ON1CGX:** ON6SK, ON7YU, ON74I, ON12403. **07L7R:** Club. **OR5EEC:** CT4ND, DF3TF, ON4KRW, ON56A. **OX10:** OX3CS, OX3ZM. **P48V:** A16V, N6BT, VE7KNI, WA6VEF. **PAB3DHR:** NL10373, NL10594, NL10763, PA3AQL, PA3DHR.

PJB1: K4P1, KN3B, SW3TX, PXW4, PJ9W, CH1TD, OH2BSS, OH4RH, OH4SE, OH4TH, OH4RW, OH4ON, OH5BM, OH6RM, OH6RI, OH6NU, OH6MW, OH6FT, OH6XY, **R0C**: UW0CA, UW8CN, UW0CW, UW0CA, UA0CDX, UW0CJ, **RB4EXN**: Valo, D., Sheremet, I., Koloda, R., **RB4IWM**: Nick, Alexey, Alexander, **RC6GWS**: Soji, Viktor, Katarzyna, **RL1P**: UL7PAVE, UL7PCZ, RL8PY, UL7PL, RL7PHL, **RU7WU**: U02-037-83, U02-037-116, U02GIG, U02GOD, U02GWP, Boris, **SK20G**: SM2FCG, SM2LYI, SM2NNX, SM20DB, SM2S2M, **SMB2GM** & **SM0ATN**, **SP1PBW**: SP1AMU, SP1BZZ, SP1MVZ, **SP3KPN**: Club **SP3PLD**: SP3BSO, SP3B1L, **SP4KTO**: Club, **SP8PFI**: Club, **SP9PEY**: SP9CXH, SP9PKQ, SP9HMC, **SP9PEZ** & **SP9OHA**, SP9MRM, **SP9PRO**: Club, **SP9ZHR**: SP9EMI, SP9-4315-KA, TH1J: K1AR, T12KD, TI2LT, A1TQ, **UB2JWS**: Constantin, Igor, Kirill, **UB4SGW**: Alexey, Mikhail, Igor, **UB4IWM**: UB5INT, UB5 073 4328, UB5-073-3793, **UB4IZA**: UB3IBZ, UB5TC, **UB4MWU**: UB5MWMM, RB5MAE, Venja, Oleg, UB4MIU, **UB4QWW**: RB5OW, UB4QW, UB5QLR, UB5-064-866, **UB4TWL**: RB5TN, UB5TBS, UB5-079-2, **UB4WA**: Bessarab, B., Didenko, V., Romanyuk, R., Fomichenko, V., **UB4WZA**: UB5WCX, UB5-068-995, UB5-068-996, UB5-068-997, **UB4WZB**: Alex, Andrej,

U84XW: Club. **U1CTAW:** UC2ABC, UC20HU, UC2CFP. **U1FWC:** Nazarov, T., Tewsdale, D., Keia, A. **U1FTFW:** UF6FUD, UF6FID, UF6FDJ. **U19BWF:** RI8BQ, UI8-053-2173, UI8-053-2175. **U19KWC:** Olimov, Zhuchenko, Dunin, Ptuhin. **UL88WW:** UL78Y, UL78Q, UL78B, UL7-016-389. **UL8CWW:** UL7-028-283, UL7-028-291. **UL8LWA:** UL7LEN, UL7LER, UL7-026-587, UL7-026-623, UL7-026-781. **RL7LWF:** UL8LYA: UL7LEZ, UIW9AR, UL7LEG, ex-RAGXA, UI7-026-177, RA9AY, UW9AK, UI7-026-796, RL7LGC. **UL8RWE:** RL7RCF, RL7RCL. **UL8RWR:** UL7RER, UL7-178-3. **U040XA:** Vad, Vitali, Henry. **UP1BZG:** UP2BCO, UP2BKT, UP2BCW, UP2BTS. **U016XQ:** U02-037-221, U02GTF. **U0BA:** U02GM, R02GM U02GID, U02GKL, Ingus. **U1R1WQ:** Alekseev, S., Poldoja, P., Ignatejev, A. **U1R1WX:** UR2RRR, UR2RJ, UR2RDJ, UR2RH, UR2RNX, UR2RNA, UR2RNT. **UT4UWU:** UT5UDI, UT5UGI, UB5-066-340. **UT5UGR:** Club. **U1IAW0:** UA1-169-2391, UA1-169-848, UA1-169-909. **U21AZW:** Timofeev, A., Onishchenko, E., Dolzenkov, S. **U21TWB:** RA1TE, UA1TFV, UA1UM, UZ3AWR: UV3AFG, RA3ARI, UV3AEV. **UX3DXS:** Muchin, V., Titov, V., Golikov, A. **U3QZWM:** UA3COLJ, UA3QWP, UV300. **UZ3QYA:** UA3-121-1644, UA3-121-1506, Valchenko, A.

U25WAT: Felionov, V., Achkurin, M., Zabelin, M. **U24XAN**: RA4AUG, UA4ARM, RA4AQL **U24WNS**: Alex, Ven, Sergei. **AL 04ZH4Y**: Yuri, Slava. **U24PWN**: RA4PO, RA4PY, UA4-094-1210. **U24SW0**: Club. **U24WBW**: Blinov, N., Saifulin, R., Nekrasov, A., Korotaev, A. **U24WWY**: RW4WR, RW4WZ, UA4WAM. **U26AXS**: UA6AQOA, Bessarab, S., Kiselev, A. **U26HXK**: UA6-108-1838, UA6-108-70, UA6-108-71. **U29CPY**: U9ZXC, UA9-154-2105, U29FZD: Izergin, E., Arsenko, A. **U29QWA**: UA9OFH, UA9-134-274. **U29SWR**: Porubajmekh, V., Ilkaev, R., Umanskij, S., Blinov, S., Lisovoij, S. **U29XWA**: UA9-098-1053, UA9-090-1088, UA9XKU. **U29XWV**: UA9-090-747, UA9-090-1058, UA9XC. **U29XXM**: UA9-090-717, UA9XF, UA9-090-742. **U29YLU**: Club. **U28SWX**: Peter, Andrej, Konstantin. **U29WWP**: RW8WR, UA8WO, UA8WFA. **V47QQ**: K2DOX, W9QO. **VE5GE** & **VE5AE0**: VE5AGA, VE5BCT, VE5ELJ, VE5IC, VE6U0/X13: VE20ZR, VE5DX, VE6UU. **VE7GFC** & **VE7GAS**: VE7GFS, VE7NS. **VE7SZ** & **VE7CC**, VE7IN, VE7ON. **VK2MAG** & **VK2XKE**: Peter. **VK3VT** & **VK3CGH**, VK3BMV, VK3CRA, VK3MZ, VK3CHR, VK3MCV, VK3BY, VK3MDB. **VK9LV**: K1JB, K02EU. **VP9LR** & **DK8FD**, G4OSY, VP9ID, VP9NMA.



Aki, JA5DQH, put rare East Malaysia on in a big way, as he racked up 3.2M at 9M8XX.

X3LCPA: VE3CPA, VE3NJ.M, YU3NS/YU4H, XU3NS/DU&DUBG, W1RAN. **Y3CZN:** Y3ZBN, Y3ZVN, Y3ZWB, Y3ZWB, Y3ZTB, Y4BDDR, Y21XF, Y3TEO, Y5UML, Y5ATO, Y44CO, Y24AO, Y44NO, YT3T, YT3EW, YU3BQ, YU3HP, YU3HR. **YT4D:** YU4AR, YU4LA, 4N4EX, YU4NC, YU4RS-1045, YU4RS-1046, Dejan. **YU3EO:** YU3AI, YU3BM, YU3MM, YU3RN. **ZM2A:** ZL2AGY, ZL2ALP, ZL2AMT, ZL2AVF, ZL2BFG, ZL2BHS, ZL2BLC, ZL2BSW. **ZS4K & ZS40:** ZS4K. **ZT1AA:** PB18G, PP1ZC, PY1YT, **J4FV:** BU51OK, UB5II, RB5IJ, RB5II, UB5-073-1151, RSBU5, UBSIFN, UB5-073-322, UF6VZ. **4N2D:** YT2TL, YT2VM, YU2DZ, YU2FK, Dado, Ivo, Luksa, Mato, Vido. **4N4C:** YU4MA, Jana, Mika, Mukri, Samir, Vachko. **4ZTM:** 4X10M, 4X4YM, 4X6MI, 4X6UT, 4X6UU, 4Z4KM. **5B4ES:** 5B4WN, 5B4WS, 5B4XF, 5B4XN, 5B4YS, Adonis Charalambides, Savvas Georgiou, Yiannis Tolias. **5J6CQ:** HK6BDX, HK6BTC, HK6KKK, HK6LNO, HK6MKK. **6Y5X:** KN5X, WB5N. **8P9X:** K3KG, K4FJ.

Multi-Op Multi-Transmitter

C6A/4FD: N4FD, WB4FLB, WI1UA, **DF2RG** & DF7MV, DF9RB, DG2RCH, DG3DAW, DH5MBB, DJ1QJ, DL1MAJ, DL2AW, DL3MAA, DL5RWB, DL6MAO, DL7MAE, DL8AM, DL9BBR, **DF30G** & **J1FC**, **FS/KC1F**, KC1F1, NA1U, **HB/HB9ADN**, DJ2YE, DH9EW, DK5EZ, DL3EBX, DL6EAG, DL8EAG, **IU3A**, I3MAU, I3EVK, IN3DYQ, I3JSS, I3N, I3FYI, I3KVW, I3GJZ, I3BYT, IV3TJE, **J37DX**: W8KKF, K8CV, WD8MGJ, WD8ATS, NY8E, J39AL, **JAY1FG**: JL1BLW, JN1NO, JG1BMY, J61RUR, JP1JFG, JP10GL, JQ1BRW, JS1MVE3, J38KF, JE7WBI, JH0LE, **JAY2KA**: JG2VTD, JE2VBZ, JK2CZL, JI2KRD, JE4LTK, JE2HPN, JR0IRB, JM2FPO, JK1GRT, JM2RBB, JM2RBC, JK2CKV, JK2MNG, **JAY44Y**: JP1EVO, JK3V0C, JL30YV, JL3NAW, JH3LOU, JQ3GZT, JF4JXS, JG4JYN, JH5NAH, JH5FWA, JR5RCI, F5I4AJ, **JAY7RR**: JA7CEC, JA7FDY, JA7JUD, JA7LYB, JA7MOM, JA70ZW, JA7WSC, JA7VHZ, JH7MEV, JG7JB2, JG6NKV, **JAY9BYA**: JA9LNJ, JA9LJN, JA9NF0, JA9OTX, JA9PPC, JA9VWB, JA9WD4, JHKF19, JHF9VSF, JR0ELG, Hiroshi Fujita, **J2YRD**: JH1EAQ, JE1JKL, JA2IVK, JA2VWG, JA2PHO, JH2BNL, JR2SOU, JF2DQJ, JF2XJE, JI2KWW, JF2OC, JG3JLW, JI3FRV, JI3IGJ, JR90MD, JA9-10148, Noriko, **K2TD** & **WB2YOF**, WB2R, K3GYS, **K2TR** & K2EK, K2XA, K2RD, WB2KMY, WA2SPL, KM3T, N1CC, **K3ZZ** & **WA3EKL**, W3AOE, NM1Z, KN3P, W3HXI, KS3L.

K5NA/2 & KU20, WB2Q, W2JU, KR2J, KY2J, NA2N, KA2TIP, N2AA, K2TW, N2EK, W2RQ, NX2X, N2GOS, KA2YJM, KU2NE, Sherry King. **K8CC & K8AQM, KB8EEC, K8LJ, N8CDA, W8LU, AC8WV, KB8DD, W8UA, WA8RRR, K5GO, WB8VMN, **K9UWA & K9A, K9B, K9AG, K9AS, N9GH, WB8YBI, N9BW, N9BF, K9VFE, N9OH, K9R9, WD9WGA, K9NY, KC7OB & K7ABV, N7AGP, KL7AA: KI7BB, KI7HFO, **KL7RA & KL7XD, AL7CO, AL7IF, AL7HC, AL7AF, NL7V, NL7PH, AAD6X, KL7J & JY4RFH, JK3GAD, KL7HFA, KL7U, NL7GP, NL7HP, NL7MW, NL7RT, WL7TE, KL7HF, KL7P, **KD7N & N9XK, W7L1, W7JR, W7JS, WG7N, K7DBW, WA7TDZ, WA7FXO, KC7EM, AI7W, N57P, **KY1H & AA2Z, WA1ZAM, NT2X, AK4L, K1R1, KT10, KA1RE, KB1WV, NJ1M, NJ1M, **LX7A: DL3LAB, DL4MCF, DL5IC, DL5MAE, DL6FBL, DL6NCY, DL6RA1, DL7AV, DL7MAT, DL8OH, LX11, LX1MK, LX1WW, PA3CEF, PA3DOD, DA1DW, DA1KM, DF2UU, DF3CB, DF3QL, DF7RX, DJ0IP, DJ1AT, DK1FW, DK2OY, DK3GI, DK5WL, DK6WL, DK8MZ, DK9IP, DL1SBR, **LY2WW: LY2BWB, LY2BIG, LY2BLL, LY2BTA, LY2PAJ, RA3QK, **N2RM & WM2H, K2Z5, N2NU, NF2L, KY2T, WA2IUO, N2MR, N3LR & N3JA, NW3B, NSFOB, **N5AU: W5XZ, K5TA, KM5X, NSR5, KS1G, M5TR, KY5N, WB5VZL, WN4KKN, A5B5, WC4E, WB2UL1, WD5N, **N6DX & A6EC, A6D0, WA6OTU, KAG5R, N6DLU, WA7ZTN, W6AE, N6IC, NGVR.********************

