

# 1981 CQ WORLD-WIDE DX CONTEST C.W. RESULTS

BY BOB COX\*, K3EST, AND LARRY BROCKMAN\*\*, N6AR

**J**ust when you thought the conditions were retreating into the past, Mother Nature smiled on the C.W. weekend. The conditions were not just good, they were outstanding. Comments from around the world testified to sunspot maximum conditions.

The overall All Band winner was the result of a close competition between 9Y4VT and CT3BZ. These two fine operators set an example for others in their operating techniques and duplicate-free logs. This year Richard Norton, 9Y4VT, took the world crown. He was followed closely by Martti Laine, CT3BZ. HK3A operated by Fred Laun of HS1ABD fame was third in the world, and N6BT/AH0, who hopes to return to Saipan in 1982, was fourth.

The top USA All Band score was decided by less than a minute's operating time on a good band. K1GQ edged out K8LX for top place. The top five USA scores were better than the "old" 1980 record of 2.83 MEG points.

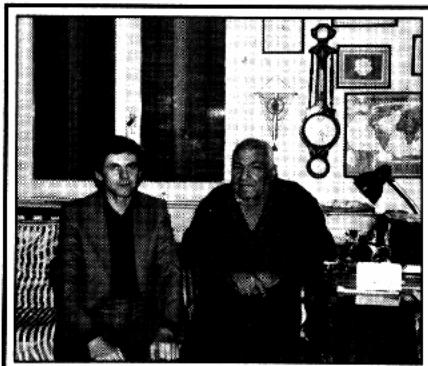
Four new continental record champions emerged: CT3BZ, Africa; N6BT/AH0, Oceania; UF6CR, Asia; & EA2IA, Europe.

Single band entrants were paced by LU8DQ's World Record 21 MHz score. Jorge's location and operating skills present a tough combination to challengers. The following stations set new records: EA8AK, Africa (1.8); 4X4NJ, Asia (1.8); UA9TS, Asia (3.5); JE3MCC, Asia (7); UA9ADQ, Asia (14); OH8SR, Europe (14); YU3ZV, Europe (21); KG6DX, Oceania (14); YV1DO South America (1.8).

In the USA, W1ZM (K1ZM op.) (3.5), K0RF (7), K6EWL (21), and N4ZC (28) all set new records.

In the Multi-Single category, P41E took the world top honors, thereby setting a new South American record. Second place winner, YU3EY and his crew, set a new European record in the highly competitive European Multi-Single division.

The new USA Multi-Op. Single Transmitter record holder was N4AR. The boys from Maine, N1AC, pushed Bill's crew to the wire before settling for second place. W3BGN rounded out the top three USA scores.



Ibrahim, SU1IM, the Grand Old Man of Egypt, is still active daily. On the left is Ville, OH2MM, a visiting op at SU1AA.

In the battle of the Goliaths, W2PV captured the top world Multi-Multi score—no easy feat for a US station. They were followed closely by N2AA. W2PV beat the old US record by over a million points. In Europe the top honors went to the gang at OH3AA. They also set a new European record, and to finish off the Multi-Multi records way out on Niue, ZK2RU set a new Oceania record.

The contest is made more interesting by expeditions. The trophy for Single Operator expedition goes to SU1AA operated by OH2MM. This trip not only gave contestants an uncommon country multiplier, but also a rare zone. The expeditions of the following made the contest a pleasure: N6BT/AH0, ZK2RU, V3MS, K8CW/C6A, 8P6J, VP2VHX, HH2VP, VP2MEV, J6LZA, W4UY/PJ7, SU1AA, CT3BZ, C5AAU, 9K2DX, 8Q7BP, FC0FOO, YJ8RW, K3SA/PJ3, 9Y4VT, W4BPD/C6A, 6Y5JW, OH0AL, HB0AYZ,



P41E, 9Y4KG, and FO0KP. Thanks for all your efforts.

The QRPP category is now well established. This year we had over 110 entrants. The All Band winner was AC2U. He beat out N3RS for the top World and USA position. In the future, if QRPP continues to grow, the committee will have to devise a better awards technique. Do you have any suggestions? If you do please write to the committee.

The World high club score goes to the Northern California Contest Club. This Club went from 9 MEG points in 1980 to over 160 MEG in 1981. Congratulations! Following in a very, very close second place was the Yankee Clipper Contest Club. One or two scores would have made the difference between first and



Nigel, G3TXF (left), and Roger, G3SXW (right), arriving in Alderney (one of the three islands that make up GU3) for the 1981 CQ WW DX CW Contest—operation GU3SXW.

second place. The Frankford Radio Club rounded out the top 3 club scores in the world. The top DX club score was the Lithuanian Contest Group, followed by the competitive scores of the Voroshilovgrad Radio Club (UB5) and the Kaunas Polytechnic Institute Radio Club.

The contest community around the world will remember this fall when the signals are strong and clear that a few of our friends are not present. W2PV, UI8LAG, and W3KT have become Silent Keys. Each one contributed to what the contest stands for: enjoyment and excellence. We will miss them.

The following people devoted much time and effort to verifying the results: Frank, W1WY; Terry, N6CW; Glenn, K6NA; John, K1AR; Jim, W7EJ; Dave, K2SS; John, K9DX; Fred, AD6C; Doug, KR2Q; Gene, N2AA; Reg, N6SV; and new committee members John, K2VV; Ed, N3ED; and Tree, N6TR.

We all wish you the best of a good contest season.

73, Bob, K3EST, and Larry, N6AR

\*6548 Spring Valley Drive, Alexandria, VA 22312.

\*\*7164 Rock Ridge Terrace, Canoga Park, CA 91307.

**U.S.A. QRM**

Working ZK2RU for first contact with Niue in 47 years... W4DGJ. Thrill to work VQ9 & HZ long path, 7 MHz... K4PI. Best contest of them all. My first time for CQ WW CW; too bad it's always on Thanksgiving... K5NW. Precip static made me yearn for my old quads... K6NA. Lay down on Saturday night for 2 hours and wound up sleeping for 13 hours... KD9E/6. Tough using a KT-34 on 40/80... WD6EWG. My neighbor's new video-recorder did me in... WB6EXW. There is nothing quite like the "WW" for competitive sport... W6US.

Wait till next year! . . . N1AC Worked CT3BZ on 5 bands—sure hope that bottle of wine comes in soon . . . K1XA. Hitting 100 QSO's/hr on 28 MHz, WAC on 7 MHz with the Butternut vertical . . . KQ2O. This still remains the premium DX contest of the year . . . K2TD. Next year we're going to use a beam and linear . . . N4RJ. FB8WG called me on 15 . . . W5RRR. Got to be pretty good at replacing diode stacks in SB-220's during the contest . . . NC6T. This year HZ1HZ tail-ended a European, calling me . . . W7IR. Enjoyed the PREMIER CW Contest of all . . . KD7H. In Washington State we had only a brief 10 meter opening to Europe—a hint of the future . . . W7WA (*Opr.* of K7RI). It seems the rarer the DX station, the longer he takes to identify . . . N7RO. In the desert the heavy rain wiped out my balun . . . K7NO. Maybe it's time to reconsider the RST exchange for contests . . . K7FC and N7ES. A beam and Extra Class ticket sure help on 40! . . . K7ABV.

Along with my 160 meter log please find list of serious violators of the DX Window—request you start disqualifying those who take part . . . K0PP/7. New countries, lots of activity, antenna testing—that's the CQ WW . . . KG7D. Conditions so good it was hard to pick the right band to be on . . . K8LX. 48 straight is tough on the body . . . N8II. Caught the flu by preparing so frantically for the Test—just exhausted . . . K8GL and W8UA. My indoor dipole for 10 snagged 152 QSOs . . . W8GOC. Fun? Cracking some BIG pileups with 200 watts! . . . N8BC. A hot final amp helped in my unheated garage . . . K8BA. 250 QSOs with a straight key—whew! . . . WD8IXE.

When the amp blew, I drove 120 miles for tubes and got back in the Contest . . . WD8AUB. Simply, thanks to all for a great weekend . . . W8LRL. Zones 17 and 18 called me on 80 meters! . . . K9BN. First contest—I'm hooked! . . . KC9T. Finally got that Zone 34 . . . AKØM. Really great runs to Europe on 40 . . . KØRF. We were killed by severe line noise on all bands. It came up one-half hour before test . . . N5RM. JA signals at dawn on 3.5 MHz Sunday morning among loudest ever heard . . . K1ZM. Biggest thrill—no breakdowns! . . . A1E. Worked TG9AC for number 86 top band . . . AA1K. Are you sure 10 meters is on the way out? . . . KA1CFC. My Extra Class license came in the mail 7 hours before start of contest . . . WA1FCN. Worked CT3 as first DX on 80 meters . . . KA1CZF/QRP.

DX ORM

This is my swan-song contest, since I am entering the OTC this year . . . OH2BH (*Opr. of CT3BZ*). Best condx ever on CW weekend; ran out of stations on Sunday . . . VE3BMV. Lazy, tired and cold = me . . . VE1AIH. Great fun—CU next year . . . VE6OU. Lost rotator at 4 hours into contest and amplifier 10 hours later. Thanks a lot Murphy . . . KH6ND. I must have been popular. A lot of stations wanted to work me again and again and again . . . VE1BEC. Did enjoy your contest very much . . . VE2DPO. Bit confusing at first with stations using short figure "A" instead of "1" . . . VO1AW. No time for full effort, but couldn't stay away entirely! . . . VE1BCZ (*Opr. of VE3UOT*). Not good propagation in Melilla . . . EA9JV. Extremely difficult working zones 6, 7, 10, 12, as these are completely blotted out by U.S.A. stations . . . ZS2RM. JT60UB QSO! . . . VE2GCO. Much less intensive contest effort this year after major efforts as 5W1BZ . . . ZL1AIZ.

U.S.A. beaming east while Europe beams west; no one beams south . . . VK2AYD. No permission for 3.5 or 7 MHz . . . OH2MM (*Opr. of SU1AA*). To those who did not get in the log, I will be back next year . . . N6BT/AH0. Biggest thrill was having 8Q7BP answer my CQ . . . 4X6FY. Vy nice condx first night (160 M) . . . EA8AK. Almost no CW activity from Africa, So. America, and Caribbean . . . VE1TG. Condx mediocre (3.5 MHz) . . . KP4KK/DU2. Condx much to be desired on 28.100–28.600 (Australian Novice freq.) . . . VK5NNV. Conditions couldn't really have been better on 40 M . . . VE3KRN. The activity was tremendous overall with good condx into Europe (7 MHz) . . . VO1QU. Much more courtesy than courtesy . . . KH6JWK. Surprised with 579 from VP8ANT (1.8 MHz) . . . VE3INQ. Hard to believe the multiplier on 7 MHz equal or greater than 21 and 28 MHz . . . VE3IY.