N6ND & K9VW, W6YA, N1W6, KJ6YI, NO6I, KT6V, W6NK, JR1CWV, **NB1H & NX1H**, NX1G, N1BL, W1RZ, K1ST, K1FWF, K1MWS, N1ATN, W1HNN, **NE3F & KS3F**, K3WGR, W3AP, K3NW, W8B0CEP, N9AZD, W89PN, W8SLTY, W9SU, WA9NPM, KA9AND, KA9OH, WB9NWF, KT9M, **NO4I & W14R**, KM4HH, **P14EC**, Club, PJ1WB, W3LRL, PJ2MM, A17B, W3U3, N7ZZ, N7ZR, K3EST, N4RY, W7EJ, K2SS, OH2MM, N66, A6GNT, K2SB, PJ9EE, KB2XZ, K4EIN, WR4S, W6VN, W4JVN, **RBBM**: RB4MF, RB4MB, RB4MV, RB5MR, RB5MT, RB5MP, UB5MM, UB3MN, UB4MC, UB5MDA, UB5-059-12, UV6ARS, **SK1UX**, SM8HBV, SM8GZT, SM8NZ, SM8LCB, SM8MRO, SM8NZD, U26LWZ, U4BLV, U5B5JW, U85IBG, UA6-150-1070, UA6-150-1103, UA6-150-1336, UA6-150-1483, UA6-150-1410, **V47K**: K3NZ, K3IPK, WB2P, **VE3XO**: Club, **VE6WP & VE6BBP**, VE6BOS, VE6BRE, **VE7ZZZ**: VE7ARS, VE7AV, VE7DLM, VE7EME, VE7DRS, VE6EZ, VE5FN, VE7FZ, VE7NNN, VE7RK, VE7SK, VE7SS, VE8UX, VE7XYL, **VPSAD & G4CNY**, N2ME, N3AD, N3RD, VP9J1, W3MA, **W3FW & N3EC**, KA3R0F, WA3YOB, **W3GN & K3ND**, W3FV, N2EA, W2NM, KA3PIT, KY3W, **W3LPL & KA1GD**, KC3EK, W3EKT, W3EMH, N3GB, WB3JRU, KX3Q, K3RA, NM3U, WB4DXAM, NW5E, KN5H, NB1II, WAB8MAZ, KD9J, **W3NX & N3NA**, **W1KEA & W1XE**, K9MWDM, KR0U, K1AC, **WB8WTC**

YT2A: YU2RA, YU2OG, YU2DO, YU2MP, YU2QS, YU2EU, YU2MY, YU2AW, YU2WJ, YU2LJ, YU2AJ, YT2FI, YT2GW, YT2HG, YT2LL, YT2LA, YZ2ADM, YU4CW, Club Ops. **ZM2K:** ZL2BKM, ZL2BNJ, ZL4OY, ZL3XJ, ZL2TQ, ZL2TC. **ZW5B:** N5FA, N6AA, N6TJ, N6V1, N6ZZ, OH2BH, PY4OY, PY5CC, PY5EG, W6MKB, W6NV, P5JCY, PY5TT, PY5CA, PY5ZBU, PY5VM, PY5PS. **3D2KH:** W6QC, K6KH, W6MI, N6MDV, N6AXQ. **4U1VIC:** OE1Z7S, DF5B8N, DF1BZ, DF6OC, DK7ZT, DK7ZH.

**WORLD TOP QRPP
(5W Input) All Band**

| | | | |
|-----------|---------|------------|---------|
| 1. YU2TY | 758,523 | 6. WØMHK/1 | 311,576 |
| 2. EA3FBO | 461,472 | 7. HB9ADD | 303,552 |
| 3. KD2TT | 371,968 | 8. WØUO | 297,591 |
| 4. 4M1G | 336,384 | 9. UD6DFF | 253,984 |
| 5. VE1CBF | 331,261 | 10. N4IJ | 244,651 |

Number groups after call letters denote following: Band (A = all), Final Score, Number of QSOs, Zones, and Countries. Certificate winners are listed in boldface.

**SSB RESULTS
SINGLE OPERATOR
NORTH AMERICA**

UNITED STATES

| | | | | | | | | | |
|---------|---------------------------------|---------|-------------------------------|----------|---------------------------------|---------------|------------------------------|-------------|-------------------------------|
| N6BV/1 | A 4,564,755 2760 134 451 | WR26 | " 503,721 612 70 221 | N02D | " 535,068 1142 37 141 | W4TMN | " 264,132 378 63 190 | KG5EG | " 134,596 240 72 137 |
| K10G | " 4,153,380 2491 133 447 | NA2D | " 483,882 602 80 207 | K2MGA | " 139,997 347 36 107 | K4GHF | " 264,008 395 75 169 | A5AHR | " 124,248 274 52 115 |
| K1RU | " 3,954,090 2432 131 447 | WA2UDT | " 430,900 545 77 201 | W2A5AQ | " 41,207 164 19 70 | W2HTI/4 | " 239,134 330 80 186 | W5MW | " 101,916 226 63 108 |
| W1WEF | " 1,914,750 1475 106 344 | W2JGR | " 397,215 523 61 212 | W2G2R | " 16,380 102 21 39 | KM4KJ | " 234,955 369 70 175 | W5BE | " 67,320 140 63 117 |
| W1GIF | " 1,566,226 1186 117 349 | N02D | " 378,084 478 81 213 | K2DUG | " 9,840 63 20 40 | KX4R | " 226,600 389 55 151 | K1L7/5 | " 56,576 161 39 89 |
| K1CLN | " 1,289,972 1155 94 310 | KS2N | " 372,842 476 78 199 | W02M | 7 83,316 279 24 82 | WA4CTC | " 216,812 293 98 180 | KG5VO | " 53,928 156 41 85 |
| K1VDF | " 960,360 1121 73 229 | WA2VQW | " 358,468 509 67 185 | W2SC | " 69,930 225 24 87 | K2ADE/4 | " 216,768 391 49 143 | KG5SX | " 53,176 160 46 90 |
| WF6G/1 | " 799,645 839 81 260 | KF2J0 | " 356,827 527 61 178 | KB2WN | " 6,600 75 14 41 | W4LMJ | " 203,850 337 63 162 | W5EJ | " 52,345 141 48 97 |
| W1B1H | " 351,000 505 63 187 | NW2J | " 351,000 505 63 187 | W2XL | " 924 16 8 13 | W3GW/4 | " 194,936 298 62 174 | W5GSQ | " 12,709 63 22 49 |
| N2M | " 316,336 414 61 195 | WK2H | " 319,744 464 61 195 | W2FCR | 1.8 2,975 47 11 24 | WD4BH | " 165,048 296 52 132 | K5GA | 28 983,433 1808 35 152 |
| KA1UC | " 684,905 670 99 306 | NA2M | " 316,468 404 84 192 | K3TUP | A 4,930,510 2859 136 462 | WKF | " 160,500 265 57 157 | W5VX | " 517,275 1051 36 135 |
| K1TN | " 616,691 631 84 269 | WB2ZMK | " 315,468 404 84 192 | K30D | " 303,033 131 25 65 | W45DTK | " 157,560 293 60 142 | (Op. K5TSO) | |
| W2AX/1 | " 584,415 611 80 253 | KD2B | " 304,584 424 69 190 | K2DE | " 284,928 405 79 177 | N3RC/4 | " 142,884 278 54 135 | K5NW | " 311,688 700 34 122 |
| W1PH | " 555,977 633 82 225 | W2KHO | " 284,928 405 79 177 | KT2D | " 245,700 383 62 177 | K4BAM | " 120,916 252 52 120 | W5CWQ | " 162,288 411 31 107 |
| W1B1H | " 492,800 456 105 293 | W2TZ | " 205,615 359 53 152 | K5ZD/3 | " 4,147,902 2418 138 456 | N4XA2 | " 94,860 254 51 119 | KD9HY/5 | " 155,790 397 27 108 |
| K1JUL | " 484,386 676 64 202 | K2RW | " 199,689 280 72 187 | N03A | " 1,953,150 1581 114 355 | W4WJJ | " 82,804 183 46 117 | N5KEA | " 143,707 393 29 102 |
| N1API | " 422,532 529 72 219 | NA2M | " 187,880 343 51 149 | W3UWU | " 1,87,598 1248 24 395 | N4FVJ | " 79,086 204 47 100 | N5NMX | " 120,950 390 28 90 |
| NK11 | " 420,579 464 87 246 | W2T | " 183,890 338 52 133 | N3B | " 1,578,552 1353 89 319 | KM4MG | " 77,953 204 38 99 | K5LZ0 | " 100,044 278 29 97 |
| W1CB | " 312,930 377 74 231 | W2P | " 170,562 288 60 157 | K3Z | " 1,561,144 1250 100 342 | W5DX | " 63,600 178 31 105 | N5DX | " 63,600 187 31 81 |
| W1FJ | " 300,300 465 60 171 | W2NE | " 136,952 240 68 144 | K30 | " 4,533,543 2740 130 451 | K4AKD | " 72,940 193 38 102 | W3SRUS | " 61,845 234 25 68 |
| K1VS | " 247,020 384 63 187 | W2FUI | " 22,958 267 44 118 | K3ZD | " 4,163,018 2651 132 425 | N4PUV | " 63,048 180 44 98 | N5ERC | " 53,465 221 23 62 |
| W1YV | " 245,518 355 67 199 | W2K | " 21,844 259 45 121 | K4BAM | " 51,246 156 31 86 | W30YE/A/5 | " 51,930 199 24 66 | | |
| W1AX | " 244,024 363 56 180 | W2KWM/M | " 75,397 351 56 176 | K4D/LD/3 | " 49,445 130 52 93 | K5C5AC | " 42,840 186 25 59 | | |
| KA1NDS | " 145,137 247 62 157 | W2T | " 10,858 236 42 121 | K4J | " 39,680 126 40 84 | N5HB | " 30,033 148 21 50 | | |
| N4XR/1 | " 139,644 241 68 164 | W2OP | " 102,992 251 52 105 | K3RNW | " 1,578,552 1353 89 319 | N5ZM | " 130 5 5 5 | | |
| W1HUE | " 53,560 151 39 91 | WB2ZLW | " 10,858 236 42 121 | K3Z | " 1,561,144 1250 100 342 | NA4M/5 | 21 272,553 814 32 109 | | |
| KA1NNI | " 46,320 139 36 84 | W2BZLW | " 10,858 236 42 121 | K3Z | " 1,561,144 1250 100 342 | W5BUOX | " 244,530 596 31 112 | | |
| KB1RB | " 30,975 117 32 73 | WB2LNR | " 85,675 218 40 104 | K3Z | " 1,561,144 1250 100 342 | W5A0YU | " 140,288 444 29 99 | | |
| K1SA | " 20,880 81 23 67 | W2M | " 82,689 222 37 92 | K3Z | " 1,561,144 1250 100 342 | K5FUV | " 138,072 374 31 101 | | |
| W1FV | " 20,592 94 22 56 | W2M | " 77,550 201 39 102 | K3Z | " 1,561,144 1250 100 342 | W5VSI | " 104,013 282 30 97 | | |
| KC1LM | " 15,688 81 22 52 | KA2HTU | " 31,413 112 35 75 | K3Z | " 1,561,144 1250 100 342 | W5SYLI | " 91,072 315 17 6 9 | | |
| K2SX/1 | " 12,854 53 24 40 | W2FB | " 30,504 213 37 87 | K3Z | " 1,561,144 1250 100 342 | KSUR | 1.8 5,040 93 11 29 | | |
| K51L | " 825,727 1585 32 147 | W2UW | " 29,637 116 26 63 | K3Z | " 1,561,144 1250 100 342 | | | | |
| M1TZ | " 323,070 678 31 134 | W2RMX | " 29,637 116 26 63 | K3Z | " 1,561,144 1250 100 342 | | | | |
| K1EFF | " 310,880 673 32 128 | W2S | " 25,194 221 24 90 | K3Z | " 1,561,144 1250 100 342 | | | | |
| W1BWS | " 298,656 575 38 123 | W2X | " 24,310 82 37 73 | K3Z | " 1,561,144 1250 100 342 | | | | |
| NX1P | " 211,211 518 29 114 | W2X | " 31,398 31 17 24 | K3Z | " 1,561,144 1250 100 342 | | | | |
| K51J | " 200,294 501 30 107 | KA2IRO | " 3,748 15 8 | K3Z | " 1,561,144 1250 100 342 | | | | |
| KA1RLI | " 116,112 345 26 92 | KM2P | " 15,308 71 25 61 | K3Z | " 1,561,144 1250 100 342 | | | | |
| KA1OFO | " 66,309 252 24 69 | KD2RD | " 689,653 1442 32 131 | K3Z | " 1,561,144 1250 100 342 | | | | |
| /1 | " 63,308 225 21 77 | W2HG | " 416,465 881 34 129 | WB3FSB | 21 121,278 358 28 95 | K3Z | " 1,561,144 1250 100 342 | | |
| KA2DJH | " 55,120 190 27 77 | KA2EV | " 317,282 870 30 101 | K3Z | " 1,561,144 1250 100 342 | | | | |
| KA1UO | " 42,622 167 23 76 | W2K | " 265,221 660 27 114 | K3Z | " 1,561,144 1250 100 342 | | | | |
| KJUBS | " 29,580 146 15 53 | W2R | " 251,304 595 30 118 | K3Z | " 1,561,144 1250 100 342 | | | | |
| KA1RRX | " 27,097 125 20 59 | W2FXA | " 135,184 343 30 112 | K3Z | " 1,561,144 1250 100 342 | | | | |
| KC1QN | " 21,038 121 16 51 | K2OLG | " 124,200 315 31 107 | K3Z | " 1,561,144 1250 100 342 | | | | |
| WB1EPO | " 14,874 84 17 50 | KA2AWE | " 78,368 178 30 123 | K3Z | " 1,561,144 1250 100 342 | | | | |
| K1ZZJ | " 11,555 76 19 36 | W2BDND | " 3,010 30 20 23 | K3Z | " 1,561,144 1250 100 342 | | | | |
| N13LE/M | " 8,673 67 13 36 | KA2EIK | " 63,308 226 21 77 | K3Z | " 1,561,144 1250 100 342 | | | | |
| N13OE | " 3,526 37 11 25 | WB2HNY | " 51,976 212 22 67 | K3Z | " 1,561,144 1250 100 342 | | | | |
| WB10XD | 21 261,144 773 31 93 | KA2HUN | " 51,744 213 22 63 | K3Z | " 1,561,144 1250 100 342 | | | | |
| W1PLJ | " 6,216 50 13 29 | K2KTT | " 35,952 172 21 63 | K3Z | " 1,561,144 1250 100 342 | | | | |
| KH6CP/1 | " 4 1 1 1 | N2I2J | " 34,936 174 23 65 | K3Z | " 1,561,144 1250 100 342 | | | | |
| W1RR | 14 706,986 1383 39 142 | KA2FDD | " 34,160 150 18 62 | K3Z | " 1,561,144 1250 100 342 | | | | |
| N8RA/1 | " 266,850 646 35 115 | KA2CUF | " 27,068 147 20 47 | K3Z | " 1,561,144 1250 100 342 | | | | |
| N1ENN | " 229,252 621 35 113 | KA2JTW | " 23,800 135 17 53 | K3Z | " 1,561,144 1250 100 342 | | | | |
| AA1M | " 12,786 80 17 40 | KA2BZI | " 22,043 126 21 46 | K3Z | " 1,561,144 1250 100 342 | | | | |
| N2NT | A 5,403,200 3074 137 477 | KA2WEI | " 20,130 117 16 45 | K3Z | " 1,561,144 1250 100 342 | | | | |
| N2LT | 4,014,080 2482 126 434 | W2AOKJ | " 16,956 113 20 34 | K3Z | " 1,561,144 1250 100 342 | | | | |
| K2DM | 3,437,252 2268 121 401 | W2KZB | " 12,870 80 19 46 | K3Z | " 1,561,144 1250 100 342 | | | | |
| N2BA | " 2,535,636 1703 123 40 | W2KZB | " 7,826 62 11 34 | K4MF | " 505,720 652 63 206 | K3Z | " 1,561,144 1250 100 342 | | |
| W1GD/2 | " 1,768,452 1219 116 402 | W2KZB | " 3,686 38 11 27 | W4FOT | " 497,777 549 83 246 | K3Z | " 1,561,144 1250 100 342 | | |
| K2PS | " 1,316,252 1135 101 305 | KB2HXR | " 3,686 38 11 27 | W4FOT | " 488,180 580 90 218 | K3Z | " 1,561,144 1250 100 342 | | |
| K2PH | " 1,145,538 982 102 312 | K2MK | " 3,286 36 8 23 | KM4EX | " 1,058,229 975 98 288 | K3Z | " 1,561,144 1250 100 342 | | |
| KF20 | " 952,632 867 91 302 | W2L | " 1,050 18 6 15 | W4WKO | " 952,258 897 92 290 | K3Z | " 1,561,144 1250 100 342 | | |
| K2JLA | " 763,656 732 98 278 | KA2DT | " 1,008 17 8 13 | W4WKO | " 695,299 727 88 253 | K3Z | " 1,561,144 1250 100 342 | | |
| K2FL | " 723,168 720 98 281 | N2JNZ | " 507 13 3 10 | KA4XU | " 508,958 660 73 218 | K3Z | " 1,561,144 1250 100 342 | | |
| KU2YP | " 696,397 670 93 278 | N2GZ | " 21 697,463 1412 36 133 | W4JNS | " 505,720 652 63 206 | K3Z | " 1,561,144 1250 100 342 | | |
| KB2EMU | " 640,710 83 68 202 | N2BP | " 30,086 497,664 1059 127 | WA4KJ | " 505,720 652 63 206 | K3Z | " 1,561,144 1250 100 342 | | |
| K2BFR | " 615,020 678 83 239 | W210L | " 101,152 324 26 83 | KJ4TI | " 505,720 652 63 206 | K3Z | " 1,561,144 1250 100 342 | | |
| N2WK | " 583,080 626 90 249 | W2ACYO | " 84,750 262 28 85 | W4CVX | " 505,720 652 63 206 | K3Z | " 1,561,144 1250 100 342 | | |
| WA2C | " 551,922 568 96 261 | K2HFX | 14 604,945 1151 39 148 | KJ4FW | " 505,720 652 63 206 | K3Z | " 1,561,144 1250 100 342 | | |

| | | | | | | | | | | |
|----------|--------|-----------|------|-----|--------|---------------|---------|-----------|--------|---------|
| W60K | 38,456 | 156 | 26 | 62 | K3ZJ/8 | 28 | 806,140 | 1656 | 34 136 | |
| N6RJ | 7 | 34,560 | 142 | 24 | 66 | N6FH | " | 218,822 | 540 | 31 111 |
| K5KT/6 | " | 9,760 | 63 | 19 | 42 | K5CFS | " | 128,528 | 419 | 23 85 |
| K6HAM | " | 7,900 | 63 | 17 | 33 | KF8BT | " | 112,190 | 303 | 29 101 |
| W6RJC | 3.8 | 30,848 | 253 | 21 | 43 | N8MK | " | 38,732 | 153 | 21 71 |
| N6UC | " | 2,652 | 32 | 14 | 20 | KB8HZE | " | 28,196 | 133 | 21 55 |
| K7RI | A | 2,302,005 | 1958 | 119 | 296 | KA8VPL | " | 14,300 | 114 | 17 27 |
| NN7L | " | 1,955,764 | 1679 | 123 | 289 | N8JS | " | 6,864 | 50 | 17 31 |
| N7TT | " | 1,398,495 | 1257 | 121 | 278 | N8JHG | " | 2,550 | 29 | 14 20 |
| WZ7J | " | 829,440 | 831 | 102 | 258 | N8JEC | 21 | 299,094 | 681 | 34 124 |
| KC7UO | " | 585,090 | 623 | 98 | 232 | WB8M | " | 239,294 | 583 | 33 113 |
| WE7B | " | 550,401 | 783 | 88 | 183 | KF8K | " | 127,140 | 344 | 30 100 |
| WG7A | " | 426,591 | 548 | 89 | 190 | N8EXS | " | 63,896 | 244 | 20 78 |
| KS7T | " | 421,344 | 691 | 70 | 161 | K8RWL | " | 44,462 | 161 | 26 68 |
| NY7T | " | 342,771 | 568 | 80 | 141 | KAKUH | 14 | 19,710 | 96 | 18 55 |
| WA7FAB | " | 342,500 | 499 | 89 | 185 | WA8NDE | " | 16,660 | 100 | 20 48 |
| KA7MKX | " | 335,616 | 526 | 62 | 166 | AB8C | 7 | 44,778 | 162 | 25 77 |
| W7LGG | " | 328,890 | 424 | 76 | 209 | WB8SMS | " | | | |
| NB7N | " | 305,760 | 591 | 73 | 122 | /8 | " | 11,842 | 78 | 17 45 |
| KC7UP | " | 254,740 | 401 | 74 | 161 | WB8D/8 | 3.8 | 16,043 | 130 | 17 44 |
| KA7EQS | " | 253,800 | 459 | 68 | 132 | (Opn. WB8UV2) | " | | | |
| W7HS | " | 250,640 | 376 | 83 | 158 | WR8K | " | 1,474 | 30 | 9 13 |
| NN7F | " | 240,870 | 404 | 73 | 149 | | | | | |
| N7MJZ | " | 214,564 | 469 | 61 | 133 | W9RE | A | 3,215,696 | 1875 | 142 462 |
| W7GUR | " | 214,011 | 326 | 78 | 159 | K9CAN | " | 948,703 | 782 | 115 318 |
| K7RA | " | 210,987 | 378 | 63 | 134 | WE9R | " | 940,104 | 839 | 109 287 |
| K7GEX | " | 186,375 | 320 | 74 | 139 | WE9V | " | 866,980 | 935 | 88 246 |
| W7XN | " | 178,976 | 273 | 79 | 158 | WG9XR | " | 725,460 | 800 | 82 239 |
| KC7DB | " | 177,552 | 306 | 69 | 147 | WG9B | " | 652,422 | 676 | 94 260 |
| KC7FV | " | 173,505 | 293 | 66 | 149 | WG9P | " | 594,088 | 685 | 69 245 |
| WC7S | " | 164,116 | 420 | 70 | 108 | AF9Y | " | 583,176 | 558 | 109 267 |
| N7ENU | " | 154,440 | 303 | 70 | 110 | KB8C/9 | " | 543,576 | 560 | 96 252 |
| KA7IGE | " | 145,296 | 344 | 51 | 93 | KA9YMV | " | 505,404 | 601 | 85 218 |
| N7IRR | " | 136,396 | 297 | 53 | 119 | K9UQN | " | 359,805 | 510 | 64 188 |
| WK7Z | " | 125,400 | 213 | 73 | 147 | KA9JUL | " | 325,759 | 438 | 81 188 |
| WB7NRC | " | 115,731 | 241 | 68 | 99 | N9NS | " | 313,052 | 447 | 69 175 |
| KA6V/7 | " | 104,940 | 235 | 55 | 104 | KD9HT | " | 310,566 | 420 | 69 202 |
| WT7ON | " | 92,757 | 228 | 46 | 101 | NG9L | " | 278,822 | 457 | 57 161 |
| KR7L | " | 89,224 | 211 | 55 | 97 | W9CA | " | 267,032 | 414 | 62 170 |
| WA7BAY | " | 84,384 | 212 | 52 | 92 | NI9C | " | 231,352 | 370 | 65 174 |
| N7LOX | " | 76,342 | 209 | 51 | 82 | KB9AIT | " | 167,090 | 280 | 75 142 |
| W7WHY | " | 64,024 | 158 | 57 | 94 | N9NS | " | 157,248 | 267 | 69 155 |
| KC7OO | " | 60,192 | 167 | 48 | 84 | K9LJN | " | 109,705 | 222 | 55 130 |
| W7IIT | " | 59,826 | 178 | 48 | 70 | W9TNZ | " | 72,068 | 159 | 68 104 |
| N7ER | " | 59,228 | 155 | 49 | 85 | N9CUL | " | 62,338 | 150 | 51 91 |
| N7JAM | " | 54,560 | 163 | 46 | 78 | WD9GGY | " | 47,880 | 139 | 44 89 |
| K7WA | " | 38,190 | 123 | 33 | 81 | WB9FEN | " | 39,380 | 128 | 37 73 |
| WA7IM | " | 29,216 | 118 | 32 | 56 | WB9WNO | " | 37,504 | 118 | 41 87 |
| WA7UVJ | " | 24,642 | 118 | 29 | 45 | WA9ZSO | " | 29,505 | 104 | 34 71 |
| W7VH | " | 16,860 | 92 | 28 | 40 | N9ACD | " | 18,928 | 76 | 29 62 |
| WC7Q | " | 15,400 | 75 | 28 | 49 | KA9HDN | " | 18,040 | 80 | 24 58 |
| KD7C | " | 4,300 | 32 | 21 | 29 | W9LYN | " | 16,235 | 78 | 33 52 |
| WA7TUX | " | 4,240 | 56 | 17 | 23 | KA9NNI | " | 15,288 | 64 | 32 52 |
| N7BUX | 28 | 628,075 | 1234 | 34 | 141 | W9VCV | " | 5,828 | 34 | 28 34 |
| K7IDX | " | 444,467 | 1333 | 35 | 122 | WB8IH/9 | 28 | 793,507 | 1532 | 33 146 |
| NW7Q | " | 318,096 | 815 | 31 | 113 | (Opn. NBB8H) | " | | | |
| K7HBN | " | 247,142 | 654 | 31 | 108 | KK9A | " | 549,524 | 1191 | 34 124 |
| N07M | " | 132,360 | 379 | 32 | 88 | K9MD0 | " | 313,678 | 764 | 31 111 |
| W7AYF | " | 86,208 | 319 | 27 | 69 | WA8CDY | " | 290,070 | 632 | 33 132 |
| KB7IRF | " | 74,336 | 258 | 26 | 75 | KK9G | " | 240,660 | 597 | 34 106 |
| K7SE | " | 70,902 | 246 | 27 | 74 | W9H | " | 196,185 | 418 | 33 132 |
| W7KKR | " | 64,952 | 257 | 28 | 64 | W9YYG | " | 160,962 | 408 | 34 105 |
| N7CTY | " | 59,280 | 259 | 21 | 59 | WB9JKI | " | 140,622 | 356 | 29 109 |
| KE7GL | " | 46,410 | 216 | 24 | 54 | N9HMZ | " | 58,480 | 231 | 26 60 |
| KO7I | " | 44,895 | 215 | 23 | 50 | N9ICH | " | 47,047 | 186 | 22 69 |
| KX7J | " | 42,210 | 196 | 25 | 65 | WD9HID | " | 36,265 | 103 | 21 102 |
| WB7VUB | " | 34,124 | 162 | 26 | 50 | W9YB | " | 32,058 | 150 | 19 59 |
| WY7U | " | 33,943 | 139 | 27 | 64 | (Opn. KA3VCJ) | " | | | |
| N07O | " | 26,296 | 137 | 22 | 54 | W9NWY | " | 18,957 | 94 | 19 52 |
| N7KSX | " | 25,179 | 127 | 25 | 52 | WA9GUN | " | 18,601 | 74 | 26 63 |
| N7MVX | " | 17,836 | 127 | 15 | 37 | K9CRY | " | 11,960 | 107 | 16 36 |
| N7KOV | " | 5,310 | 48 | 20 | 25 | WD9GRL | " | 10,140 | 60 | 18 47 |
| W7WA | 21 | 842,710 | 1760 | 36 | 127 | N4CC/9 | 21 | 322,410 | 716 | 36 129 |
| WB7RFA | " | 726,204 | 1731 | 33 | 113 | K9JD | " | 107,950 | 301 | 27 100 |
| K7LR | " | 600,300 | 1420 | 35 | 115 | N9AT | " | 70,278 | 245 | 27 75 |
| K7LXC | " | 514,514 | 1167 | 35 | 119 | WB9CXV | " | 40,630 | 175 | 22 63 |
| W7TJ | " | 274,720 | 604 | 36 | 124 | N9RD | 14 | 283,500 | 652 | 37 125 |
| K7LJZ | " | 179,425 | 482 | 33 | 101 | K9CLO | " | 154,290 | 405 | 36 103 |
| W7FP | " | 89,930 | 294 | 31 | 84 | K9YNF | " | 91,125 | 257 | 30 95 |
| W7UPF | " | 89,784 | 315 | 29 | 87 | K9KL | " | 89,798 | 265 | 30 88 |
| AG7J | " | 31,773 | 131 | 23 | 66 | W9GIL | " | 78,988 | 228 | 34 90 |
| KE7V | 14 | 235,490 | 587 | 36 | 111 | W9CH | 7 | 21,904 | 110 | 20 54 |
| KM7E | " | 225,060 | 689 | 33 | 99 | K4VX/B | A | 3,115,200 | 1877 | 152 438 |
| N7NKG | " | 27,324 | 163 | 19 | 50 | (Opn. WB8G) | " | | | |
| N7RK | 7 | 6,783 | 53 | 18 | 33 | WB8IZV | " | 243,397 | 430 | 61 142 |
| NABV | A | 2,837,423 | 1981 | 124 | 379 | N2IC/B | " | 3,061,852 | 2017 | 138 391 |
| WB8KXX/B | " | 2,097,525 | 1527 | 115 | 370 | K9RF | " | 2,278,647 | 1828 | 140 301 |
| K8MR | " | 1,887,918 | 1325 | 122 | 376 | N9AT | " | 851,004 | 776 | 104 292 |
| W8TWA | " | 1,428,742 | 1189 | 111 | 316 | K9BG | " | 617,419 | 554 | 108 299 |
| KC8JH | " | 669,984 | 724 | 89 | 247 | K9BQL/0 | " | 562,224 | 641 | 87 225 |
| N8ESB | " | 520,478 | 584 | 93 | 236 | KM8L | " | 474,418 | 543 | 93 236 |
| KD8KX | " | 514,485 | 603 | 90 | 219 | WB8PPF | " | 360,680 | 555 | 70 184 |
| W8UPH | " | 385,910 | 530 | 67 | 192 | WB8AM | " | 200,736 | 350 | 61 143 |
| NR8Z | " | 364,752 | 486 | 79 | 193 | K9GT | " | 345,100 | 357 | 111 239 |
| WD8EOL | " | 296,401 | 411 | 71 | 192 | NS0B | " | 326,241 | 430 | 80 201 |
| N8AGU | " | 289,476 | 409 | 73 | 185 | KJ0K | " | 253,152 | 421 | 74 142 |
| WB8MEM | " | 257,730 | 395 | 63 | 179 | AD7G/0 | " | 246,568 | 397 | 71 167 |
| K8TMK | " | 242,780 | 353 | 70 | 174 | WB8PPF | " | 220,248 | 352 | 65 163 |
| KABWAS | " | 210,512 | 326 | 63 | 173 | K9BAM | " | 200,736 | 350 | 61 143 |
| KE8KG | " | 145,147 | 299 | 50 | 123 | K9BHE | " | 112,190 | 303 | 66 149 |
| N8AHA | " | 116,056 | 249 | 48 | 115 | WB8IEL | " | 164,600 | 303 | 66 134 |
| W8YGR | " | 96,333 | 183 | 61 | 136 | WB8OUI | " | 125,160 | 329 | 44 96 |
| W8BYTM | " | 58,650 | 138 | 47 | 103 | WB8OUI | " | 120,927 | 261 | 52 121 |
| N8LCI | " | 57,584 | 160 | 41 | 91 | WB8SK | " | 110,080 | 232 | 54 118 |
| WB8OK | " | 19,995 | 83 | 39 | 25 | WB8ZPP | " | 90,888 | 205 | 52 116 |
| W8IDM | " | 2,176 | 25 | 13 | 19 | N8BH | " | 84,952 | 173 | 48 116 |
| N8KTU | " | 1,632 | 23 | 7 | 17 | WM8G | " | 69,452 | 171 | 64 115 |