100 m.p.h. winds blew down 40/80 M inverted Vee on 2nd night and prevented turning the beam . . . FC0FOO. Fantastic contest; for the first time over 2000 QSO's and solid total score . . . ON4FD. My new antenna mounted late Friday afternoon . . . OZ8AE. Think the time has come to consider a bug-key . . . G3XTT. K9GL was audible at 0500 GMT

on 21 MHz . . . G3RAU. Band opening of 15 appeared like a sunrise. First a few weak signals, and within a few minutes the band was roaring . . . DK3GI. Made 17,000 points more than last year . . . Y34SE. Propagation was unexpectedly good . . . TF3YH. Confusing when KP4KK/DU2 and UK1PGO both call on the same frequency (3.5 MHz) . . . SM4CAN. Was delighted to work VP8ANT for an all-time 1.8 MHz new country. Also made top band WAC for the first time . . . GW3NYY. First attempt and found the matchsticks in the eyes needed replacing often . . . G3XKQ.

It is very clear that it is impossible to work much DX with poor antennas. See you next year with new "antenna farm" . . . HA0DU. Beautiful Contest, big QRM . . . I2WDB. In my Zone blackout in electricity for 6 hrs . . . IS0MVE. Vy interesting contest. First time on CW . . . OH5OZ. Copying code after 47 hours without sleep is a bit difficult. Duplicate problem is getting very bad . . . OH8SR. Propagation good this year. None of the usual power line or storm damage. Expect some low band record to be broken . . . OK2BFN. Hard work for 48 hrs; I vote for some rest period . . . 4N1U (YU1PKC). Bad condx second day and linear amp went QRT . . . YU3EW.

We surely need a beam on 40; perhaps next year! . . . *F3TV*. Excellent QTH on the island of Alderney went someway in compensating for mediocre antennas . . . *GU3SXW*. Excellent band opening and activity from U.S.A. and Canada on 40 meters . . . *HG5A*. The signals from USA were better on 7 MHz than on any other bands—worked 22 states! . . . *I2UIY*. Wish we had 160 M! . . . *SM5GMG*. Biggest thrill—every QSO with my 3 watts and dipole only 2 meters up . . . *OK3CAA/P* (QRP—160). Conditions were so FB on low bands that we forgot to look after multipliers . . . *OH7AB*. Many U.S.A. stations on all bands . . . *UR2RHF*. Thanks for nice contest. My first time entering single band 80 M, very FB! . . . *UR2QD*. Very FB conditions on 28 MHz . . . *UA1DF*. QRP power, QRP antennas, QRP time, but QRO fun! . . . *VE3KZ*.

## **STATION OPERATORS**

**AA3B** & **WA3NRU**, **WB3DJF**, **AA4KT** & **AA4H**, **N4DW**, **AA6T** & **N6BSU**, Net. **AF6S** & Net. **AH6BK** & **K7T**, **WB6SHD**, **AD8I** & **K1LT**, **K8ND**, **KABHF0**, **WB8YDS**, **WB8DGL**, **DK8SU** **DF7TV**, **DL3SAS**, **DL5TT**, **DL5TV**, **DL9SA**, **DK8TU**, **DK5GB**, **KABHF0**, **DK601**, **DL7ZN**, **DF5GX**, **DL7PL**, **DQ2V0**, **DK1PD**, **DL8JR**: **DL7AE**, **DI7ON**, **DL7SI**, **EAC3NY**: **DJ2YE**, **DK3KD**, **EAC3MM**: **EA3BN**, **EA3BRL**, **EA3AC**, **EA3CRX**, **EA3CVD**, **EC3AEF**, **EC3AFM**, **EC3AT**, **EAC3RCR**: **EA3AIR**, **EA3ALV**, **EA3AZY**, **EA3IH**, **EA3JA**, **EA3OG**, **F3TV**, **F5IN**, **FEARC**, **FB6EE**, **FK6KAW**: **F200**, **F6ASS**, **F6BBO**, **F6BPX**, **F6CWN**, **F6DJ8**, **F6DZS**, **F6EBN**, **F6EPY**, **F6FLV**, **FG6DK**, **FG6GIF**, **FG6GWV**, **F6HCU**, **F6HMO**.

**G3SSO**: **G3FXA**, **G3MZV**, **G3NKS**, **G4BFZ**, **G5EBU**, **G6DV**, **G6UW**: **G3ZAY**, **G3ZRJ**, **G4BUO**, **G4FAM**, **GGJC**, **G3NXD**, **G3RLF**, **G3TOD**, **G4TKW**, **G4AAL**, **G4NEC**, **GB2MM**: **G3Z1**, **G3XVR**, **G4DSF**, **G4XL**, **GIU9Y**, **GIU3HFN**: **G3JMB3**, **G4CQ-HY**, **GIUE4DN**, **G3SXW**: **G3SXW**, **G3TXF**, **GS3JK**, **GS3JK**, **GS3UKS**, **GS3WPV**, **G4CEB**, **G5CMX**, **G5DGY**, **HA9KOL**: **HA9OL**, **HA9OT**, **HA9PQ**, **HA9RC**, **HA9RS**, **HA9RX**, **HA9KHW**, **HA9HW**, **HA9F**, **HA9IR**, **HB9AJ**: **HB9AQF**, **HB9BAQ**, **HB9BRW**, **HB9BWN**, **HB9CBT**, **HB9C10**, **HB9AYZ**, Stoecki i. Schuetz, **HE0ZH**: **HB9RE**, **HB9Z**, **HG5A**: **HA5FM**, **HA5FN**, **HA5GF**, **HA5J**, **HA5NM**, **HA5UM**, **HA5PP**, **HATRY**, **Budai**, **HB6V**: **Laszlo**, **Lezla**, **Geza**, **Lajos**, **Gyozo**, **stvan**.

**J2UYI** & **J2PJA**, **JAA3YE** & **JAA3JF**, **JAA3WL**, **JAH6FV**, **JAI1YC** & **J1G0B**, **JK1JSS**, **JE2ROU**, **JHBHMZ**, **JAYBK** & **JAR8WW**, **JABTU**, **JAC9H**, **JHT7WUH**, **JR7LH**, **J71SE**, **JAY1AB** & **JAO1GC**, **JK1AES**, **JE20Z**, **JAX3IS**, **JR6JOE**, **JHD0RT**, **K1EB** & **W1XK**, **K1GSK** & **WB1FFP**, **J71SE**, **K1B1W**, **K1RU** & **K1YR**, **K1XA** & **W10D**, **AA2Z**, **K1XM** & **K1PR**, **N1EE**, **K2BA** & **K8BMF**, **K2TD** & Net. **K3OMR** & **W3YD**, **WB3KKX**, **KA8GCD**, **K3ZFU** & **K3FR**, **K4BY** & **K4YP**, **K5KG** & **KD4M**, **NA4KNN**, **K5T**\*, **K7VWV**, **NU50**, **WS5G**, **K5RX** & **KM5R**, **K6ANP** & **K6LRN**, **K6HJK**, **NEDCU**, **K6DCD** & **K6KCM**, **K6MA**, **NGST**, **WB6JH**, **K6HMH** & **K6AHC**, **K6SG** & **KV6H**, **K6XV** & **K6PJY**, **N6FJ**, **N6MV**, **K7CWS** & **WB8EFCN**, **K8A0M** & **AC8W**, **A1BD**, **KBD0**, **KRMJZ**, **KC8KO**, **KJ8A**, **WA8ARS**, **WA8MEC**, **WB8CRR**, **K8US** & **WD8JLR**, **KR8WF** & **K0FCP**, **KU0IA**, **KC8KL**, **KM0L**, **KJ8O**, **KA3GIK** & **WB3FIZ**, **KABHUZ** & **KABHX**, **KB2CR** & **KC2IX**, **WA2HYU**, **WB2CAA**, **KB3MM** & **N3ARK**, **KB6ST** & **K6CSL**, **N6CVO**, **KB6HF** & **K0INR**, **KF8H** & **WD8EWG**, **KJ5W**: **AK5V**, **K5EE**, **KV5Y**, **N5WS**, **K1TAF** & **AL7DH**, **LB1HK**, **KO20** & **K2BK**.

**L1A1:** L44K0, LARII, LA901, LZ1KKKA Mihova, Mihov, Obretenov, **LZ2KEF:** LZ2CC, LZ2PP, LZ2HE, LZ2DF, LZ1A310, LZ2KLRL Marinov, Petrov, Zamfirov, **LZ2KSQ:** Kirilov, Nikolov, **N1AC**&K1UO, W1IHN, N1TSF & K1SF, K1DKX, K1FIR, K1IU, K1ATERF, N1ACLU, **N2GC**&N2KW, WA2BOT, WB2RNT, **N4AR**&N1GL, K1NA, N4KG, W8KIC, WA8TBO, **N4K**& A2JE, K1J4N, W4FDA, W4ORT, WA4GSF, **N4RJ**& N4HI, N4OL, N4PN, N4TZ, W8ZF, **N4RZ**& N4RA, K4MCN & K4CWQ, NO4R, **N5CW**& K1LL, K1TV, **N6DHV**& K6RIR, N6IC, WAGTLA, **N6IG**& N6NE, **N6MG**& K6DPY, **N6ND**& N6SO, N6ZL, W6UOF, WA6DBC, **N6RZ**& W6NV, N04J & K4MNS, KS4Q, **N6CT**& N6FH, W6CCP, WTGSE.