| WORLD SINGLE OPERATOR UNLIMITED All Band | | | | | | | | | |
|---|------|--------|---------|------|----|----|-----------|----------|-----------|
| 1. YT3AA | | | | | | | 5,756,932 | 6. W2GD | 2,522,290 |
| 2. K1ZM/2 | | | | | | | 4,043,592 | 7. KE3Q | 2,335,325 |
| 3. AA1K/3 | | | | | | | 3,444,575 | 8. AG1C | 2,026,500 |
| 4. K3WW | | | | | | | 3,051,528 | 9. AD3V | 1,909,321 |
| 5. AK1A | | | | | | | 2,734,920 | 10. K1VR | 1,867,621 |
| DOMINICAN REPUBLIC | | | | | | | | | |
| JP1DMX | /HIB | 28 | 192,160 | 1074 | 20 | 60 | EL2CX | 21 | 2,242,968 |
| WA8DCB | | 36,366 | 154 | 37</ | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|-------|-----------|------|-----|--------|----------|---------|---------|------|-----|---------|----------------|---------|---------|------|-----|--------|----------|---------|---------|------|-----|---------|------------|-------|-----------|-----------------------|----|-----|--------|----|---------|------|-----|-----|--------|---|--------|-----|----|----|
| J01LDY | 2,090 | 37 | 11 | 11 | JA6JYV | " | 8,528 | 60 | 23 | 29 | HS#B | 14 | 28,362 | 289 | 26 | 32 | O6EWIG | 21 | 110,858 | 547 | 25 | 79 | OK1DJW | " | 4,329 | 115 | 6 | 31 | | | | | | | | | | | | | |
| JA1AAV | 1,980 | 24 | 11 | 19 | JA6JXO | " | 7,708 | 58 | 20 | 27 | 9M9B | 14 | 28,362 | 289 | 26 | 32 | O6E4BU | 3.8 | 23,595 | 383 | 10 | 45 | OK1IDX | " | 4,192 | 131 | 5 | 27 | | | | | | | | | | | | | |
| JA2SAP/1 | 1,012 | 16 | 10 | 13 | JA6WWY | " | 7,650 | 57 | 21 | 29 | TURKEY | | | | | | | | | | | | OK3CSQ | " | 624 | 23 | 5 | 21 | | | | | | | | | | | | | |
| JA1AAT | 544 | 12 | 7 | 9 | JA6ICJ | " | 7,482 | 64 | 18 | 25 | AZORES | | | | | | | | | | | | DENMARK | | | | A 702,396 757 122 314 | | | | | | | | | | | | | | |
| JH1WTR | 450 | 17 | 5 | 5 | JA6COW | " | 7,172 | 61 | 20 | 24 | TA3 | CU2AF | 21 | 139,888 | 619 | 24 | 88 | O24MD | A | 231,768 | 682 | 58 | 172 | | | | | | | | | | | | | | | | | | |
| JA1IVW | 276 | 9 | 6 | 6 | JA6BIF | 28 | 210,120 | 700 | 31 | 72 | /DL5YCQ | A | 342,432 | 800 | 35 | 109 | O22ACL | " | 95,040 | 243 | 53 | 127 | | | | | | | | | | | | | | | | | | | |
| JA1US0 | 21 | 671,652 | 1420 | 36 | 126 | JA6EFT | " | 95,580 | 375 | 29 | 61 | WEST MALAYSIA | | | | | | | | | | | | EC6PG | A | 45,368 | 275 | 27 | 79 | | | | | | | | | | | | |
| JK1OLT | " | 492,936 | 1134 | 36 | 116 | JA6WIF | " | 62,190 | 242 | 27 | 63 | 9M2ZZ | A | 576,225 | 1209 | 75 | 150 | EA6WX | 28 | 566,272 | 2300 | 27 | 85 | EA6WY | " | 5,104 | 56 | 13 | 31 | | | | | | | | | | | | |
| JG1TSF | " | 349,076 | 896 | 36 | 101 | JA6QDU | " | 40,552 | 195 | 27 | 47 | U. S. S. R. | | | | | | | | | | | | EA6FO | 21 | 581,348 | 1955 | 34 | 108 | | | | | | | | | | | | |
| JA1YAD | " | 253,260 | 688 | 35 | 99 | JA6RXA | " | 26,455 | 144 | 23 | 42 | ARMENIA | | | | | | | | | | | | EC6NW | " | 81,548 | 616 | 25 | 83 | | | | | | | | | | | | |
| JH1CMW | " | 245,934 | 743 | 32 | 85 | JA6KBY | 21 | 151,970 | 432 | 34 | 96 | UG6JJ | 28 | 26,304 | 139 | 16 | 48 | O2ZAE | " | 14,134 | 65 | 29 | 45 | O21DVI | " | 11,186 | 84 | 26 | 68 | | | | | | | | | | | | |
| JE1DXC | " | 38,916 | 154 | 31 | 61 | JA6DBS | " | 8,648 | 108 | 23 | 24 | UD7DZA | 14 | 9,741 | 88 | 16 | 35 | O29BX | " | 6,767 | 58 | 23 | 44 | O27NBN | " | 29,925 | 188 | 42 | 91 | | | | | | | | | | | | |
| JE1UFF | " | 26,180 | 150 | 26 | 44 | JA6MRA | " | 8,316 | 71 | 18 | 26 | AZERBAIJAN | | | | | | | | | | | | O26PI | " | 50,799 | 321 | 26 | 97 | | | | | | | | | | | | |
| JA1DC0 | " | 15,478 | 83 | 26 | 45 | JA6HTJ | " | 3,335 | 42 | 14 | 15 | BELGIUM | | | | | | | | | | | | ON4ALL | 28 | 178,600 | 659 | 26 | 68 | | | | | | | | | | | | |
| JL1KUH | " | 15,455 | 105 | 22 | 33 | JA6GONY | " | 1,850 | 30 | 10 | 15 | GEORGIA | | | | | | | | | | | | ON4ZD | " | 56,800 | 284 | 25 | 55 | | | | | | | | | | | | |
| JH1XIT | " | 6,627 | 53 | 18 | 29 | JA6YFL | 14 | 42,504 | 182 | 28 | 60 | UF6OAZ | A | 291,473 | 1145 | 22 | 69 | ON4KST | 21 | 287,210 | 1052 | 26 | 84 | O21HQA | 28 | 209,874 | 824 | 30 | 74 | | | | | | | | | | | | |
| J1V1EI | " | 4,590 | 67 | 14 | 16 | JA7MAD | A | 485,012 | 595 | 100 | 102 | RF6FO | 14 | 142,642 | 370 | 37 | 104 | ON4XG | " | 96,096 | 442 | 24 | 88 | O21JVN | " | 82,782 | 335 | 39 | 123 | | | | | | | | | | | | |
| J1J1LP | " | 4,104 | 42 | 18 | 20 | JA7JHT | " | 208,530 | 353 | 80 | 130 | UF6DG | " | 31,752 | 120 | 27 | 71 | ON5KI | " | 836 | 36 | 6 | 13 | O21ACB | " | 19,557 | 157 | 15 | 38 | | | | | | | | | | | | |
| J1A1XP | " | 3,944 | 62 | 13 | 16 | JA7VSO | " | 31,772 | 120 | 42 | 52 | RF6FR | 3.8 | 62,645 | 425 | 10 | 45 | ON5KL | 14 | 29,205 | 150 | 24 | 75 | O22BMM | " | 6,336 | 45 | 19 | 45 | | | | | | | | | | | | |
| JA9BFA/1 | " | 2,492 | 31 | 13 | 15 | JA7RVJ | " | 27,744 | 100 | 40 | 62 | KAZAKHSTAN | | | | | | | | | | | | O21CFV | " | 525 | 18 | 7 | 14 | | | | | | | | | | | | |
| J1IMAK | " | 568 | 17 | 8 | 8 | JA7YBB | " | 15,504 | 105 | 31 | 37 | KIRGHIZ | | | | | | | | | | | | O21ADL/P | 21 | 133,056 | 580 | 25 | 87 | | | | | | | | | | | | |
| J1L1WZU | " | 667 | 19 | 10 | 13 | JH7DNO | 28 | 741,520 | 2515 | 32 | 98 | RUSSIA ASIATIC | | | | | | | | | | | | O21LB/P | 21 | 99,485 | 458 | 26 | 75 | | | | | | | | | | | | |
| JR1GBB | " | 30 | 3 | 5 | 6 | JR1EEG/7 | " | 461,040 | 1383 | 34 | 79 | UL7LC | A | 404,244 | 1773 | 59 | 169 | UL7DA | 21 | 93,150 | 489 | 22 | 59 | BULGARIA | | | | | | | | | | | | O21LTB | " | 99,485 | 458 | 26 | 75 |
| JH1DJU | 14 | 290,832 | 717 | 38 | 108 | JA7HFL | " | 326,370 | 670 | 55 | 110 | UL7OB | " | 44,289 | 286 | 13 | 44 | LZ1KVF | A | 227,475 | 394 | 80 | 255 | AZERBAIJAN | | | | | | | | | | | | O25XJ | " | 2,241 | 62 | 8 | 19 |
| J1AVBW | " | 44,840 | 175 | 32 | 63 | JH7XGN | " | 310,970 | 881 | 35 | 86 | UL7OH | " | 44,289 | 286 | 13 | 44 | LZ1HY | " | 57,660 | 242 | 47 | 77 | LZ1JY | " | 15,598 | 32 | 62 | 22 | LZ1TBS | " | 14,476 | 114 | 19 | 58 | | | | | | |
| J1A1GO | " | 31,164 | 109 | 30 | 76 | JH7DGT | " | 251,180 | 477 | 71 | 119 | UL7VH | 14 | 65,016 | 285 | 26 | 60 | LZ1LTS | " | 11,648 | 102 | 18 | 46 | LZ1HQ | " | 2,147 | 100 | 10 | 25 | LZ1W | 28 | 695,840 | 1877 | 37 | 123 | | | | | | |
| JR2AGL | A | 748,866 | 881 | 107 | 195 | JA7WME | " | 198,716 | 760 | 28 | 66 | UL7VZ | 14 | 65,016 | 285 | 26 | 60 | LZ2KAD | A | 462,560 | 1372 | 36 | 104 | LZ2ES | " | 419,520 | 1591 | 30 | 84 | LZ2CW | " | 158,816 | 781 | 26 | 86 | | | | | | |
| JM20WQ | " | 404,768 | 542 | 95 | 183 | JH7CJM | " | 30,960 | 126 | 26 | 60 | UL7VZ | 14 | 65,016 | 285 | 26 | 60 | LZ2UK | " | 80,472 | 454 | 24 | 60 | LZ2HD | " | 29,185 | 212 | 18 | 47 | LZ2LJ | 21 | 142,861 | 701 | 28 | 75 | | | | | | |
| JA2THS | " | 271,580 | 515 | 77 | 108 | JR2LWK | " | 24,304 | 155 | 19 | 37 | UL7AC | 3.8 | 35,316 | 246 | 9 | 45 | LZ2ZP | " | 89,726 | 610 | 20 | 71 | LZ2VP | " | 95,256 | 585 | 23 | 75 | LZ2ZV | 28 | 71,830 | 375 | 28 | 82 | | | | | | |
| J2A2DLH | " | 245,500 | 337 | 101 | 173 | JH7LBN | " | 4,588 | 47 | 14 | 23 | KIRGHIZ | | | | | | | | | | | | UW8CB | 28 | 686,633 | 1572 | 36 | 115 | LZ1DM | " | 154,632 | 544 | 31 | 105 | | | | | | |
| JH2HFD | " | 197,568 | 381 | 76 | 120 | JG7BZ | " | 3,654 | 47 | 15 | 14 | UMBMAU | A | 26,073 | 215 | 27 | 61 | UW8CL | " | 104,690 | 312 | 37 | 108 | UMBMA | " | 30,272 | 142 | 27 | 59 | UW8CM | " | 19,406 | 105 | 123 | 278 | | | | | | |
| JJ2EEN | " | 65,728 | 239 | 39 | 65 | JA7AXP | " | 3,388 | 43 | 8 | 20 | UMBMDX | 7 | 25,594 | 176 | 17 | 50 | UW8CDV | " | 104,690 | 312 | 37 | 108 | UMBMB | " | 127,065 | 310 | 51 | 158 | UW8CG | " | 12,000 | 129 | 21 | 40 | | | | | | |
| J2A2VIL | " | 61,740 | 213 | 40 | 65 | JA7WVF | 21 | 251,990 | 762 | 32 | 81 | UMBMDX | 7 | 25,594 | 176 | 17 | 50 | UW8CDV/M | " | 12,000 | 129 | 21 | 40 | UW8CG/M | " | 1,005,585 | 2473 | 35 | 122 | UW8CH | " | 12,000 | 129 | 21 | 40 | | | | | | |
| JH2WHS | " | 14,553 | 101 | 30 | 33 | JA7BEW | " | 230,036 | 642 | 35 | 96 | UMBMDX | 3.8 | 1,357 | 33 | 7 | 16 | UW8CMB | " | 16,094 | 122 | 20 | 48 | UW8CM | " | 12,000 | 129 | 21 | 40 | UW8CN | " | 12,000 | 129 | 21 | 40 | | | | | | |
| JK2HDC | " | 14,364 | 71 | 41 | 43 | JA7ZJT | " | 69,064 | 285 | 27 | 62 | UMBMTA | 1.8 | 480 | 20 | 4 | 8 | UW8CMB | " | 16,094 | 122 | 20 | 48 | UW8CM | " | 12,000 | 129 | 21 | 40 | UW8CN | " | 12,000 | 129 | 21 | 40 | | | | | | |
| JH2XTV | " | 1,380 | 29 | 11 | 12 | JH7TKT | " | 10,500 | 53 | 24 | 51 | UW8CMB | " | 347,991 | 761 | 93 | 126 | UW8CMB | " | 16,094 | 122 | 20 | 48 | UW8CM | " | 12,000 | 129 | 21 | 40 | UW8CN | " | 12,000 | 129 | 21 | 40 | | | | | | |
| JH28CN | 28 | 294,764 | 872 | 33 | 85 | JH7HF | " | 3,348 | 52 | 12 | 19 | UW8CMB | 28 | 22,348 | 102 | 36 | 115 | UW8CMB | " | 16,094 | 122 | 20 | 48 | UW8CM | " | 12,000 | 129 | 21 | 40 | UW8CN | " | 12,000 | 129 | 21 | 40 | | | | | | |
| JH28NN | 21 | 149,041 | 516 | 31 | 72 | JABR0Z | 21 | 717,320 | 1595 | 27 | 121 | UW8CMB | 28 | 22,348 | 102 | 36 | 115 | UW8CMB | " | 16,094 | 122 | 20 | 48 | UW8CM | " | 12,000 | 129 | 21 | 40 | UW8CN | " | 12,000 | 129 | 21 | 40 | | | | | | |
| JH2EUV | 14 | 140,008 | 620 | 29 | 58 | JABDVM | A | 216,895 | 332 | 60 | 94 | UW8CMB | 28 | 661,290 | 1944 | 36 | 105 | UW8CMB | " | 16,094 | 122 | 20 | 48 | UW8CM | " | 12,000 | 129 | 21 | 40 | UW8CN | " | 12,000 | 129 | 21 | 40 | | | | | | |
| JH28AY | 7 | 163,080 | 626 | 30 | 78 | JABDNX | " | 114,405 | 303 | 60 | 85 | UW8CMB | 28 | 30,264 | 143 | 26 | 52 | UW8CMB | " | 16,094 | 122 | 20 | 48 | UW8CM | " | 12,000 | 129 | 21 | 40 | UW8CN | " | 12,000 | 129 | 21 | 40 | | | | | | |
| JF2LTH | " | 120 | 9 | 4 | 6 | JABOVG | " | 49,664 | 195 | 37 | 60 | UW8CMB | 28 | 12,032 | 193 | 13 | 19 | UW8CMB | " | 4,875 | 46 | 14 | 25 | UW8CMB | " | 12,000 | 129 | 21 | 40 | UW8CN | " | 12,000 | 129 | 21 | 40 | | | | | | |
| JE2LPC | 3.8 | 1892 | 47 | 10 | 12 | JABAMN | " | 31,425 | 165 | 33 | 42 | UW8CMB | 28 | 124,943 | 533 | 26 | 65 | UW8CMB | " | 12,000 | 129 | 21 | 40 | UW8CM | " | 12,000 | 129 | 21 | 40 | UW8CN | " | 12,000 | 129 | 21 | 40 | | | | | | |
| JG3KIV | A | 1,673,660 | 1757 | 102 | 232 | JERHR | " | 24,338 | 103 | 34 | 52 | UW8CMB | 28 | 30,264 | 143 | 26 | 52 | UW8CMB | " | 12,000 | 129 | 21 | 40 | UW8CM | " | 12,000 | 129 | 21 | 40 | UW8CN | " | 12,000 | 129 | 21 | 40 | | | | | | |
| J3A3FC | " | 78,404 | 345 | 82 | 140 | JEMHMS | " | 19,584 | 99 | 32 | 40 | UW8CMB | 28 | 16,000 | 129 | 15 | 35 | UW8CMB | " | 12,000 | 129 | 21 | 40 | UW8CM | " | 12,000 | 129 | 21 | 40 | UW8CN | " | 12,000 | 129 | 21 | 40 | | | | | | |
| J3A3V0/3 | " | 111,470 | 263 | 62 | 95 | JA6GZ | " | 19,584 | 99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SINGLE OPERATOR ZONE WINNERS