**0E1JB**& **0E1DS**, OH2B8N, OH2B8O, OH2BX, OH2JA, OH2VY, **OH2VY**& OH2BAZ, OH2BEN, **0H3AC**: OH3BJ, OH3ST, **OH5BM**& CH5BB, OH5LP, OH5UQ, **OH7AB**: OH7PF, OH7UE, OH7VR, **OH8AV**: OH8PF, OH8SW, **OH9PH**& OH9UW, **OH8AL**: OH2D, OH2FS, OH2LP, **OK1KQJ**: OK1AYP, OK1AZG, OK1BY, OK1DC, OK1DLE, OK1DVb, OK1CM, OK1IMP, OK1MR, O3AX3S, **OK1KRG**: OK1ADs, OK1ALW, OK1AWZ, OK1DIM, OK1DWa, **OK1KS0**: OK1EZA, OK1FAM, OK1JCW, OK1JB, OK1JKT, OK1JWA, OK1SF, OK1WT, **OK1KTW**: OK1ADU, OK1DKA, OK1MSNs, **OK1KUA**: OK1ASQ, OK1-2231, **OK1KYS**: OK1DEY, OK1FRE, **OK2KYC**: OK2BSK, OK2BUK, OK2SMO, **OK3KEE**: OK3CGG, OK3CTL, OK3MB, OK3TKA, **OK3KD7**: OK3CEs, OK3TBa, OK3TCf, OK3TCV, **OK3RJB**: OK3CKW, OK3CD, OK3CCR, OK3SEM, OK3TCL, OK3TDO, OK3-26627, **OK3RKA**: OK3CPc, OK3TAM, OK3TDP, OK3-2616, OK3-27254, OK3-27256, **OK3EDR**

**ZUH1ET**, UC3ZON, UC2SZN.  
**PAG6N** PA0ERA, PA0GAM, PA0GIN, PA0VAJ. **P41E**: K000, K3NA, K4BAI, N4TO, W60AT. **R51**: Club. **SK5AA**, SM5ACQ, SM5APS, SM5FUG, SM5KAS. **SK0LM**: SM0XQV, SM0DRD, SM0FSC. **SM2JUR** & SM2BJE. **SM5MG** & **SM5GLC**, SM5GMU, SP2ZFJ, SP2ASJ, SP2AP, SP2026 EL. **SP3KTC**: SP3CC7, SP3PJI, SP-1151-PO. **SP5KTR**: SP5DWE, SP6SA, SP0083WA. **SP6AZP**: SP6FJG, SP6HEK, SP9PDG, SP9CSW, SP9-2291. **UK1TBH**: UA17AL, UA1TDS, UA1UG. **UK2AAP**: Club. **UK2AAO**: Club. **UK2AAX**: UC2AFX, UC2008-119, UC2009-523, UC2009-523.  
**IJK2ARC**: Getimann, Novikov, Solobuk. **UK2ARM**: UC2AAP, UC2009-575, UC2009-593. **UK2BAG**:

**UK2ABC**: Gehmann, NOROV, Sonjog, UK2ABM, UO2AM, UP2AM, UP2AN-375, UC2009-595.  
**UK2ABG**: UP2AB, UP2BAE, UP2BV, UP2BZ, UP2DT.  
**UK2BAP**: Club, UK2BBB, UP2BJB, UP2MB, UP2PAK, UP2PX,  
UP2P38-727, UP2P38-892, UP2P38-938, UP2P38-1039, UP2P38-1052.  
**UK2BF**: UP2BJD, UP2BIY.  
**UK2BQ**: UP2BAT, UP2BFV, UP2BZY.  
**UK2BX**: UP2BJQ, UP2P38-1051.  
**UK2BC**: UP2BJK, UP2P38-728, UP2BDW, UP2P38-271.  
**UK2CM**: UP2BFN, UP2BSK, **UK2CO**: UP2P38-1050.  
**UK2DZ**: UO2GAE, UO2GFM, UO2P37-168, UO2P37-261.  
**UK2GJL**: UO2GEJ, UO2P37-91.  
**UK2GK0**: UQ2GCT, UQ2GFD, UQ2PP, **UK2GKW**: UQ2GKM, UQ2OC, UQ2O1, UQ2P37-83.  
**UK2PAM**: UQ2PAM.

**UK2PAO:** UP2BHN, UP2BIC.  
**UK2PAP:** UP2BCI, UP2BIM, UP2NV, UP2OX, UP2038-1665, Petras. **UK2PAT:** UP2038-439, UP2BCW,  
UP2RCO. **UK2PRB:** UP2BCU, UP2038-1541. **UK2PCR:** UP2BRT, UP2BCR, UP2RCT, UP2RDFE, UP2RFY.

**UK4ACE**: Club. **UK4FVA**: U4AFLB. U4AFCD. U4AFCM. U4AFDV. U4A14B-273. **UK4LAZ**: U4ALAJ. **U4ALBE**. **U4ALBN**. **U4ALCH**. **UK4PNZ**: Club. **UK4WAA**: U4AWBC. U4AWBG. U4AWBV. U4AWBY. U4A095-510. **U4A095-511**. **UK4WAB**: Club. **UK5AAZ**: U5BAAL. U5B5ABZ. U5B5ADN. **UK5ECT**: Club. **UK5FAB**: U5BFCR. **U5BSFL**. U5B707-677. **UK5GKWW**: Club. **UK5HAB**: EZ5HBB. U5B7071-73. **UK5IGL**: Club. **UK5MAF**: R5BMUV. U5BMDC. U5BMJX. U5B5NMN. U5BMNX. U5BMOA. U5Y5LK. U5KMC0. U5R5MN. U5R5MTS.

**UK5MCP:** UB8BDD, UB5MDJ, UB5MLV, UB5MPD. **UK5MCT:** UB5MRI, UB5MMR. **UK5MDI:** UB5MBM, UB5MJS, UB5059-5, UB5059-6. **UK5MEG:** RB5MH, RBSMUQ, UB5MAQ, UB5MRB. **UK5NAJ:** UB5NBE, UB5NDA, UB5057-273. **UK5OBE:** UB5064-1353, UB5064-1362, UB5064-1528. **UK5OCI:** Club. **UK5UDX:** UA4LAR, UB5SLR, UB5RCA, UB5UCE, UB5UCF, UB5065-2. **UK5YAA:** UB5YAE, UB5YAH, UB5YAR, UB5YAW, UB5YBX.

**UK6AJN:** Club. **UK6APP:** EZ6ACB, EZ6ADW, UA6ARX. **UK6ARA:** UA6APL, UA6APU. **UK6FAA:** Club. **UK6FAB:** Club. **UK6LAA:** Kozadaev, Khanin, Korovkin, Liokumovich, Larionov, UB5073-1133. **UK6LAZ:** UA6LHK, UA6LIG, UA6150-1067, UA6150-1060, UA6150-1070. **UK6LEZ:** UA6HLP, UA6LJE, UB5ILW, UB5MGZ. **UK6LTA:** UA6LAM, UA6LWD, UA6LYO, UA6150-621, UA6150-686. **UK6PA:** Club. **UK6DA:** Club. **UK6AA:** UA5AIS, UA9AJD, UA9AKI, UA9ALP, UA9QBS. **UK6ACP:** UA9AAP, UA9ADE, UA9ADY, UA9ADH, UA9AGY, UA9AGY, UA9165-1635. **UK9ADS:** Club. **UK9ADY:** UW9AT, UA9AFZ, UA9AFH, UA9ADH. **UK9AC:** Gordievskiy, Zaev, Kovalyov.

**UK9FER:** UA9FAF, UA9FAL, UA9FAJ, UA9FDW, UA9FGJ. **UK9OAZ:** Club. **UK9OB:** UA9OCK, UA9ODH, UA9145. **UK9SB:** UA9SCH, UA9SHU. **UV9SA:** UV9SG, UV9SG. **UK9WAT:** Club. **UK9QAA:** UA9QDL, UA9QWB, UA9QWN, UA9Q98-74. **V3MS:** W8CPC, W8UUN, VE1DXA: VE1BSE, VE1FH, VE1MX, VE1UG, VE1YX, VE3MFA & VE3UE, VE3KTL, VE3LWL, VE3MFZ. **VE3OCU:** VE3MHA, VE3MPX, VE5DX & VE5AAD, VE5RG, VE5KK, VE7WJ, VE7Z2, W7XN, W7ZR.

**W1B1 & N1BH:** W1RM & K1JD, KA1BUO, W1BH, W1WEF, W1XX, W2RD & W5Q, W2UJ & N3KR. **W3BGN & K2RM:** KC2X, WA2ZYK, W3KF0 & K2LTJ, W3MZ & KA1COM, KD3H, W4BDP/C6A & KA3DAG, W4NL & K3AO, K3KG, K4J, KA4, KA4W, N4TX, W5RR & K5GN, KG5U, KN5F, KN5H, WB5WHR, W6BSY & Net. **W6OWD:** AG6D, N6BV, N6BZA, WB6DSV, WB6UWA & W6UW. **W6YX:** N3ER, WAD6TY, W7NI & A1TB, W7RX & K7XX, W7YQZ, W8FFF, W8FN & A8P, W8WE: AJ8T, KABFRO, K4BDM, KB8MG, KC8AU, KC8NH, N8BAZ, NBCJR. **W8FN & K1OK:** W8WV, W8NA & W8AR, W8CW, WB6FNO, WB1CNM & N1VBZ. **WDBPNF & K8RMN:** NC8ID, W8PBS, W8ZK, W8BSNF, WA8VTS, WB8MDG, WL7K, K1LZC.

**XE2BC:** N6OP, N6TU, Y23DL & Y23CL, Y27DL, Y32ZN: Y32UG, Y32WN, Y41ZA: Y23BA, Y41VA, Y41ZA, Y41ZF & Y21CF, Y43ZK: Y22BK, Y32VG, Y592A & Y45SA, Y59YA. **Y08KGA:** Y08DD, Y08DAV, Y08ER, Y08KGM: Y08AIN, Y08CMB, YU3EY & YU3BO, YU3FK, YU3SD, YU3MY, YU3TVI, F5QQ. **YU4EXA:** YU4WFT, YU4VRA, YU4WFN, 4A2Q: XE2AQ, XE1BGM, XE2GDD, 6Y5JW: VE3DAP, VE3IYS, 9Y4KG: W6KG, W6OL.