| | | | | | Zone | Call | Score | | | | | | | | | | | | | | | | | | |
|--------|-----|-----------|------|--------|--------------|-------|---------|--------|--------|--------|--------|-----------|---------|--------|---------|---------|---------|---------|--------|------------------|--------|---------|--------|-----------|-------|
| DH2RLV | " | 421,500 | 715 | 78 172 | Y22RK | " | 194,622 | 512 | 51 148 | 1 | AL7FQ | | | | | | | | | | | | | | |
| DH6NEV | " | 307,848 | 420 | 94 287 | Y250F/A | " | 170,595 | 518 | 58 197 | 2 | VE2ZP | | | | | | | | | | | | | | |
| OH1NSJ | " | 231,830 | 567 | 61 178 | Y53VN/P | " | 146,790 | 429 | 59 151 | 3 | K7RI | | | | | | | | | | | | | | |
| OH1BOI | " | 141,643 | 392 | 57 140 | Y22VI | " | 129,285 | 408 | 46 149 | 4 | N5RZ | | | | | | | | | | | | | | |
| OHGSU | " | 138,820 | 340 | 62 158 | Y55TD | " | 122,016 | 494 | 44 142 | 5 | N2NT | | | | | | | | | | | | | | |
| DH6NJM | " | 94,376 | 280 | 58 130 | Y33UJ | " | 110,662 | 209 | 73 185 | 6 | 6D2KB | | | | | | | | | | | | | | |
| OH1EB | " | 92,768 | 264 | 60 148 | Y310J | " | 80,028 | 294 | 43 113 | 7 | HU1AA | | | | | | | | | | | | | | |
| OH3AD | " | 84,956 | 379 | 41 93 | Y24NG | " | 78,684 | 210 | 49 109 | 8 | VP5T | | | | | | | | | | | | | | |
| DH2BBF | " | 74,571 | 172 | 58 143 | Y67UL | " | 74,443 | 277 | 42 109 | 9 | HK3BED | | | | | | | | | | | | | | |
| OH3NB | " | 73,352 | 283 | 50 123 | Y52GE | " | 70,819 | 305 | 43 108 | 10 | HC1OT | | | | | | | | | | | | | | |
| DH6CD | " | 61,124 | 348 | 27 91 | Y54TA | " | 61,693 | 182 | 58 133 | 11 | ZZ5JR | | | | | | | | | | | | | | |
| DH6QP | " | 48,750 | 271 | 35 95 | Y46ZC/P | " | 59,474 | 259 | 37 94 | 12 | CE3BFZ | | | | | | | | | | | | | | |
| OH5AD | " | 45,158 | 131 | 50 84 | Y33TL | " | 57,706 | 190 | 39 83 | 13 | LR6ETB | | | | | | | | | | | | | | |
| OH4NS | " | 35,644 | 132 | 46 88 | Y33PJ/P | " | 51,888 | 144 | 56 128 | 14 | ZB2X | | | | | | | | | | | | | | |
| OH2VZ | " | 25,290 | 102 | 38 72 | Y25ML | " | 48,195 | 261 | 34 101 | 15 | OH6JW | | | | | | | | | | | | | | |
| OH2BPW | " | 23,196 | 76 | 37 62 | Y220E/A | " | 47,995 | 158 | 47 98 | 16 | UA3RAR | | | | | | | | | | | | | | |
| DHBNYD | " | 9,360 | 73 | 25 55 | Y51XO | " | 42,471 | 175 | 37 80 | 17 | UW9CH | | | | | | | | | | | | | | |
| DH7SM | " | 8,448 | 100 | 22 42 | Y630I | " | 41,922 | 304 | 23 79 | 18 | UA0SR | | | | | | | | | | | | | | |
| DH10R | " | 1,680 | 22 | 13 20 | Y22IH | " | 40,186 | 117 | 54 88 | 19 | UA0OGS | | | | | | | | | | | | | | |
| DH2RL | " | 1,287 | 25 | 13 20 | Y46KA | " | 39,872 | 160 | 41 71 | 20 | JY9SR | | | | | | | | | | | | | | |
| OH1AU | 28 | 770,965 | 1999 | 35 110 | (Opn. OH1JD) | " | 37,389 | 217 | 32 71 | | | | | | | | | | | | | | | | |
| DH2BAH | " | 574,056 | 1571 | 38 117 | Y23LG | " | 36,828 | 119 | 36 72 | | | | | | | | | | | | | | | | |
| DH6AD | " | 185,472 | 640 | 29 99 | Y33TA | " | 36,000 | 112 | 53 91 | | | | | | | | | | | | | | | | |
| DHGMEN | " | 108,465 | 572 | 27 78 | Y23HJ | " | 33,945 | 175 | 32 123 | | | | | | | | | | | | | | | | |
| DH1MCX | " | 108,300 | 492 | 25 89 | Y78SL | " | 32,226 | 200 | 21 53 | | | | | | | | | | | | | | | | |
| DH1MLB | " | 108,50 | 505 | 26 77 | Y21HB | " | 31,482 | 192 | 29 77 | | | | | | | | | | | | | | | | |
| DH3MMH | " | 73,530 | 340 | 26 64 | Y31NB | " | 30,654 | 187 | 29 88 | | | | | | | | | | | | | | | | |
| DH6RC | " | 57,015 | 245 | 30 75 | Y86YL | " | 30,099 | 150 | 26 53 | | | | | | | | | | | | | | | | |
| DH3MFP | " | 45,927 | 235 | 23 58 | Y54US | " | 28,413 | 112 | 41 82 | | | | | | | | | | | | | | | | |
| DH5PA | " | 32,123 | 148 | 25 66 | Y38YB | " | 28,158 | 169 | 33 81 | | | | | | | | | | | | | | | | |
| DH4MCV | " | 22,824 | 123 | 22 50 | Y22GC | " | 24,747 | 92 | 41 72 | | | | | | | | | | | | | | | | |
| DH7MMA | " | 18,703 | 181 | 15 44 | Y61ZJ | " | 24,045 | 123 | 29 76 | | | | | | | | | | | | | | | | |
| DH5CD | " | 11,938 | 131 | 14 33 | Y54VA | " | 23,436 | 81 | 41 67 | | | | | | | | | | | | | | | | |
| DH1MEQ | " | 9,412 | 84 | 15 37 | Y34SF | " | 17,748 | 98 | 29 39 | | | | | | | | | | | | | | | | |
| DH2MDC | " | 5,705 | 76 | 13 22 | Y61YB | " | 17,640 | 103 | 29 61 | | | | | | | | | | | | | | | | |
| OH1AD | 21 | 872,784 | 2231 | 35 136 | (Opn. OH1WZ) | Y41JH | " | 12,183 | 61 | 38 55 | HA1YJ | " | 582,008 | 1715 | 34 99 | PA63CJP | " | 158,514 | 477 | 47 127 | SP9DEM | " | 30,624 | 202 | 21 45 |
| DH6NIU | " | 480,766 | 1515 | 33 110 | Y24KB/A | " | 9,625 | 66 | 28 49 | HA3TK | " | 170,592 | 819 | 26 70 | PA0KDM | " | 119,700 | 387 | 46 144 | SP3JHY | " | 28,444 | 220 | 17 35 | |
| DH7EU | " | 318,008 | 954 | 32 95 | Y55TJ | " | 9,313 | 69 | 25 42 | HB0QB | " | 129,952 | 431 | 28 103 | PA3ELD | " | 107,876 | 251 | 59 123 | SP9CAY | " | 20,493 | 104 | 22 59 | |
| OH1AF | " | 312,166 | 1155 | 32 95 | Y21WI | " | 7,849 | 66 | 20 27 | HA2KMR | " | 55,100 | 332 | 23 53 | PA3EBX | " | 27,060 | 98 | 46 77 | SP9DFH | " | 20,242 | 145 | 17 41 | |
| OH7EU | " | 262,512 | 831 | 32 112 | Y26K0 | " | 5,695 | 86 | 10 57 | HA8IE | 21 | 622,468 | 1626 | 39 149 | PA0MVW | " | 11,830 | 97 | 23 47 | SP9LDB | " | 10,603 | 124 | 15 24 | |
| DH3WD | " | 58,969 | 203 | 23 77 | Y23GB | " | 3,040 | 35 | 14 18 | HA6NW | " | 34,034 | 213 | 18 59 | PA3CLD | " | 6,136 | 60 | 18 34 | SP3LPB | " | 8,517 | 69 | 16 35 | |
| DH2BNT | " | 43,225 | 258 | 22 69 | Y34OL/A | " | 2,538 | 42 | 11 16 | HA9RE | 7 | 354,162 | 1485 | 32 102 | PA0DJ | " | 3,038 | 44 | 10 21 | SP9ZD | " | 3,290 | 36 | 11 24 | |
| DH7NW | " | 25,604 | 231 | 22 52 | Y21GO | " | 2,418 | 44 | 11 28 | HA8JV | 3.8 | 105,468 | 841 | 20 82 | PA0SWL | " | 49,555 | 254 | 21 64 | SP4EEZ | 21 | 220,464 | 846 | 34 110 | |
| DH5RZ | " | 15,476 | 163 | 13 40 | Y23KF | " | 1,904 | 59 | 6 28 | TF3CW | A | 1,705,168 | 2816 | 69 203 | PA2SWL | " | 141,372 | 660 | 27 81 | ICELAND | " | 141,372 | 660 | 120 20 47 | |
| DH8RQ | " | 11,544 | 101 | 18 34 | Y22JB | " | 1,848 | 32 | 19 25 | TF6MM | " | 13,530 | 181 | 16 50 | PA6BHT | " | 23,310 | 142 | 19 51 | SP9NLK | " | 123,003 | 480 | 31 94 | |
| DH3HM | " | 4,192 | 51 | 13 19 | Y69WA | " | 1,752 | 29 | 12 12 | TF3DC | " | 2,666 | 34 | 13 30 | PA0YDN | " | 12,048 | 124 | 17 30 | SP6OJK | " | 11,075 | 540 | 29 88 | |
| DH5VL | " | 2,754 | 55 | 11 23 | Y31UE | " | 1,638 | 38 | 11 28 | TF6LUV | " | 5,977 | 132 | 7 36 | PA62REH | 21 | 185,845 | 851 | 26 83 | SP9EMD | " | 60,605 | 352 | 22 69 | |
| OH1VR | 14 | 305,365 | 1083 | 34 88 | Y38RB | " | 1,344 | 20 | 13 19 | TF6PK | 28 | 239,802 | 959 | 23 79 | PA63EWP | 14 | 5,977 | 132 | 7 36 | SP4JSR | " | 47,430 | 309 | 22 63 | |
| DH3UJ | " | 212,296 | 866 | 32 87 | Y59ZF | " | 748 | 16 | 11 11 | TF6HDX | " | 5,005 | 133 | 6 29 | PA0ZH | " | 5,005 | 133 | 6 29 | SP6RVB | " | 56,248 | 304 | 23 66 | |
| DH6ZD | " | 43,663 | 193 | 31 68 | Y31NJ | " | 675 | 21 | 7 8 | TF6LUV | " | 5,005 | 133 | 6 29 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | IRELAND | " | 15,120 | 161 | 13 50 | |
| DH4BEN | 3.8 | 30,480 | 443 | 10 50 | Y22EK | " | 570 | 30 | 4 15 | TF6PK | A | 71,628 | 338 | 35 92 | PA0BHDH | 14 | 17,688 | 125 | 20 47 | NORTHERN IRELAND | " | 17,225 | 205 | 15 50 | |
| DH6AD | A | 1,588,429 | 1517 | 98 321 | Y24SG | " | 510 | 10 | 9 8 | TF6PK | A | 657,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | ISLE OF MAN | " | 10,868 | 160 | 13 39 | |
| F1LB/P | " | 795,636 | 1207 | 88 228 | Y24ZG/A | " | 27,292 | 307 | 27 86 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | ITALY | " | 8,964 | 135 | 13 41 | |
| F8WE | " | 361,680 | 977 | 64 176 | Y27GL/A | " | 25,864 | 184 | 21 40 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | NORWAY | " | 4,704 | 85 | 8 34 | |
| F6FXO | " | 320,648 | 529 | 78 220 | Y62XG | " | 14,464 | 95 | 20 44 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | PORTUGAL | " | 4,704 | 85 | 8 34 | |
| TVGMHZ | " | 301,860 | 775 | 61 154 | Y56VF | " | 4,284 | 72 | 9 12 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | FRANCE | " | 10,868 | 160 | 13 39 | |
| F6GFNA | " | 251,516 | 560 | 59 168 | Y25DF/A | " | 252 | 12 | 4 3 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| F3VX | " | 214,512 | 601 | 55 163 | Y37ZE | 21 | 81,750 | 400 | 26 83 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| F6GDRP | " | 99,360 | 429 | 34 88 | Y24SG | " | 77,292 | 307 | 27 86 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| F6DLW | " | 86,112 | 239 | 51 133 | Y32ZF/A | " | 32,000 | 237 | 18 62 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| F6FH | " | 84,545 | 299 | 38 88 | Y22XF/A | " | 25,480 | 184 | 17 53 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| F6FTB | " | 34,254 | 156 | 38 61 | Y68TH | " | 24,909 | 212 | 16 53 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| FE9UJ | " | 24,795 | 135 | 27 60 | Y26HG | " | 7,990 | 72 | 15 32 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| F3AT | " | 24,025 | 125 | 27 55 | Y66YF | " | 4,773 | 47 | 14 29 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| F6GDK | " | 22,110 | 139 | 30 80 | Y38ZG | " | 4,181 | 55 | 13 24 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| FD10GG | " | 17,375 | 101 | 27 80 | Y64XH | " | 3,876 | 50 | 11 23 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| FE1JND | " | 15,340 | 100 | 28 37 | Y38WE | " | 1,242 | 30 | 7 11 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| TX7A | 28 | 1,158,614 | 3093 | 35 122 | Y41HL | 14 | 202,089 | 1074 | 29 94 | TF6PK | A | 567,072 | 913 | 85 253 | PA0BHDH | 14 | 122,200 | 243 | 10 47 | SP9CAY | " | 10,868 | 160 | 13 39 | |
| FF6KRC | " | 1,074,045 | 2578 | 35 124 | Y24MF | " | 11,088 | 105 | 19 44 | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|-----|---------|------|----|-----|-----------------|----|-----------|------|-----|-----|-----------------|----|------------------|------|-----|-----|-----------------|----|-----------|------|-----|-----|-------|----|---------|------|----|-----|
| Y0BCIY | .. | 1,952 | 53 | 18 | 24 | E5ETP | .. | 14,374 | 155 | 15 | 38 | WALES | .. | 331,160 | 1023 | 33 | 1C3 | U5MLP | .. | 206,670 | 430 | 74 | 200 | | | | | | |
| Y02AIX | .. | 240 | 12 | 7 | 9 | E5FNE | .. | 14,235 | 85 | 24 | 49 | GWBLE | A | 4,058,880 | 3048 | 124 | 436 | U5JFV | .. | 173,400 | 573 | 52 | 148 | | | | | | |
| Y05KLE | 28 | 78,128 | 420 | 24 | 58 | E5RCL | .. | 12,100 | 122 | 18 | 37 | GWARK | .. | 1,187,724 | 1739 | 80 | 268 | U5QJF | .. | 167,739 | 381 | 72 | 181 | | | | | | |
| Y02LBN | .. | 39,468 | 180 | 26 | 66 | E7EBL | .. | 11,275 | 105 | 16 | 39 | YUGOSLAVIA | .. | 30,636 | 232 | 23 | 46 | U5RQJ | .. | 36,448 | 235 | 60 | 76 | | | | | | |
| Y09HP | .. | 30,345 | 358 | 14 | 37 | E1YW | .. | 2,739 | 32 | 8 | 25 | Y0TJ | A | 889,258 | 1232 | 98 | 296 | U5EPV | .. | 34,300 | 2/1 | 33 | 77 | | | | | | |
| Y04BEX | .. | 21,835 | 222 | 16 | 39 | E3FRJ | 21 | 381,160 | 1299 | 34 | 96 | Y0TJ | A | 180,402 | 815 | 27 | 80 | U5ICY | .. | 25,990 | 237 | 22 | 75 | | | | | | |
| Y09AGI | .. | 21,204 | 200 | 18 | 39 | F3ESZ | .. | 86,112 | 310 | 21 | 75 | Y0TJ | .. | 133,056 | 581 | 31 | 96 | U5U3N | .. | 12,546 | 61 | 27 | 55 | | | | | | |
| Y06BZL | .. | 14,664 | 134 | 14 | 33 | E7PS | .. | 84,456 | 358 | 23 | 85 | Y0TJ | .. | 96,031 | 831 | 23 | 60 | U5QJN | .. | 8,784 | 70 | 16 | 58 | | | | | | |
| Y08AI | .. | 5,244 | 80 | 10 | 13 | E3ELM | .. | 68,250 | 353 | 26 | 79 | Y0TJ | .. | (Opn. LY-R-1289) | .. | .. | .. | U5JAE | .. | 6,888 | 108 | 10 | 31 | | | | | | |
| Y03AGW | .. | 495 | 14 | 6 | 9 | E1CHB | .. | 53,599 | 331 | 20 | 71 | Y0TJ | .. | 26,452 | 250 | 17 | 51 | U5UHF | .. | 4,806 | 75 | 14 | 40 | | | | | | |
| Y03JAL | 21 | 54,126 | 296 | 24 | 73 | E1EVW | .. | 35,568 | 292 | 17 | 55 | Y0TJ | .. | 16,256 | 167 | 14 | 42 | RB5IM | 28 | 673,760 | 1781 | 37 | 123 | | | | | | |
| Y04JQ | .. | 41,888 | 200 | 32 | 80 | E1EVY | .. | 29,304 | 230 | 17 | 57 | Y0TJ | .. | 17,660 | 148 | 17 | 51 | U5UGR | .. | 600,138 | 1494 | 38 | 119 | | | | | | |
| Y02GZ | .. | 5,376 | 58 | 16 | 32 | E7CDS | .. | 22,792 | 152 | 18 | 56 | Y0TJ | .. | 10,575 | 197 | 12 | 33 | RB5FO | .. | 157,986 | 1179 | 30 | 104 | | | | | | |
| Y06HN | 14 | 50,399 | 257 | 26 | 75 | E5GIG | .. | 20,315 | 164 | 21 | 64 | Y0TJ | .. | 7,918 | 133 | 14 | 54 | RT5UO | .. | 93,639 | 450 | 27 | 64 | | | | | | |
| Y09BSF | .. | 33,538 | 292 | 22 | 60 | E1CNU | .. | 10,974 | 80 | 15 | 47 | Y0TJ | .. | 24,452 | 250 | 17 | 51 | RB5JF | .. | 60,137 | 474 | 16 | 61 | | | | | | |
| Y02BMA | .. | 10,918 | 142 | 14 | 39 | E7CDU | .. | 7,392 | 71 | 15 | 41 | Y0TJ | .. | 18,284 | 130 | 27 | 80 | RB5UCY | .. | 32,782 | 228 | 21 | 53 | | | | | | |
| Y08MF | .. | 10,260 | 137 | 11 | 46 | E1CTH | .. | 6,292 | 73 | 14 | 38 | Y0TJ | .. | 19,656 | 168 | 18 | 45 | U5EKW | .. | 19,656 | 168 | 18 | 45 | | | | | | |
| Y04PN | .. | 9,955 | 154 | 12 | 43 | E7AQY | .. | 5,985 | 126 | 10 | 35 | Y0TJ | .. | 18,408 | 309 | 9 | 43 | U5VN | .. | 12,920 | 186 | 17 | 43 | | | | | | |
| Y08CRU | .. | 9,954 | 109 | 14 | 49 | E3VNM | 14 | 44,268 | 268 | 27 | 75 | Y0TJ | .. | 14,565 | 124 | 7 | 28 | U5VCK | .. | 9,366 | 137 | 9 | 33 | | | | | | |
| Y03DAD | .. | 8,960 | 90 | 15 | 41 | E5DVL | .. | 17,503 | 141 | 18 | 44 | Y0TJ | .. | 17,472 | 111 | 5 | 19 | U5QVC | .. | 8,566 | 169 | 8 | 34 | | | | | | |
| Y03JF | 7 | 112,931 | 759 | 10 | 81 | E4EHQ | .. | 13,968 | 147 | 14 | 34 | Y0TJ | .. | 9,1200 | 942 | 16 | 66 | U5XCU | .. | 4,080 | 67 | 10 | 20 | | | | | | |
| Y06AJI | .. | 35,763 | 296 | 18 | 73 | E3CVM | .. | 11,950 | 138 | 6 | 28 | Y0TJ | .. | (Opn. YT6AA) | .. | .. | .. | U5WE | 21 | 980,001 | 2308 | 38 | 133 | | | | | | |
| Y05OAG | .. | 5,412 | 124 | 8 | 33 | E3AEY | .. | 2,244 | 45 | 6 | 28 | Y0TJ | .. | 56,196 | 804 | 11 | 52 | U5IFZ | .. | 517,864 | 1485 | 37 | 115 | | | | | | |
| Y05CTY | .. | 4,342 | 92 | 8 | 34 | E5AVM | .. | 522 | 11 | 10 | 8 | Y0TJ | .. | 14,080 | 309 | 9 | 43 | U5UII | .. | 408,800 | 1298 | 36 | 110 | | | | | | |
| Y04AAC | .. | 540 | 23 | 5 | 15 | E3ANA | 7 | 14,210 | 130 | 15 | 55 | Y0TJ | .. | 24,900 | 180 | 29 | 71 | R04DC | .. | 132,096 | 593 | 33 | 95 | | | | | | |
| Y06KVZ | 3.8 | 14,392 | 254 | 7 | 49 | E3UOE | .. | 9,734 | 124 | 14 | 48 | Y0TJ | .. | 24,900 | 180 | 29 | 71 | R04DA | 28 | 437,892 | 1272 | 34 | 122 | | | | | | |
| Y05BPE | .. | 9,236 | 179 | 7 | 44 | E4DDE | .. | 451 | 29 | 5 | 14 | Y0TJ | .. | 22,848 | 448 | 13 | 38 | U05OCJ | 21 | 22,848 | 448 | 13 | 38 | | | | | | |
| SCOTLAND | | | | | | SVALBARD ISLAND | | | | | | SWEDEN | | | | | | RUSSIA EUROPEAN | | | | | | | | | | | |
| GM3BL | A | 766,080 | 1207 | 68 | 198 | JW1VW | A | 277,344 | 681 | 50 | 94 | Y0TJ | .. | 894,075 | 2058 | 37 | 138 | U050NA | A | 454,800 | 897 | 83 | 217 | KH8 | .. | 980,001 | 2308 | 38 | 133 |
| GM40BK | .. | 55,874 | 134 | 52 | 130 | GM8ECO | 21 | 354,472 | 1490 | 23 | 95 | Y0TJ | .. | 181,882 | 691 | 49 | 162 | U5IFZ | .. | 517,864 | 1485 | 37 | 115 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| SICILY | | | | | | SMÅLAND | | | | | | RUSSIA EUROPEAN | | | | | | RUSSIA EUROPEAN | | | | | | | | | | | |
| IT9ZWV | A | 37,539 | 263 | 30 | 67 | SMS400 | A | 2,710,911 | 2475 | 126 | 375 | U050NA | A | 454,800 | 897 | 83 | 217 | U3AR8R | A | 1,371,270 | 1361 | 111 | 319 | KH8 | .. | 980,001 | 2308 | 38 | 133 |
| IB9LB | 28 | 949,960 | 2410 | 35 | 115 | SKBLM | .. | 1,166,102 | 1784 | 79 | 247 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| IT9HBT | .. | 637,606 | 1655 | 37 | 132 | SM3BIZ | .. | 859,026 | 1069 | 5 | 267 | U050NA | A | 454,800 | 897 | 83 | 217 | U3AR8R | A | 1,371,270 | 1361 | 111 | 319 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| IT9RYJ | .. | 302,309 | 1230 | 33 | 100 | SM5DIB | .. | 201,411 | 493 | 53 | 108 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| IT9WNV | 21 | 42,696 | 482 | 18 | 54 | SM6DTR | .. | 90,207 | 310 | 35 | 82 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| IT9NTN | 14 | 254,508 | 1166 | 32 | 72 | SM4GB | .. | 48,732 | 283 | 33 | 98 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| IT9TQH | 3.8 | 32,452 | 334 | 14 | 62 | SM6UF | .. | 20,072 | 156 | 27 | 57 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| SPAIN | | | | | | SVALBARD ISLAND | | | | | | RUSSIA EUROPEAN | | | | | | RUSSIA EUROPEAN | | | | | | | | | | | |
| EA4KK | A | 866,892 | 1065 | 74 | 208 | SK3LH | 28 | 611,534 | 1977 | 33 | 100 | U050NA | A | 454,800 | 897 | 83 | 217 | U3AR8R | A | 1,371,270 | 1361 | 111 | 319 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| EA3GBU | .. | 781,509 | 1335 | 73 | 194 | SM6JII | .. | 509,795 | 1254 | 36 | 119 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| EA1CON | .. | 515,075 | 818 | 73 | 202 | SM5AOE | .. | 428,130 | 1280 | 34 | 100 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| EA4DPK | .. | 200,196 | 351 | 72 | 177 | SM5AHO | .. | 295,392 | 750 | 37 | 99 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| EA3DNC | .. | 154,137 | 423 | 50 | 141 | SM5HTO | .. | 243,746 | 276 | 31 | 103 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| EA3CZR | .. | 147,420 | 348 | 52 | 130 | SM5MD | .. | 15,552 | 182 | 15 | 33 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| EA4DXP | .. | 136,032 | 430 | 47 | 109 | SM2WKQ | .. | 15,495 | 716 | 30 | 75 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| EA1CYV | .. | 134,030 | 442 | 37 | 93 | SM4LK | .. | 100,983 | 372 | 29 | 54 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| EA2CR | .. | 59,898 | 36 | 39 | 110 | SM3JN | .. | 6,230 | 93 | 10 | 25 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| EA5AEW | .. | 55,545 | 166 | 56 | 56 | SM2PYN | .. | 9,374 | 170 | 12 | 31 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488 | 1317 | 83 | 261 | RA1AA | .. | 714,488 | 1317 | 83 | 261 |
| EA5FVP | .. | 50,970 | 210 | 34 | 84 | SM8SKB | .. | 8,856 | 125 | 12 | 24 | U050NA | A | 454,800 | 897 | 83 | 217 | RA1AA | .. | 714,488</ | | | | | | | | | |

| | | | | |
|--------------------------------|-------------------------------|--------------------------------|---------------------------------|---------------------------------------|
| SK20G | 718,976 1401 81 247 | LU1FKR | 1,977,300 2222 88 237 | LICHTENSTEIN |
| SM9BGM | 211,152 398 57 182 | LT5F | 1,066,360 1686 78 134 | HBB |
| HB9H | 4,845,681 3675 136 471 | P4BV | 18,500,488 9128 143 542 | /HB9AON 6,600,328 5462 123 479 |
| HB9AGC | 1,436,910 1729 102 320 | ZZ1AA | 3,322,150 3465 89 236 | LUXEMBOURG |
| GW8GT | 6,171,984 4571 140 484 | BRAZIL | CE2AA | LX7A 26,578,978 14947 175 751 |
| WALES | 3,322,150 3465 89 236 | CHILE | CE4MWK | THE NETHERLANDS |
| YT3T | 4,130,719 3071 131 456 | 2,684,880 2813 99 246 | P14DEC | 5,567,302 5471 119 347 |
| YU3EO | 2,416,874 2363 117 329 | 543,552 966 67 125 | SWEDEN | SK0UX 186,408 384 65 151 |
| 4N2D | 2,337,253 2983 112 237 | COLOMBIA | 5J6CQ | UNITED NATIONS (VIENNA) |
| YT4D | 748,693 1089 81 238 | 3,319,360 3924 90 238 | 4U1VIC | 5,565,680 5803 129 451 |
| 4N4C | 320,528 879 79 229 | ECUADOR | HC2T | U.S.S.R. |
| U.S.S.R. | 1,575,817 1897 92 197 | 1,575,817 1897 92 197 | FYBP | YUGOSLAVIA |
| BYELORUSSIA | 2,007,852 2491 106 386 | FRENCH GUYANA | 13,054,368 6856 142 504 | YT2A 15,514,674 9328 167 624 |
| ESTONIA | 3,489,870 2920 135 428 | NETHERLANDS ANTILLES | PJ9W | U.S.S.R. |
| UR1RWX | 118,125 474 47 128 | 17,682,387 9265 150 537 | UC1AWC | EUROPEAN RUSSIA |
| UR1RWQ | | | | UZ6LWZ 6,205,728 4791 154 522 |
| LATVIA | 8,388,076 5622 148 520 | LITHUANIA | LY2ZZ | LY2ZZ 18,271,552 10196 175 657 |
| UO7W | 5,097,849 3995 144 487 | UKRAINE | R88M | R88M 19,598,840 11896 182 642 |
| UQ1GXJ | 880,854 1605 68 231 | OCEANIA | | |
| LITHUANIA | | FIJI ISLANDS | 3D2KH | 679,135 1292 70 115 |
| UP1BZG | 4,838,070 3359 146 524 | NEW ZEALAND | ZM2K | 5,500,782 4226 115 332 |
| LY2WW | 3,943,218 2920 135 428 | SOUTH AMERICA | | |
| LY1BYK | 1,413,760 1721 125 348 | BRAZIL | ZW5B | 35,830,544 13644 189 710 |
| LY1BZB | 797,625 1244 88 287 | NETHERLANDS ANTILLES | | |
| LY1BZR | 44,478 223 31 95 | PJ1B | 48,985,200 18175 175 764 | |
| MOLDAVIA | 64,894 285 35 107 | PJ2U | 6,579,774 5811 105 282 | |
| RUSSIA EUROPEAN | | QRP | | |
| UZ4HWS | 1,710,536 2202 108 296 | WORLD | | |
| UZ4WWY | 1,390,984 1554 106 307 | YU2TY | A 758,523 848 96 321 | |
| UZ1TWB | 927,472 1491 94 270 | E43FB0 | 461,472 700 79 225 | |
| UZ1AWQ | 923,843 1413 91 302 | KD2TT | 371,968 508 62 194 | |
| UZ4WWB | 629,443 1115 86 227 | 4M1G | 336,384 562 60 159 | |
| UZ4PWW | 609,861 984 93 246 | VE1CBF | 311,261 510 70 89 | |
| UZ6AXS | 538,684 852 77 197 | WB8MHK | | |
| UZ3DXS | 180,992 544 55 147 | /1 | 311,576 476 60 172 | |
| UZ6HYK | 128,568 620 41 187 | HB9ADD | 303,552 490 76 212 | |
| UZ3AWR | 79,818 366 36 132 | W8UD | 297,591 428 79 180 | |
| UZ3QWM | 68,952 324 48 108 | UD6OFF | 253,984 432 56 165 | |
| UZ4PWF | 65,056 428 38 114 | N4U | 244,651 363 66 187 | |
| UZ1AWO | 56,211 302 31 92 | SM5CTT | 196,409 593 48 149 | |
| UZ4AXN | 15,853 148 19 64 | Y05AVN/3 | 182,748 336 20 211 | |
| UZ3QYA | 15,827 139 16 33 | ON4AVG | 175,000 520 51 124 | |
| UZ4SWO | 3,696 55 13 31 | EA1GTC | 159,896 470 50 149 | |
| UZ3VXT | 2,952 93 7 29 | IDKHP | 155,200 431 47 47 | |
| UZ4HYR | 2,380 86 7 27 | JA1DXA | 148,365 459 44 140 | |
| UKRAINE | 2,573,980 2951 112 318 | ISBLVN | 180,772 255 42 117 | |
| UB4QWV | 2,475,576 2930 105 333 | KE0KB | 66,304 166 48 100 | |
| UB4WZA | 1,167,810 1357 95 307 | UB3MP | 65,943 292 38 115 | |
| UB4IZA | 621,481 1026 86 329 | D21GRS | 62,272 351 31 108 | |
| RB4IWM | 589,677 1006 80 241 | UA9GS | 58,812 318 24 63 | |
| UB4MWU | 285,348 734 69 189 | RA3DOP | 56,440 268 38 98 | |
| UB4UWU | 223,260 593 62 182 | SM0BYD | 55,132 203 40 114 | |
| UB4VWW | 216,435 669 60 175 | UV3DCR | 46,620 345 21 69 | |
| UB4TBL | 135,720 416 51 144 | KA1CZF | 36,562 130 27 84 | |
| R84EXN | 135,675 484 46 155 | RA3AAU | 35,349 277 28 99 | |
| UB3GWG | 73,188 171 36 82 | EA1CUJ | 32,635 251 23 84 | |
| UB4IWI | 49,140 256 33 93 | UB5AFI | 30,044 187 28 88 | |
| UB4XWK | 15,744 162 21 62 | Y02CMI | 24,735 145 25 60 | |
| UB4WZB | 7,982 88 26 52 | G4ZMK | 24,319 193 19 64 | |
| OCEANIA | | Y02DLE | 21,037 151 26 83 | |
| AUSTRALIA | | W5TU | 20,280 100 34 44 | |
| VK3VT | 2,262,415 2231 114 241 | Y4HB | 11,988 133 12 69 | |
| VK2MAG | 379,800 1596 41 85 | KB6ZNF | 11,918 76 26 33 | |
| LORD HOWE ISLAND | | R85WV | 11,398 127 13 28 | |
| VK9LV | 3,201,936 3388 103 225 | KB7M | 10,780 62 30 40 | |
| MARSHALL ISLANDS | | JE7EWN | 9,872 119 29 31 | |
| KX6OI | 6,062,384 4489 141 321 | Y05CUU | 8,820 145 10 50 | |
| NEW ZEALAND | | Y05QDN | 8,723 135 11 50 | |
| ZM2A | 139,018 370 52 90 | UA8QIU | 9,310 156 22 27 | |
| PHILIPPINES | | GM3RFR | 8,528 100 15 37 | |
| DX1A | 2,606,325 3130 97 188 | RA3DFN | 6,837 65 16 27 | |
| XU1SS/DU6 | 2,267,916 3030 97 169 | JH1RMH | 6,789 51 22 26 | |
| DX1CW | 1,860,252 2762 73 155 | UV3TD | 6,741 83 19 44 | |
| TONGA | | W6VYK | 5,610 44 25 30 | |
| A35VB | 895,053 1468 83 221 | Y23TL | 5,184 89 10 42 | |
| WAKE ISLAND | | L21OR | 3,960 46 14 16 | |
| AH2BE/KH9 | 5,289,756 5339 112 227 | Y21XC | 3,500 49 17 33 | |
| SOUTH AMERICA | | U02GRZ | 2,022 49 16 30 | |
| ARGENTINA | | Y06ADW | 1,885 54 6 23 | |
| AZ4F | 7,327,780 4701 145 386 | OK3CPY | 1,429 102 11 32 | |
| ITALY | | Y49ZL | 8 2 2 2 | |
| EUROPE | | U02PP | 7 960 40 3 21 | |
| FEDERAL REP. OF GERMANY | | Y04CXD | 224 15 4 10 | |
| DF2RG | 7,066,920 4755 149 556 | SP4GFG | 3.8 9,522 187 9 37 | |
| DF3OG | 1,335,044 1364 115 378 | Y245B | 9,048 166 9 43 | |
| YUGOSLAVIA | | Y05JA | 912 41 4 20 | |
| Wales | | AA1K/3 | A 3,444,575 1894 148 505 | |
| YU3EO | | K3WW | 3,051,528 1705 139 497 | |
| 4N2D | | KE30 | 2,335,325 1530 126 419 | |