## STATION OPERATORS Multi-Operator Multi-Transmitter

**A16V & NB6G, N6KT, KB6F, W6MYP, W6UYKM, W6EEN, WB6FB1, K6KLY. DLOKF:** DJ8FR, DF3LP, DJ2BV, DJ4FZ, DK8LE, DF6LJ, DJ7SW, DL5LC, DK8LD, DK7LJ, DF6LH, DJ4SO, DL2ZT, DF3LZ, DL2NF, DJ2LJ, DK9XU, FOOKP, N6SPN, N6TV, AA6C, HZ1AB, K0JJ, W7JK, WB8MOA, N6OL. **JAY1JA:** J10HP, JF2FDH, JH7NZU, JHGCGR, JA1YHA: JH4TS, JH1AEB, JK1LSE, JA4OYR, JH1UEJ, JA1YXP: JH0NPR, JH40WG, JH7WV, JA0WGG, JR2HOM, JA2YEF, JR2WP, JR2TPD, JR2TA, JR2UWZ, JE2FRT, JE2KIH, JE2RLI, JE2RWF, JE2UGT, JE2WBH, JE2WBZ, JF2ACB, JF2ERH, JF2NFC, JF2NTV, JF2RV, JF2VRV, JF2GMC, JF4VQZ, JH6RPZ, JA9INFO, JA9SSY.

**JAY3BF:** JE3PAS, JE3PED, JF3KKO, JF3PG, JG3GKK, JG3GQB, JG3IUG, JI3PB, JI3KZ, JH4CES, JH4FF, JH4AGT, JH5BJT, JH5JKH, JH9ATF, JA9TQZ, JA3-30356. **JAY3Y:** JE3B3A, JH3BAL, JH4TDH, JH4B5M, JH3FPR, JH3PKS, JF3PBM, JH3PRR, JA5M0U, JE3RAL, JE3MXO, JH4PAM, JH3IOJ, JH6JNF, JE3MAS, JH4WER, JG3LLB, JF3FP, JH3VOT, JH3KEG, JH4ZB, JA30DL, JA4YEB, JA4YJ, JE6ASN, JH6MWG, JH6LYN, JH6RAD, JH6WF, JE6LFO, JE6SYA, JG1TAW, Kamito. **JAY7AA:** JG1GH, JR2NKG, JH7AEF, JH7CUO, JH7GFO, JH7HWR, JH7LIS, JH7UJN, JH7WTC, JR7OMD, JH7SEI, JF7AWM, JH8BME, **JAY9BA:** JA9DZS, JA9LJ, JA9LNJ, JA9LWBL, JA9OTX, JA9UAD, JH8CAZ, JH9DUU, JF1YFJ: JH10GC, JH1UIC, JH1UJC, JH1GFC, JE10DO, JH1AJT, JK1KZA, JH1KYN, JH1YDT: JF1EA1, JK1CPG, JK1FLU, JH6UUN, JA0VSH, JH0HN.

**K10X & N1RC:** WB8BBT, K1VR, K1RX, W1FV, K1CF, KBT1, K1ZZ & K1BW, K1CC, K1GX, K1TC, W1GNC, AK4L, K2TR & K2WR, K1CO, K2UA & W3UX, N3RD, N2ME, N2BA, WA2GM, WA2SF, K6XO & W1ARR, N6AUAV, AA4KB, K6DZL, K6ZM & K2PV, AK6T, N6BL, WA6JCZ, K9GL & K9BG, WB9T1Y, K9RS, WD9IC, W9OFV, K9NO, KJ9W, K9HMB, WB9CAS, K9PW, AG9A. **KD6NH & N6KB:** KN6M & AH6Z, AA6DX.



Operators of YW5A: (standing, left to right) John, YV5AAQ; Ray, DL2GG; Billy, YV5ANE; Edwin, YV5HUJ; Mike, YV5AAZ; Hermes, YV5DFI; Piti, YV5NN; Mauricio, YV3BDQ; (front, left to right) Jorge, YV4BMV, and son; Ali, YV2BE; Napo, YV5BNR; and Joe, YV5ANT.

K6DT, K6JV, K6GYF, N6PO, W6MFZ, N6DN, K6KXN, N6RPL, W6AVS, WB6KNU, Betty, Sonya, N2AA & K2GL, K2BQ, K2NG, K2GM, K2TW, K2SS, K2TT, KR2J, KR2W, KU2M, K5NA, N2RM & N2ATX, N2MM, KB3TN, N3RW & W3YFV, N5RM & N5AM, A4SC, K5U, K5MM, KM5X, N5BQD, N6R0 & N6XI, N6CN, WA6DIL, WA6WEQ, K6XM, K9LB, KB7SC, N9NM & K9UWA, W9LT, N9NC, KC9C, K9FN, N9NS, K9AF, K9JF, WB8STD, W9RE, WB8POH, W9ZRX, W90BF.

**OH1AA:** OH1LF, OH1LG, OH1MD, OH1NH, OH1OJ, OH1OC, OH1RM, OH1SV, OH1SY, OH1TY, OH1WR, OH2PQ, OH3OM, OH3ZE, OH5NG, OH2AW: OH2BPN, OH2BPW, OH2BQS, OH2JA, OH2BBH, OH2BEO, OH2HJ, OH2EE, OH5UX, OH5XL, OH6UM. **OH3AA:** OH2CP, OH2DT, OH3U, OH3J, OH3XT, OH3WS, OH3XS, OH3TO, OH3YI, OH3Q, OH3WZ, OH3KS, OH3RF, OH3IO, OH3XZ, **OK1KPU:** OK1AXA, OK1JAX, OK1JDX, OK1LD, OK1NMW, **PA6WW:** PA3ABA, PA3AOJ, PA3ADM, PA3BFM, PA3BFX, PA3BIL, PA3BTH, PA2DXY, PA2PMF, PA0AJ, PA0IMA, PA0JWK, PA0LBV, PA0SKP, PA0PDV, PA0PSK, PA0KCR, F6DXE, U2R, UR2QF, UR2FU, UR2HU, UR2IG, UR2HB, UR2JW, UR2MS, UR2RAM, UR2REC, UR2RKF, UR2RMB, UR2TAB, UR2-083-910. **YTR:** YU1EW, YU1UU, YU1OF, YJ70QI, YU70QZ, YU70BC, YU70FK, **YU3APR:** YU3FR, YU3FK, YU3DM, YU3BO, YU3SC, YU3UX, YU3ED, YU3TVI, YU3EY, **W1YN & A61C:** K1A1, K1A10, **W2PV & K1DG:** K1JX, K1AR, K1C10, N2NT, WA2SPL, K2SX, K2XA, K3UA, W3ZAS, **W3GM & K3GM:** K3OA, K3ND, K3FD, W3FV, N3VV, N3AMK, WB2YOF, KB3GJ, **W3PL & A13M:** K3DI, K3RA, K3EST, WD4AXM, K3RV, KT4W, WA3UXU. **W3NX & AD3V:** N8NA, **W6XX & W6TPH:** AE6U, N6QW, 4X4WN, N6TH, K6TMB, N6OK, W6CF, K6HNZ. **WB8AH & WA8RBW:** K0FV, N0NO, K0TG, N0BIH, KM90, W8RIF. **ZK2RU:** K6RU, AA6AD, W6VG.

## U.S.A. Club Scores

Northern California Contest Club	160,376,446
Yankee Clipper Contest Club	159,837,851
Frankford Radio Club	155,503,310
Potomac Valley Radio Club	70,587,887
North Texas Contest Club	27,056,996
San Diego DX Club	19,767,727
Murphys Marauders	19,726,822
Mad River Radio Club	19,030,623
III-Wind Contesters	15,278,585
Southern California DX Club	14,818,780
Southeastern DX Club	14,578,462
Northern Illinois DX Association	10,981,070
Texas DX Society	10,102,624
Willamette Valley DX Club	8,654,889
Eastern Iowa DX Association	8,418,034
Rubber Circle Contest Club	8,322,335
Greater Milwaukee DX Association	7,407,480
Kansas City DX Club	5,146,050
Central Virginia Contest Club	5,049,640
Northern Ohio A.R.C.	4,989,705
Albuquerque DX Association	3,661,073
Michigan DX Association	3,608,046
Northern California DX Club	3,554,105
Vulcan DX Club	3,364,102
Central Arizona DX Association	3,287,775
Northern Ohio DX Association	3,138,514
Colorado Contest Conspiracy	2,994,662
Alamo DX Amigos	2,962,474
Western Washington DX Club	2,753,681
Neenah-Menasha A.R.C.	2,478,717
Rochester DX Association	2,270,349
Sheboygan County DX Association	2,047,596
Gloucester County A.R.C.	1,931,336
Lynchburg A.R.C.	1,908,092
Northern Florida A.R.S.	1,829,554
Mississippi Valley DX and Contest Club	1,735,452
DX Association of Connecticut	1,333,377
Meridian A.R.C.	1,311,858
Hart House A.R.C.	1,305,985
Southwest Ohio DX Association	1,286,995
Northern Florida DX Association	1,027,598
Montgomery A.R.C. (MD)	882,283
Long Island DX Association	784,397

Four Lakes A.R.C.	758,424
Redwood Empire DX Association	566,927
Kansas City DX Association	533,849
Red Stick DX Association	443,457
Dauberville DX Association	237,267
BARRA (Buffalo, NY)	232,773
Eastern Michigan A.R.C.	211,564
Central Iowa Radio Amateur Society	190,126
Mid-Ohio Valley A.R.C.	180,328
Cuyahoga Falls A.R.C.	75,872

## DX Club Scores

Lithuanian Contest Group	22,685,926
Voroshilovgrad Radio Club	19,432,964
Kaunas Polytechnic Institute R.C.	19,336,688
Southern German DX Group	17,578,259
YU DX Club	14,258,804
Halifax A.R.C.	10,708,702
Rhein Ruhr DX Association	9,649,907
Alaska DX Association	9,213,800
The Bullmertz (Sweden)	8,769,208
Ontario Contest Club	8,469,309
Tallinn Radio Club	7,731,089
Fraser Valley DX Club	7,379,093
CW YV Club	5,625,000
Israel DX Club	4,199,232
Marianas Amateur Radio Club	2,932,220
Northern Lithuania DX Group	2,851,453
Saar Pfalz DX Club	2,386,318
Danish DX Group	1,924,050
A.S. Filarat DX (Romania)	1,782,274
Grupo Argentino de Radiotelegraphia	1,771,479
SP DX Club	685,857
ES DX Club (Poland)	268,447
ZSTC (Ukraine)	143,728
Szkołn Club (Poland)	107,739
SP6PAZ Club	53,390
"Iskra" Krzeszowice (Poland)	52,770

*Addendum:* The Kansas City DX Club in the 1980 Contest was credited with a score of 2.9 MEG points, but actually the score should have been 8.1 MEG due to the omission of the Multi-Multi Phone score from AB0I. We apologize for this mistake.

# C.W. TROPHY WINNERS AND DONORS

## SINGLE OPERATOR, ALL BAND

### World

**Martti Laine, CT3BZ**

**\*Donor:** Albert Kahn, K4FW (W2AB Memorial)

### World—QRPP

**Ted van Beek, AC2U**

**Donor:** Gene Walsh, N2AA

### U.S.A.

**Willard L. Myers, K1GQ**

**Donor:** Frankford Radio Club

### Canada

**Jim Roberts, VE3IY**

**Donor:** Canadian DX Association

### Carib./C. A.

**Ivan R. Belvis, Jr., WP4BDS**

**Donor:** Jim Neiger, N6TJ

### Europe

**Al Slater, G3FXB**

**Donor:** Edward Bissell, W3AU

### Africa

**FR0GGL**

**Donor:** Gordon S. Marshall, W6RR

### Asia

**Alexander Nicolaevich Karamian, UF6CR**

**Donor:** Japan CQ Magazine

### Japan

**T. Aoyama, JA1IDY**

**Donor:** Palm Garden Contest Club

### Oceania

**Thomas H. Schiller, N6BT/AH0**

**Donor:** Maui Amateur Radio Club

## SINGLE OPERATOR, SINGLE BAND

### World

**Jorge Humberto Bozzo, LU8DQ (21 MHz)**

**Donor:** W2JT Memorial, No. Jersey DX Assoc.

### World—3.5 MHz

**Francesco Chioldini, I4IND**

**Donor:** Fred Capossela, K6SSS

### U.S.A.

**Stephen F. Biddle, K6EWL (21 MHz)**

**Donor:** No. Illinois DX Association

### Canada

**Kari Korhonen, VE1BRB (14 MHz)**

**Donor:** Canadian Amateur Radio Federation

### Carib./C.A.

**Isaac Novoa-Lopez, NP4DA (21 MHz)**

**Donor:** DX Club of Puerto Rico

### Europe—14 MHz

**Markku Nyysonen, OH8SR**

**Donor:** G2LB Memorial (From Friends)

### South America

**Franklyn Brooker, 9Y4VU (28 MHz)**

**Donor:** Rafael Ponce de Leon, CX3BR

## MULTI-OPERATOR, SINGLE TRANSMITTER

### World

**P41E (Oprs. K4BAI, N4TO, W6OAT,  
K3NA, K0OO)**

**Donor:** Anthony Susen, W3AOH

### U.S.A.

**N1AC (Oprs. N1AC, W1IHN, K1UO)**

**Donor:** Douglas Zwiebel, KR2Q

## MULTI-OPERATOR, MULTI-TRANSMITTER

### World

**W2PV (Oprs. K1DG, K1JX, KA1R, KC1Q,  
N2NT, WA2SPL, K2SX, K2XA, K3UA,**

**WA3ZAS**

**Donor:** Hazard Reeves, K2GL

### U.S.A.

**N2AA (Oprs. K2GL, K2BQ, K2NG, K2GM,  
K2TW, K2SS, K2TT, KR2J, KR2Q, KR2W,  
KU2M, K5NA)**

**Donor:** James Rafferty, N6RJ

## CONTEST EXPEDITIONS

### World—Single Operator

**SU1AA (Opr. Ville Hiilesmaa, OH2MM)**

**Donor:** Yankee Clipper Contest Club

### World—Multi-Operator

**ZK2RU (Oprs. K6RU, AA6AD, W6VG)**

**Donor:** Bill Schneider, K2TT

## SINGLE OPERATOR—ALL BAND

### World—Phone/CW Combined

**Martti Laine, OH0BH/CT3BZ**

**Donor:** John Knight, W6YY

## CLUB TROPHIES

### World—Phone/CW

**Northern California Contest Club 160,376,446**

**Donor:** CQ Magazine

## MOST IMPROVED—PHONE/CW

### Northern California Contest Club

**Donor:** Southeastern DX Club

## WORLD TOP 10 QRPP

(5w input)

All Band

1.	AC2U.....	591,856
2.	N3RS.....	577,205
3.	UP2BFC.....	441,881
4.	OK2PDL.....	321,984
5.	K4LTA.....	281,082
6.	N4BP.....	268,832
7.	AJ7S.....	267,544
8.	VE3KZ.....	261,632
9.	HP1XAT.....	253,215
10.	DF4RD.....	220,712

Number groups after call letters denote following: Band (A = all), Final Score, Number of QSO's, Zones, and Countries. Certificate winners are listed in Bold Face.

## C.W. RESULTS

### SINGLE OPERATOR

#### NORTH AMERICA

##### UNITED STATES

K1BQ	A	3,276,768	2111	138	390
K1KI	"	3,169,751	2044	132	401
K1AR	"	2,916,822	2003	130	371
W1KM	"	2,628,120	2034	121	319
W1DA	"	1,748,810	1442	116	299
W1PH	"	1,581,306	1298	105	314
W1ZT	"	1,323,084	1177	110	289
W1RR	"	1,289,148	1093	115	297
K1SA	"	1,178,532	1208	96	246
W1FJ	"	947,076	973	89	249
KG1E	"	851,390	922	93	223
A1IE	"	548,386	740	76	178
ABTU	"	480,986	589	83	208
K1K	"	368,460	468	89	187
W1NG	"	368,368	448	105	194
K1JB	"	344,796	544	72	164

K1MA	7	215,424	719	24	78	KA2IBT	"	18,392	88	26	50	K3JGJ	"	195,620	326	64	144	
AA1M	"	37,530	197	17	53	W2XQ	"	9,246	48	28	41	WB3FSB	"	178,200	307	63	144	
W1BWS	"	9,374	77	10	33	KA2FEW	"	4,005	95	20	25	WA3SYZ	"	147,573	309	53	118	
W1ZM	3.5	151,497	610	22	71	N2AWH	"	2,143	50	15	13	N2MA/3	"	146,848	241	83	125	
K1PBW	1.8	6,160	61	17	27	KA2WK	"	1,674	50	17	14	W3HDH	"	130,640	252	61	123	
K1MEM	"	5,964	65	14	28	N2IN	"	900	17	8	12	K3IE	"	118,192	234	54	124	
W1BB/1	"	1,533	25	8	13	KA2MNJ	"	27,094	135	21	49	KA3CRC	"	106,386	253	45	104	
K2VV	A	2,783,920	2079	118	342	N2AU	21	406,640	1021	35	101	W3GNQ	"	100,080	210	56	124	
W2REH	"	2,777,236	1857	135	373	WA2HZR	"	195,536	56	33	88	W3HVM	"	99,593	223	54	109	
N2LT	"	2,768,157	2135	118	323	WA2LOG	"	105,576	348	29	77	N3NA	"	98,436	233	54	102	
W2VJN	"	2,374,930	1554	142	288	W2RPZ	"	33,884	141	28	58	AJ3H	"	52,138	143	46	85	
AE2A	"	2,227,357	1653	123	350	KA2LEB	"	29,260	133	25	52	K3KNH	"	49,176	181	41	85	
W2GD	"	2,171,310	1630	126	333	K2MN	14	2,212	27	9	19	WB3JRU	"	40,770	153	48	87	
W2IB	"	2,128,475	1560	127	348	W2KHO	7	23,232	129	17	47	WB3CAC	"	26,712	109	32	65	
K02M	"	1,784,727	1427	120	321	W2TZ	"	752,740	858	82	223	K3FJ	"	3,577	35	22	27	
W2TA	"	1,517,820	1278	128	295	K2OF	"	738,390	796	105	221	WA3KIL	"	3,577	35	22	27	
W2YC	"	1,217,200	1067	104	296	N2UN	"	708,671	761	91	240	WA3JXW	"	101,442	337	28	78	
W2GGE	"	951,709	915	90	269	N2DT	"	701,244	774	87	215	W4GMZ/3	"	64,246	246	25	66	
K2N	"	921,284	882	103	261	W2KZ	"	595,074	630	1396	101	267	WA3DMH	"	8,648	64	12	34
N2JJ	"	850,694	897	95	239	W2T	"	530,994	534	1346	125	321	K3TGW	"	35,100	168	17	58
N2UN	"	738,390	796	105	221	K2KE	"	393,104	444	96	215	WA3JWV	"	9,984	75	17	31	
N2DT	"	701,244	774	87	215	K2KZ	"	351,671	540	163	103	W4AV/4	"	1,253,448	1169	104	274	
N2OF	"	567,056	613	89	243	K2FZ	"	301,158	388	85	201	W4AU	"	999,544	955	105	259	
N2MR	"	473,224	569	88	210	W2GKZ	"	291,510	434	72	174	W4YE	"	775,838	898	91	211	
N2PA	"	470,470	599	84	202	W2AYJ	"	281,441	438	69	159	K4AMC	"	775,838	898	91	211	
N2MA	"	470,470	599	84	202	W2GHV	"	270,572	535	53	120	LA4LN/	"	750,300	875	89	211	
N2ZQ	"	222,768	344	72	166	W2KZ	"	222,768	277	56	120	N4MO	"	605,730	669	98	233	
N3AM	"	284,250	357	80	220	W2FTY	"	212,898	336	68	154	WA4NTI	"	482,296	541	97	237	
W3UJ	"	287,818	801	101	242	W2PHT	"	173,880	459	38	97	N4CD	"	244,080	366	73	167	
W3GN	"	797,818	801	101	242	W2KJ	"	761,560	850	94	222	N4QB	"	227,683	384	69	154	
W3KT	"	727,684	1148	108	280	K2OJ	"	743,566	730	102	256	W4BV	"	435,891	479	98	229	
W3GU	"	723,142	764	99	230	K2JLD/3	"	421,627	511	91	202	W6OKX/4	"	391,741	457	81	212	
K3II	"	717,570	750	92	243	W2LJM	"	414,187	611	76	163	W4RF	"	376,600</td				