*Setting a new African 1.8 MHz record from Sicily (Africa),
IH9/IV3PRK used this top-loaded vertical on Pantelleria
Island.*

**SINGLE OPERATOR
UNLIMITED
NORTH AMERICA**

UNITED STATES

A 2,734,920 1762 119

.. 1,867,621 1202

| | | | | | |
|------------------|------------|------------------|-------------|------------|------------|
| A1K1 | A | 2,734,920 | 1762 | 119 | 416 |
| G1C | " | 2,026,500 | 1353 | 117 | 408 |
| 1KVR | " | 1,867,621 | 1202 | 122 | 435 |
| 48P0/1 | " | 1,787,450 | 1364 | 109 | 356 |
| NC1B | " | 1,713,192 | 1363 | 111 | 345 |
| A1XN | " | 1,424,640 | 920 | 127 | 433 |
| 4C8PE/1 | " | 1,328,610 | 1180 | 97 | 305 |
| Q1 | " | 1,215,680 | 939 | 106 | 358 |
| C1E0 | " | 944,622 | 942 | 81 | 276 |
| 1K1P | " | 867,104 | 834 | 91 | 301 |
| 1KTR | " | 604,384 | 612 | 91 | 261 |
| Y1YN | " | 595,080 | 604 | 83 | 265 |
| 1GW | " | 586,430 | 618 | 88 | 259 |
| AD1C | " | 468,872 | 488 | 88 | 256 |
| A8WS8M/1' | " | 438,470 | 500 | 86 | 240 |
| 1KLXJ | " | 358,150 | 514 | 58 | 189 |
| 1AD1MG | " | 336,162 | 384 | 78 | 235 |
| 13E/1 | " | 298,500 | 351 | 82 | 218 |
| 1IDEA | " | 240,835 | 366 | 65 | 180 |
| 1JL2/1 | " | 129,211 | 286 | 43 | 114 |
| 1AL1S2 | " | 60,532 | 147 | 38 | 110 |
| 1AERL | " | 15,753 | 68 | 32 | 57 |
| 1BG | 3.8 | 2,992 | 33 | 8 | 26 |

15th Annual Va. Beach HamFest / ComputerFest

ARRL Roanoke Division Convention

Sept 15 & 16, 1990
Va. Beach, VA



- Major Commercial Exhibitors & Dealers
- Amateur Exams & Upgrades
- Special Guest - Gordon West, WB6NOA
- ANARCON '90 SWL Convention
- DX Forums - Technical Forums
- Excellent Food Service
- Held at the Va. Beach Pavilion
- Plenty of FREE Parking
- It's still Vacation Time at the Beach!
- Lots of Nearby restaurants, museums, historic sites - Williamsburg, Busch Gardens, Norfolk Naval Base & more!