## TOP SCORES

# 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
9Y4VT	116/9/16	385/17/43	553/23/61	1220/29/66	874/27/68	1140/28/71
CT3BZ		385/17/44	643/18/52	1324/29/72	1279/25/68	1075/22/58
HK3A		328/14/40	320/18/51	938/24/68	925/25/57	1312/26/71
N6BT/AH0	18/2/2	238/15/27	497/19/30	522/29/56	1587/28/60	1221/28/53
UF6CR	83/8/22	183/9/33	509/15/49	970/27/65	787/21/53	1130/20/65
8P6J	25/5/8	154/9/15	256/12/30	1457/26/57	1450/29/68	1323/26/63
K1GQ	8/7/8	208/18/61	425/24/76	576/32/85	438/31/80	473/26/80
K8LX	10/6/8	288/15/46	576/32/85	438/31/80	473/26/80	605/28/89
K1KI	17/7/11	119/17/58	366/22/65	636/29/81	559/28/78	636/25/78
EA2IA		582/15/51	311/17/67	604/32/96	464/31/84	529/28/85

## WORLD TOP MULTI-OPERATOR SINGLE TRANSMITTER

Station	160	80	40	20	15	10
P41E	16/7/14	375/16/40	534/23/63	1636/35/97	1010/36/91	1484/31/83
YU3EY	27/6/26	89/10/55	479/31/95	618/35/131	780/36/125	2058/32/113
YW5A	9/7/6	348/16/41	580/24/66	1083/29/88	888/29/69	981/29/69
R5I	65/10/32	653/19/62	626/24/75	568/34/86	1381/31/90	1001/35/96
N4AR	17/9/16	67/16/62	461/28/92	755/34/110	499/33/101	686/32/97
UK2PCR	104/8/34	266/18/60	439/25/86	1034/32/85	780/33/88	609/33/89

## WORLD TOP MULTI-OPERATOR MULTI-TRANSMITTER

Station	160	80	40	20	15	10
W2PV	72/14/27	427/18/70	1101/30/103	1389/35/118	1228/35/103	1050/34/106
N2AA	49/12/15	461/21/70	803/26/85	1475/37/115	1314/35/113	1051/33/108
W3LPL	53/12/20	263/18/65	1012/29/106	1323/38/123	1179/35/111	875/33/110
OH3AA	250/9/36	596/17/56	941/24/81	1823/34/92	1632/31/86	1440/33/96
K2UA	41/11/17	380/18/65	1151/29/91	1051/36/119	1129/35/109	1006/33/106
N9MM	83/16/25	223/21/56	870/29/96	1253/39/115	1157/35/103	1072/33/100

## WORLD TOP MULTI-OPERATOR MULTI-TRANSMITTER

W2PV    72/14/27    427/18/70    1101/30/103    1389/35/118    1228/35/103    1050/34/106

N2AA    49/12/15    461/21/70    803/26/85    1475/37/115    1314/35/113    1051/33/108

W3LPL    53/12/20    263/18/65    1012/29/106    1323/38/123    1179/35/111    875/33/110

OH3AA    250/9/36    596/17/56    941/24/81    1823/34/92    1632/31/86    1440/33/96

K2UA    41/11/17    380/18/65    1151/29/91    1051/36/119    1129/35/109    1006/33/106

N9MM    83/16/25    223/21/56    870/29/96    1253/39/115    1157/35/103    1072/33/100

## USA TOP SINGLE OPERATOR—ALL BAND

Station	160	80	40	20	15	10
K1GQ	8/7/8	208/18/61	425/24/76	576/32/85	438/31/80	473/26/80
K8LX	10/6/8	88/15/46	366/22/65	636/29/81	559/28/78	636/27/81
K1KI	17/7/11	119/17/58	311/17/67	604/32/96	464/31/84	529/28/85
N5AU	15/10/11	97/15/33	386/27/68	511/33/82	538/31/73	542/26/82
K1AR	4/4/3	134/14/50	226/33/64	447/30/85	587/31/80	605/28/89
K2EV	9/3/5	109/12/38	365/19/63	584/28/83	531/29/76	481/27/77
W2REH	6/5/13	88/14/42	371/22/64	547/34/93	377/31/82	468/29/87
N2LT	3/2/1	129/12/40	434/20/66	490/28/89	445/31/69	634/25/78
W1KM	3/2/2	274/19/56	414/23/68	460/24/80	360/29/66	523/24/67
K9DX	13/7/6	89/12/41	315/22/66	464/30/78	523/30/78	509/25/79

## USA TOP MULTI-OPERATOR SINGLE TRANSMITTER

Station	160	80	40	20	15	10
N4AR	17/9/16	67/16/62	461/28/92	755/34/110	499/33/101	686/32/97
N1AC	5/4/5	104/15/53	333/27/72	1008/35/95	622/32/77	638/27/86
W3BGN	14/9/12	111/17/61	390/25/74	565/35/106	441/35/94	793/31/100
K1XA	1/1/1	73/15/56	481/23/72	757/35/95	424/34/88	489/27/86
N4RJ	6/6/5	46/15/45	388/27/77	701/35/106	569/35/98	363/28/85
W4NL	13/11/12	70/16/57	283/24/71	785/35/106	502/31/91	357/27/79

## USA TOP MULTI-OPERATOR MULTI-TRANSMITTER

Station	160	80	40	20	15	10
W2PV	72/14/27	427/18/70	1101/30/103	1389/35/118	1228/35/103	1050/34/106
N2AA	49/12/15	461/21/70	803/26/85	1475/37/115	1314/35/113	1051/33/108
W3LPL	53/12/20	263/18/65	1012/29/106	1323/38/123	1179/35/111	875/33/110
K2UA	41/11/17	380/18/65	1151/29/91	1051/36/119	1129/35/109	1006/33/106
N9MM	83/16/25	223/21/56	870/29/96	1253/39/115	1157/35/103	1072/33/100
K1ZZ	50/13/18	353/20/67	909/28/89	1173/36/119	1049/34/97	1005/33/108

WBSR    " 79,170 267 29 76    VE4MF    " 69,550 186 45 85    CANARY ISLANDS

K4VX/#    21 397,764 1068 34 93    VE6OU    A 1,839,702 2302 110 217    KANARY ISLANDS

WBKEA    " 306,125 864 34 91    VE6OC    21 12,264 122 16 26    EA8ZZ    A 94,815 247 44 85

WA0MHJ    " 244,488 727 34 88    VE7TV    A 885,720 1687 82 138    EA8BV    21 44,116 183 26 56

N0BCN    " 116,202 377 30 77    VE7OC    28 11,340 139 14 21    EA8ZS    7 83,220 464 15 45

N9BD/#    " 33,900 161 22 53    VE7DLM    14 52,083 236 19 62    EA8AK    1.8 41,470 242 17 41

K0ZK    14 327,228 850 36 98    VY1DD    21 960 28 9 11    CANARY ISLANDS

AC0S    " 121,680 404 27 77    DOMINICA

WB5A    " 60,426 253 27 54    EA8JWV    21 68,996 251 24 70    CEUTA & MELILLA

WBFO    " 12,212 96 12 31    J73D    1.8 184 10 3 5    EA8JYV    21 68,996 251 24 70

KF0A    " 4,309 48 12 19    HI8LC    3.5 12,298 278 8 14    EA8JYV    21 68,996 251 24 70

K0RF    7 337,280 949 31 93    EA9JV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

AB0I    " 335,775 1080 26 85    (Opn. K0RF)    EA9JV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

KJ0D    " 42,600 319 23 52    DOMINICA

WB5JU    3.5 10,836 95 15 28    EA9JWV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

WB5RT    " 3,128 41 12 22    EA9JWV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

WB5CMM    1.8 3,276 65 13 15    EA9JWV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

K0ZK    " 1,520 39 10 9    EA9JWV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

AL7H    A 2,078,352 2683 107 199    AL7H    A 2,078,352 2683 107 199    EA8JYV    21 68,996 251 24 70

KL7RA    " 2,015,026 3340 85 162    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

KL7Y    " 108,102 363 57 72    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

AL7X    28 75,460 747 21 23    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

BAHamas

K8CW/ C6A    7 85,672 609 15 51    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

BARBADOS

BP6J    A 3,868,716 4665 107 241    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

(Opn. N6DM)    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

BRITISH VIRGIN ISLANDS

VP2VHX    A 308,824 917 50 104    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

(Opn. N6DM)    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

CANADA

VE1AIH    A 774,080 922 86 242    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

VE1ANU    " 462,735 603 85 230    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

VO1AW    " 172,142 423 53 113    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

VE1CAN    " 129,628 556 26 66    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

VE1TQ    21 89,440 465 24 56    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

VE1BRB    14 167,132 772 26 68    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

VE1CEG    " 56,223 333 18 47    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

VO1UO    7 14,112 124 13 35    EA8JYV    21 68,996 251 24 70    EA8JYV    21 68,996 251 24 70

VE1BEC    1.8 472 65 2 2    EA8JYV    21 68,996 251 24 70    EA8JYV

JABDNV	30,120	182	22	38	TURKOMAN	OK1AVI	19,551	142	20	37	FAEROES ISLANDS	DJ2BW	3.5	130,974	849	19	64
JA2INS	28,187	142	25	46	UH8DC	A 1,651,674 2129 78 204	OK1MSP	10,659	77	20	31	DJ3QJ	..	19,110	281	10	39
JH7LVK	23,540	165	21	34	UH8BHR	47,616 282 19 45	OK1JIM	5,617	51	18	23	DK8AX	..	3,472	73	7	21
JA2LA	10,023	89	14	25	UH8EAA	7 231,595 977 25 66	OK1AYQ	2,567	55	9	8	DJ7HU	1.8	4,318	134	5	28
J66BF	8,262	95	13	21			OK3KSQ	609	30	9	2	DJ3XD	..	4,154	130	5	26
JATGAX	3,330	65	10	8			OK3ZWX	180	12	6	9	DJ6TK	..	1,608	70	4	20
JASDQH	1.8	62	11	16			OK1TN	21 257,255 950 30 85	OK2PM	A 1,312,856 1497 107 272	DJ1DU	..	348	29	3	9	
JAT7NI	4,158	67	12	15			OK3COP	171,348 556 34 97	OK6MM	259,532 658 58 159	DF7IU	247	21	2	11		
JR1AHH	1,008	23	8	10	UI8BI	A 1,225,430 1546 89 221	OK1MG	160,121	586	30	83	Y31XA	A	617,016	1201	78	203
JASBOH	584	22	5	4	UI8ADR	28 90,744 474 21 55	OK3KAG	150,282	654	25	74	Y47ML	A	40,743	234	33	48
							OK2SAT	100,260	504	25	65	DY2J	28	162,640 1216 26 69			
KUWAIT							OK2BUW	98,200	418	28	78	OK2PE	..	188,100	639	42	90
9K2DX	A 2,263,494 2453 92 235	(Opr. N5NI)					OK1AE5	83,265	373	27	63	Y32L	..	172,960	470	52	132
							OK1JVO	65,110	347	22	63	Y70UF	..	150,150	352	48	147
MALDIVE REPUBLIC							OK3KEX	48,174	319	22	52	Y22HC	..	148,470	410	45	102
807BP	A 69,870 316 25 60	(Opr. C5ABH)					OK1DZD	8,700	139	13	16	Y22TQ	..	142,968	319	60	173
MONGOLIA							OK3KG0	1,178	22	6	13	Y43XL	..	129,132	283	63	141
JT6BUB	A 17,338 269 19 37						OK1ASQ	1,037	23	8	9	Y47YN	..	117,470	345	55	115
OMAN							OK3CLA	14 80,256 602 20 55	OK38I	..	113,894	386	49	111			
A4XJO	A 875,368 1335 73 174						OK1FV	76,540	371	29	60	Y1X1C	..	113,360	241	64	154
QATAR							OK2BUJ	69,222	341	24	59	Y31SK	..	107,533	252	52	139
A71AE	7 26,936 204 15 37						OK2BGR	48,818	312	23	54	V55TA	..	172,960	470	52	132
SAUDI ARABIA							OK1JPH	32,770	288	16	42	Y25TG	..	106,400	289	54	121
HZ1HZ	A 923,616 1107 77 211						OK1DDW	22,491	266	11	38	Y33EL	..	97,350	435	39	111
SRI LANKA							OK1ZY	8,880	91	15	33	Y31XF	..	90,280	488	70	15
4S7MX	21 407,565 1279 35 100						OK3CDN	6,806	116	9	32	Y44XF	..	58,562	248	37	52
ASIATIC U.S.S.R.							OK1JZZ	5,543	87	10	13	Y58YF	..	46,620	146	47	101
ASIATIC RUSSIA							OK1FJU	3,220	52	11	12	Y36YM	..	27,671	181	20	47
UV9AX	A 2,299,443 2022 103 290						OK1NAD	5,220	112	11	12	Y24DF	..	16,560	140	18	22
UA9UAR	716,274 1283 69 165						OK2BAM	5,054	120	11	12	Y71SH	..	13,504	345	33	101
UASB	238,581 644 44 103						OK3CAU	4,950	23	9	10	Y24DM	..	12,643	312	42	101
UA0LAF	95,232 317 53 71						OK1XG	1,488	30	8	16	Y1RH	..	6,412	318	41	107
UA0LCZ	68,272 202 58 78						OK2SPS	462	16	6	8	Y48UJ	..	8,689	257	45	104
UA9UGA	65,058 517 17 25						OK3CE1	3.5 28,620 419 9 45	OK3XZ	28 546,360 1918 34 95	Y22JA	..	67,200	182	63	112	
UA9AFG	63,246 177 46 79						OK1DKR	22,740 500 9 51	OK1DK	..	133,282	568	28	75			
UA9NN	42,075 102 59 94						OK1DEC	16,422	277	8	43	V51XE	..	64,539	310	36	65
UA9ACU	20,280 123 18 42						OK1AXA	15,860	257	9	43	V51RC	..	51,842	169	48	113
UA9OC1	11,750 52 23 24						OK1DCN	11,454	210	7	37	V51FV	..	51,456	304	23	44
UA9ZDE	10,908 144 21 22						OK2PCF	11,130	243	7	35	V522F	..	34,840	340	16	36
UA9PP	9,568 80 19 27						OK2BAJ	10,810	236	7	40	V52DF	..	29,990	201	20	45
UA9CHV	2,552 39 11 19						OK3RFF	9,282	323	6	28	V39YD	..	14,899	150	15	32
UW9AF	28 198,198 843 26 73						OK1OPT	8,892	225	6	32	V23HN	..	35,343	162	39	80
UA9QBE	141,480 524 29 79						OK2HI	8,052	127	8	36	Y124H	..	31,392	204	24	72
UA9GBT	136,146 520 27 74						OK3ZBZ	6,000	91	7	33	V57ZL	..	26,522	162	31	58
UA9X9	106,128 243 24 75						OK1ZGZ	5,054	276	5	29	V23RJ	..	22,785	130	30	63
UA0FAY	25,668 344 11 44						OK3CNP	5,334	82	8	33	V592F	..	22,344	160	19	57
UA90B	25,200 150 13 28						OK3CPW	4,469	90	7	39	V592Z	..	17,672	112	37	57
UA0CCR	20,090 171 18 23						OK1ZLW	109,005 375 45 84	OK1DK	..	103,680	397	28	80			
UA0SAU	19,232 317 53 71						OK1ZGZ	4,131,300 276 55 84	OK1DK	..	139,925	385	45	100			
UA0SGJ	18,232 321 25 43						OK1RN	28 181,940 717 32 78	OK1DK	..	132,275	397	28	80			
UA0ADQ	14 447,874 1412 34 88						OK2TW	14 70,012 355 30 82	OK1DK	..	106,336	701	20	52			
UA9WDM	13,025 137 16 17						OK1AVD	797,000 1512 68 23	OK1DK	..	18,963	205	14	29			
UA0SGSL	7 29,688 317 17 38						OK1AD	636,744 1040 79 179	OK1DK	..	15,180	115	18	42			
UA0JAD	3,5 122,567 622 17 56						OK2TCB	605,745 947 90 22	OK1DK	..	11,610	148	15	28			
UA9TS	108,023 230 19 59						OK3YX	563,654 839 92 234	OK1DK	..	6,520	141	7	33			
UA9AO	108,023 243 19 59						OK1FCA	389,301 855 65 186	OK1DK	..	1,990	67	4	23			
UA9WBL	14,070 190 15 27						OK2XW	343,808 534 82 232	OK1DK	..	200	10	5	5			
UA9SAX	1.8 17,480 179 9 29						OK3P0	335,175 804 55 150	OK1DK	..	200	10	5	5			
AZERBAIJAN							OK2YR	278,600 603 57 142	OK1DK	..	200	10	5	5			
GEORGIA							OK1ZP	247,736 691 54 125	OK1DK	..	200	10	5	5			
UD6DKW	A 151,632 473 34 83						OK1KZ	215,055 612 50 127	OK1DK	..	200	10	5	5			
UD6DLL	28 44,622 256 23 51						OK1KZK	201,122 433 68 159	OK1DK	..	200	10	5	5			
UD6CN	7 14,308 102 15 34						OK1DVK	196,206 567 48 111	OK1DK	..	200	10	5	5			
UD6DMV	3.5 45,720 391 9 36						OK1AWF	179,136 448 54 138	OK1DK	..	200	10	5	5			
UF6FX	A 4,101,936 3634 102 286						OK3FON	141,888 330 58 134	OK1DK	..	200	10	5	5			
UF6FFX	28 74,053 396 20 51						OK1AKW	129,990 229 61 149	OK1DK	..	200	10	5	5			
UF6FER	38,610 278 19 55						OK1MM	124,998 361 44 122	OK1DK	..	200	10	5	5			
UF6FBX	21 3,780 105 13 23						OK1DVK	196,206 567 48 111	OK1DK	..	200	10	5	5			
UF6FFF	14 233,280 864 29 69						OK1APJ	46,550 169 41 57	OK1DK	..	200	10	5	5			
UF6FJ	14 30,056 224 17 30						OK1OFA	43,056 208 22 49	OK1DK	..	200	10	5	5			
UF6QAN	.. 33,088 246 13 34						OK3KAP	40,313 208 29 62	OK1DK	..	200	10	5	5			
UF6FDR	7 101,931 609 15 46						OK2DB	38,250 181 43 82	OK1DK	..	200	10	5	5			
KAZAKH							OK1MIN	31,595 126 37 53	OK1DK	..	200	10	5	5			
OK1MWN	.. 30,736 178 24 64						OK1DRY	28,800 166 33 95	OK1DK	..	200	10	5	5			
OK1MZO	.. 27,051 175 31 95						OK1AVG	22,050 131 29 34	OK1DK	..	200	10	5	5			
OK1AOU	.. 22,050 131 29 34						OK1AVG	21,120 166 22 33	OK1DK	..	200	10	5	5			
OK1KAG	.. 20,826 202 17 61						OK1DGN	16,947 131 19 44	OK1DK	..	200	10	5	5			
OK1DGH	.. 16,947 131 19 44						OK2KHS	13,952 172 16 25	OK1DK	..	200	10	5	5			
OK1DGH	.. 13,952 172 16 25						OK2SGW	12,546 115 16 25	OK1DK	..	200	10	5	5			
OK1DGH	.. 8,288 117 11 45						OK3BRK	8,288 117 11 45	OK1DK	..	200	10	5	5			
OK1DGH	.. 22,050 131 29 34						OK3XB	A 2,720,785 2522									



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**ARGENTINA**  
LU1EWL A 411,768 839 58 110  
LU6DQ 21 1,359,711 2933 37 116

**BRAZIL**  
PY2DLK A 649,440 1325 56 108  
PY7ZZ " 384,150 669 72 123  
PY2EXD " 362,310 631 65 130  
PY1BUY " 121,720 480 32 53  
PY2CAR " 17,820 83 33 48  
PY2FNB " 9,434 60 20 33  
PY3ZZ " 3,358 32 19 27  
PY1DFF " 3,322 85 12 10  
PY1BDA 28 210,980 677 30 80  
PY1VQY " 110,853 381 38 75  
PY1IEG " 4,128 58 9 15  
PY2SHI " 420 14 6 5  
PY2BTR 21 100,010 514 22 51  
PY2RAN " 63,960 338 25 40

**COLUMBIA**  
HK3A A 4,478,204 3823 107 287  
(Op. K320)

**NETHERLAND ANTILLES**  
WD9IH/ HK4 14 253,878 841 28 74

**EASTER ISLAND**  
CE8AE 28 100,359 540 23 40

**PARAGUAY**  
ZP5XJA A 786,335 1424 59 128

**PERU**  
OA4AWD A 465,479 795 72 131

**TRINIDAD & TOBAGO**  
9Y4VT A 5,803,776 4288 133 325  
(Op. N6AA)  
9Y4VU 28 443,504 1441 31 75

**URUGUAY**  
CX8DT 1.8 100 9 4 6

**VENEZUELA**  
YV1NX A 1,368,920 1650 88 192  
YV3BQS 28 199,080 870 22 57  
YV4BOU 14 291,552 1020 25 71  
4M3AGT 7 143,025 655 22 53  
YV4OY " 104,874 700 18 48  
YV3AZC 3.5 58,555 415 15 34  
YV1OB 1.8 25,806 258 11 23