**General Admission - \$5 Advance - \$6 At The Door
Tickets Good for Both Days!**

Tickets & General Info
Manny Steiner, K4DOR
3512 Olympia Lane
Va. Beach, VA 23452
(804) 340-6105

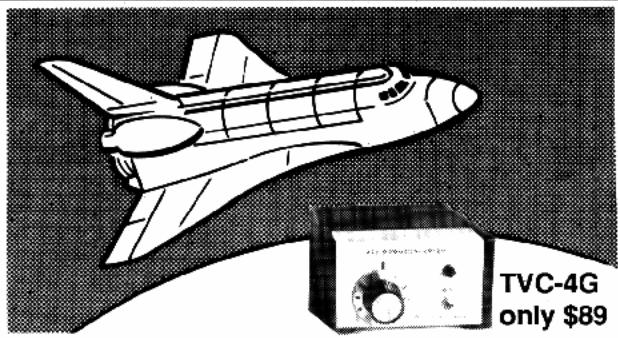
**Talk-In
146.97**

**Send SASE - Checks
Payable to TRC, Inc.**

Exhibitor Info
Lewis Steinberg, W4BLO
3449 Dickens Drive
Va. Beach, VA 23452
(804) 486-3800

CIRCLE 49 ON READER SERVICE CARD

AMATEUR TELEVISION



SEE THE SPACE SHUTTLE VIDEO

Many ATV repeaters and individuals are retransmitting Space Shuttle Video & Audio from their TVRO's tuned to Satcom F2-R transponder 13. If it is being done in your area on 70 CM, all you need is one of our TVC-4G ATV 420-450 MHz downconverters, add any TV set to ch 3 and 70 CM antenna. Others may be retransmitting weather radar during significant storms. Once you get bitten by the ATV bug - and you will after seeing your first picture - show your shack with the TX70-1A companion ATV transmitter for only \$279. It enables you to send back video from your camcorder, VCR or TV camera. ATV repeaters are springing up all over - check page 411 in the 90-91 ARRL Repeater Directory. Call for a copy of our complete 70, 33 & 23 CM ATV catalog.

(818) 447-4565 m-f 8am-5:30pm pst.

P.C. ELECTRONICS

2522 S. Paxson Ln Arcadia CA 91007

Visa, MC, COD

Tom (W6ORG)

Maryann (WB6YSS)

CIRCLE 47 ON READER SERVICE CARD

| | | | |
|---------------|--------------------------------|--------------|---------------------------------|
| AD3V | .. 1,909,321 1297 115 412 | N6ATR | A 1,448,920 1159 113 327 |
| NN3Q | .. 1,557,920 1234 105 350 | WB6CG | .. 1,395,248 1276 91 297 |
| K3VW | .. 1,475,040 1186 103 336 | WB8IXE | .. 1,313,671 1004 114 353 |
| NW3Y | .. 1,341,362 1156 101 317 | N9AG/8 | .. 935,703 773 108 326 |
| N3II | .. 1,323,972 1007 112 356 | WB8VPA | .. 881,215 807 95 297 |
| NX3A | .. 1,134,915 928 105 330 | KA8D | .. 368,350 509 69 196 |
| KD3IY | .. 507,636 51* 96 258 | WD9NF/8 | .. 264,852 372 72 180 |
| K3YGU | .. 484,932 539 83 239 | WB8CAR | .. 227,994 380 74 163 |
| NK3U | .. 381,408 412 94 254 | NG8D | .. 127,575 207 69 156 |
| K3RL | .. 356,352 377 96 252 | | |
| KW3Z | .. 325,471 432 71 200 | | |
| NU3Y | .. 259,740 329 69 201 | | |
| KA3PLS | .. 210,112 336 60 154 | | |
| K03F | .. 186,238 279 70 177 | | |
| W3OV | .. 162,864 262 79 155 | | |
| K12Z/4 | A 1,150,344 870 111 357 | W9NNE | A 1,021,650 766 129 361 |
| KB4NJ | .. 437,276 502 81 241 | WB9GIG | .. 520,352 517 92 276 |
| WB4MAI | .. 406,973 442 97 232 | K0BFR/9 | .. 462,536 510 88 235 |
| W4LVM | .. 342,168 458 72 197 | K9OSH | .. 423,680 497 95 225 |
| K4PR | .. 291,316 483 75 193 | K9BTU | .. 13,689 66 33 48 |
| N4MM | .. 289,275 361 80 205 | W9XT | 28 603,598 1182 34 144 |
| K8UNP/4 | .. 257,167 395 64 165 | | |
| K2EWB/4 | .. 193,971 288 67 182 | | |
| AA4DO | .. 155,403 210 93 186 | | |
| KB4SSS | .. 152,544 249 68 156 | | |
| K4DLI | .. 120,450 195 75 144 | | |
| K4KUZ | .. 91,665 180 53 136 | | |
| K04G | .. 60,032 167 36 92 | | |
| WB4QNP | 28 101,280 223 35 125 | | |
| NN4K | .. 50,868 160 29 79 | | |
| N4HOH | 7 30,616 127 24 65 | | |

| | | | |
|-------------|---------------------------------|-------------|---------------------------------|
| KA5W | A 1,768,600 1312 121 357 | WBZV | A 3,521,032 2171 147 421 |
|-------------|---------------------------------|-------------|---------------------------------|

| | | | |
|------|---------------------------|--------|-----------------------|
| KW5P | .. 1,302,189 1160 103 310 | WB8RLX | .. 788,005 798 93 266 |
|------|---------------------------|--------|-----------------------|

| | | | |
|-------|-----------------------|---------|-----------------------|
| KD5GD | .. 746,548 767 96 265 | KC9AL/0 | .. 365,754 465 75 207 |
|-------|-----------------------|---------|-----------------------|

| | | | |
|-------|------------------------|------|-----------------------|
| KG5ND | .. 672,945 583 109 326 | NI0G | .. 175,950 258 80 175 |
|-------|------------------------|------|-----------------------|

| | | | |
|-------|-----------------------|-------|--------------------|
| K56OE | .. 243,648 316 90 198 | N0IGP | .. 12,012 71 29 55 |
|-------|-----------------------|-------|--------------------|

| | | | |
|--------|-----------------------|-------------|------------------------------|
| N38B/5 | .. 130,870 212 81 149 | NYBV | 28 145,440 357 32 112 |
|--------|-----------------------|-------------|------------------------------|

| | | | |
|----------|-----------------------|----------|----------------------|
| WB8NSA/5 | .. 115,830 242 60 135 | WB8ZRL/0 | .. 71,850 172 34 116 |
|----------|-----------------------|----------|----------------------|

| | | | |
|--|--|------|----------------------|
| | | W0SR | .. 64,800 163 34 110 |
|--|--|------|----------------------|

ASIA

JAPAN

| | |
|---------------|---------------------------------|
| JA1YDU | A 1,776,652 1593 121 267 |
|---------------|---------------------------------|

| | |
|--------------|--|
| (Opr. JHBNZ) | |
|--------------|--|

| | |
|--------|-----------------------|
| JR1GSE | .. 541,002 833 90 141 |
|--------|-----------------------|

| | |
|---------------|---------------------------------|
| JH1AJT | 28 1,097,235 2037 37 148 |
|---------------|---------------------------------|

| | |
|--------|----------------------|
| JR3NZC | .. 248,193 774 33 76 |
|--------|----------------------|

| | |
|-------|-----------------------|
| JA7TK | .. 411,642 1173 32 89 |
|-------|-----------------------|

| | |
|--------|------------------------|
| JA8SCD | 21 765,567 1556 37 134 |
|--------|------------------------|

EUROPE

FEDERAL REP. OF GERMANY

| | |
|--------------|-----------------------------|
| DL40K | A 357,713 606 76 205 |
|--------------|-----------------------------|

NORWAY

| | |
|--------------|---------------------------|
| LA9ML | A 23,883 150 18 39 |
|--------------|---------------------------|

YUGOSLAVIA

| | |
|--------------|---------------------------------|
| YT3AA | A 5,756,932 3580 154 482 |
|--------------|---------------------------------|

U.S.S.R.

| | |
|------------------------|--|
| EUROPEAN RUSSIA | |
|------------------------|--|

| | |
|--------------|---------------------------|
| UZ3AF | A 31,436 175 28 88 |
|--------------|---------------------------|

OCEANIA

GUAM

| | |
|------------------|------------------------------|
| NY6M/KH2A | 2,108,408 2466 90 206 |
|------------------|------------------------------|

PHILIPPINES

| | |
|---------------|-----------------------------|
| 4F3AAL | 14 165,512 715 30 54 |
|---------------|-----------------------------|

A22RA, C6/AA5AU, CS0CDP, CS0DJ, DF5PP, DJ3VC, DJ7EE, DK0CT, EA1ATQ, EA1AW, EA1CNL, EA1DVY, EA1ECE, EA1EMO, EA1KW, EA2BOT, EA3BSE, EA3CTB, EA3CYM, EA3CZM, EA3DMP, EA3DXD, EA3FDR, EA3FYD, EA5BK, EA5DCL, EA5DT, EA5EGT, EA5FQ, EA5FWG, EA5GHM, EA5GF, EA7AL, EA7BV, EA7GD, EA7DH, EA7DLC, EA7DLD, EA7DUD, EA7FZR, EA8ACH, EC3CTB, F11COA, F11CWX, F11DFI, HA7MY, HJ3MCM, HK3MAH, IK8JMS, IK7PV, IT9ZY, JA6FH, JA6LDD, JF2KUU, JP1RY, K2RXXN, K4HJT, K7EFB, KB0CCWV, KG50V, KJ4VH, KK4RV, KK9A, KP4BJD, LA2LY, LA2PGA, LA3VP, LA4ODA, LA5MT, LASTFA, LA6PB, LA9DFA, LA9FFA, LA9HF, LA9LQ, LA9LWS, LA9WBA, LA9XG, LU5EC, LU6AJA, LZ1DM, LZ1HH, LZ100, LZ1OS, LZ1SS, LZ1UK, LZ2A-321, LZ2DD, LZ2PS, N060S, N60U, N94Z, NW4Y, OH1AA, OH1MFH, OH1UN, OH1XX, OH3FW/6, OH3HS, OH3MIG, OH3NM, OH5MMG, OH6UC, OH6WI, OH7MFO, OH8MCE, OK1AMS, OK1DW, OK1GS, OK2BBQ, OK2BQO, OK2BO, OK2SG, DK2SKU, OK2ZU, OK8AGN, DN5EV, OZ1CID, OZ1LRT, OZ2TH, OZ9SN, PA0LRK, PA3BUD, PA3DRZ, PP5JD, PY2APC, PY3BD, PY30L

RA1AG, RA1AI, RA3AGF, RA3ATM, RA3DDA, RA3DJA, RA3DKE, RA3DOX, RA3DR, RA3NC, RA3VV, RA3XC, RA4PKI, RA4PKL, RA6L0T, RB0HZ, RB5CW, RB5GL, RB5GN, RB5IN, RB5NT, RB5RA, RL7PEO, RV6LD, RW9CFP, RW3DF, RW6AH, RZ6AYA, SM0CSX, SM0MC, SM2NTU, SM3CVM, SM3MHD, SM4DLS, SM4JUW, SM4LEB, SM4RDR, SM4SET, SM5CVC, SM5EME, SM6BHQ, SM6CDN, SM6HRR, SM6LIF, SM7FHJ, SP1MD, SP2GJ, SP3BVI, SP3CQD, SP3GRQ, SP3GVX, SP3HZG, SP3HY, SP3JIA, SP4AS, SP4BY, SP4GDC, SP4GFG, SP4KM, SP4LVG, SP5ATO, SP5DZE, SP5GNI, SP5N0G, SP6FB, SP6SP, SP6TPM, SP7DBI, SP7LHZ, SP7RQJ, SP8BBK, SP8BWR, SP8GEY, SP8HXN, SP8JMA, SP8LZD, SP8UFO, SP9-4315-KA, SP9-4557-KA, SP9-4558-KA, SP9AZL, SP9DGO, SP9EMI, SP9GDB, SP9JPA, SP9MRP, SP9REP, SP9TNZ, TH2X, U5FG, UAOFS, UA1CK, UA1NDI, UA1WBV, UA3ACT, UA3AGW, UA3AHA, UA3DUA, UA3EDH, UA3SBJ, UA3WCN, UA4CIN, UA4CKC, UA4FDD, UA4NCI, UA4PKN, UA4PNV, UA4QK, UA4QD, UA4YJ, UA6ED, UA6HHF, UA6HRZ, UA6LAX, UA6LQZ, UA6PAG, UA6WBF, UA9AKW, UA9JFR, UA9LFN, UA9MFN, UA9MGY, UA9OS, UA9TS, UA9TX, UA9UDC, UA9UY, UA9YND, UB4OZZ, UB4WW, UB566376, UB5II, UB5QFJ, UB5QJA, UB5QMD, UB5WXB, JB5ZEG, UB5ZMW, UC1AWP, UC1CWR, UC2AFD, UC2LB, UC2LR, UF6VR, U18BA, JL7V, UL7Z, UM8DX, UMBMGM, UO50OJ, UP2BG, UR1RYE, UR2OB, UR2RM, UR2RNT, UT4JWL, UT4IWA, UV3DF, UV3DLB, UV6HC, UV6HSU, UV9CF, UW3HY, UW3RR, UW3VA, UW9CD, UW9CH, UW9CW, UW9UE, UW9YM, UY5GG, UZ1AYX, UZ1WNA, UZ1ZWO, UZ3AWT, UZ3AXB, UZ3DWZ, UZ3DXF, UZ3DYU, UZ3TZ, UZ4AXQ, UZ4SWU, UZ6AZR, UZ6LWW, UZ9CXA, UZ9SWI, UZ9YXI, VE1ACK, VE7BSB, VK2DXI, VK2EKY, VU2IN, W4UW, W8RV, WA2HAL, WD5EHU, WA6HRK, WM7R, WW7M, XE3EB, Y21DG/A, Y21ML/P, Y22KI, Y2200, Y22TO, Y23FI, Y24EA, Y24HJ, Y24XD, Y25BL, Y25FI, Y25SA, Y25TO, Y26JD, Y26NL, Y31WI, Y36XC, Y37XJ, Y38YE, Y38YK, Y45RJ, Y53UL, Y53VL, Y54FL, Y54UI, Y55PG, Y52QH, Y75YL, Y78VL, Y87LP/P, YC5OH, Y06GFB, Y06KNT, Y09HH, Y1U1KQ, YV3BQS, ZS3UN/0H8DG, ZS6AXF, 9K2CS, 9K2RA.

CIRCLE 47 ON READER SERVICE CARD