**MULTI-OPERATOR  
SINGLE TRANSMITTER  
NORTH AMERICA**  
UNITED STATES

**MARSHALL ISLANDS**  
KX6PI 7 167,144 839 27 41

**NEW HEBRIDES**  
YJ8RW 28 612,255 2138 31 66  
(Op. ZL1AM0)

**NEW ZEALAND**  
ZL1AIZ 7 19,133 125 20 33

**OGASAWARA**  
JD1ABX 21 4,301 71 12 11

**PAPUA-NEW GUINEA**  
P29NPL 28 6,680 114 11 9

**PHILIPPINES**  
KP4KK/ DU2 3.5 55,328 339 20 36

**SOUTH KIRIBATI**  
T44AA A 6,228 115 10 8

**SOUTH AMERICA**  
**ANTARTICA**  
KC4USV 21 290,829 1259 28 49  
(Op. N6WT)  
VP8ANT 1.8 594 18 4 7

**SAY YOU SAW IT IN CQ**

K5RX	1,614,944 1300 119 317	AA6T	122,430 290 60 94	BAHAMAS	ASIA	JAYAK	448,500 649 95 154		
KJ5W	1,523,116 1407 115 294	KJ6F	73,952 200 44 82	W4BPD/C6A	115,908 723 35 43	JA1YCL	260,984 586 61 91		
N6ND	2,414,346 1758 141 330	KK6X	35,956 125 33 63	V3MS	3,307,920 4145 108 250	JA3YEE	234,016 401 77 129		
N6IG	2,369,760 1722 140 340	N6QC	594 19 6 5						
N6CW	2,218,390 1624 141 255	W7RX	1,331,700 1335 113 232						
N6GT	1,966,770 1644 121 289	W7NI	692,992 1012 84 180						
K6KV	1,943,810 1477 136 315	ADBI	3,225,735 2277 127 358						
N6MG	1,610,136 1236 138 318	K6AQM	2,189,064 1660 126 337						
W6WQ	1,225,854 1146 112 266	A8D0	1,309,950 1296 95 260						
N6HV	1,061,788 1045 109 255	W8HN	542,724 694 81 192						
K6SG	1,015,666 1123 99 218	K8US	207,776 489 47 104						
K6IIH	1,002,040 1073 110 218	W8DPNF	108,251 249 48 95	VE1DXA	3,357,354 3174 117 312	OHBAL	925,750 1500 97 253		
K6DC	971,454 949 113 246	KABHUF	23,028 162 54 78	VE7WJ	2,920,776 3103 125 268				
W6BIP	752,136 746 110 220	W8WE	19,754 129 37 46	VE5DX	2,777,273 3064 124 267				
K6ANP	736,890 738 112 251	KF8H	1,683,968 1646 99 253	VE3MFA	935,881 1356 84 199	AUSTRIA	1,109,652 1482 97 259		
N6RZ	695,358 755 110 216	K8RWL	1,436,292 1279 112 291	VE3OCU	44,055 230 38 51	OE1JNB			
W6GC	670,941 633 123 258	K7CS/8	501,084 629 90 189						
W6UA	572,400 574 105 255	W8NA	406,350 545 84 174	JAMAICA	GEORGIA	BULGARIA			
AT6S	519,370 556 114 220	W8FF	217,170 381 62 128	6Y5JW	774,408 2259 63 101	UK6FAA	28,440 240 12 33	LZ2KEF	2,142,584 2110 119 327
KR6Q	434,775 561 85 170	KL8FP	64,964 162 47 102	XE2BC	3,460,606 4324 109 229	UK6FAB	10,047 48 15 22	LZ13C	549,336 1250 85 237
KC6D	414,039 618 82 155			4A2Q	1,207,038 2687 78 125	JA1YAB	2,353,582 1908 142 292	LZ2KSQ	522,332 1031 77 191
W6YX	395,136 616 91 133	WL7E	889,344 1980 72 120					LZ1KKA	116,820 470 43 122
W6BSY	253,228 383 82 154	KL7AF	846,745 1988 83 102					LZ2KLR	29,002 269 11 25
K6FO	181,396 335 81 121								
KB6ST	136,920 354 53 87								

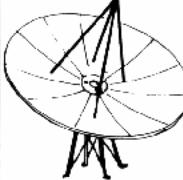
## MY COMPETITION KNOWS ME... YOU SHOULD TOO!!! HAL'S SHOPPER'S GUIDE

### \* HMR II

Buy Your First @ \$149.95 ea.

Buy Two @ \$139.95 ea.

Buy Three or More @ \$129.95 ea.



Frequency Range - 2100 MHz to 2600 MHz

Power Requirements - 117 VAC 60 cps

Shipping Weight - 8 lbs.

Complete System Ready To Install

\*Ham Microwave Receiving System

### FREQUENCY COUNTERS

COMPLETE KITS: CONSISTING OF EVERY ESSENTIAL PART NEEDED TO MAKE YOUR COUNTER COMPLETE. HAL-600A 7-DIGIT COUNTER WITH FREQUENCY RANGE OF ZERO TO 600 MHZ. FEATURES TWO INPUTS: ONE FOR LOW FREQUENCY AND ONE FOR HIGH FREQUENCY; AUTOMATIC ZERO SUPPRESSION. TIME BASE IS 1.0 SEC OR .1 SEC GATE WITH OPTIONAL 10 SEC GATE AVAILABLE. ACCURACY ± .001%. UTILIZES 10-MHz CRYSTAL 5 PPM. COMPLETE KIT.....\$129

HAL-300A 7-DIGIT COUNTER (SIMILAR TO HAL-600A) WITH FREQUENCY RANGE OF ZERO TO 300 MHZ. COMPLETE KIT.....\$109

HAL-50A 8-DIGIT COUNTER WITH FREQUENCY RANGE OF ZERO TO 50 MHZ OR BETTER. AUTOMATIC DECIMAL POINT, ZERO SUPPRESSION UPON DEMAND. FEATURES TWO INPUTS: ONE FOR LOW FREQUENCY INPUT, AND ONE ON PANEL FOR USE WITH ANY INTERNALLY MOUNTED HALTRONIX PRE-SCALER FOR WHICH PROVISIONS HAVE ALREADY BEEN MADE. 1.0 SEC AND .1 SEC TIME GATES. ACCURACY ± .001%. UTILIZES 10-MHz CRYSTAL 5 PPM. COMPLETE KIT.....\$109

HAL/79 Clock Kit FREE with every Counter  
Plus A FREE In-Line RF Probe.

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HAL 300 PRE (Pre-drilled G10 board and all components).....\$14.95

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HAL 600 PRE (Pre-drilled G10 board and all components).....\$29.95

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### ACCUKEYER

ACCUKEYER (KIT) THIS ACCUKEYER IS A REVISED VERSION OF THE VERY POPULAR WB4VVF ACCUKEYER ORIGINALLY DESCRIBED BY JAMES GARRETT, IN QST MAGAZINE AND THE 1975 RADIO AMATEURS HANDBOOK. \$16.95

ACCUKEYER—MEMORY OPTION KIT THIS ACCUKEYER MEMORY KIT PROVIDES A SIMPLE, LOW COST METHOD OF ADDING MEMORY CAPABILITY TO THE WB4VVF ACCUKEYER. WHILE DESIGNED FOR DIRECT ATTACHMENT TO THE ABOVE ACCUKEYER, IT CAN ALSO BE ATTACHED TO ANY STANDARD ACCUKEYER BOARD WITH LITTLE DIFFICULTY. \$16.95

SHIPPING INFORMATION ORDERS OVER \$25.00 WILL BE SHIPPED POSTPAID EXCEPT ON ITEMS WHERE ADDITIONAL CHARGES ARE REQUESTED. ON ORDERS LESS THAN \$25.00 PLEASE INCLUDE ADDITIONAL \$2.00 FOR HANDLING AND MAILING CHARGES.



HAL-TRONIX P.O. BOX 1101, SOUTHGATE, MICH. 48195 PHONE (313) 285-1782

### EUROPE

#### AALAND ISLANDS

#### ASIATIC RUSSIA

UK9AAN	4,300,833 2756 147 390
UK9FER	3,355,520 2795 109 319
UK9ADY	2,072,673 1979 97 272
UK9OAZ	1,931,778 1299 87 234
UK9QAA	1,922,050 2318 106 219
UK9ACP	1,115,909 1507 67 196
UK9AEC	335,491 629 55 142
UK9SBI	224,740 488 51 119
UK9OBO	64,620 289 27 73
UK9WAT	14,212 150 11 23
UK9ADS	8,181 107 10 17

#### AUSTRIA

#### GEORGIA

#### BULGARIA

### DOWN CONVERTERS

**NEW!** HAL 2304 MHz Down Converters (freq. range 2000MHz/2500MHz)

2304 Model #1 Kit Basic Unit w/preamp less housing fittings.....	\$34.95
2304 Model #2 Kit (with preamp).....	\$44.95
2304 Model #3 Kit (with High Gain preamp).....	\$54.95
Models 2 & 3 w/coax fittings and w/weather-proofed die cast housings.	
Basic power supply.....	\$19.95
Power supply kit for above with case.....	\$24.95

### CLOCK KIT

**NEW!** HAL 79 FOUR-DIGIT SPECIAL—\$7.95. OPERATES ON 12-VOLT AC (NOT SUPPLIED). PROVISIONS FOR DC AND ALARM OPERATION

#### 6-DIGIT CLOCK • 12/24 HOUR

COMPLETE KIT CONSISTING OF 2 PC G10 PRE-DRILLED PC BOARDS, 1 CLOCK CHIP, 6 FND READOUTS, 13 TRANSISTORS, 3 CAPS, 9 RESISTORS, 5 DIODES, 3 PUSH-BUTTON SWITCHES, AND INSTRUCTIONS.

DON'T BE FOOLED BY PARTIAL KITS WHERE YOU HAVE TO BUY EVERYTHING EXTRA.

PRICED AT.....\$12.95

CLOCK CASE Available and will fit any one of the above clocks. Regular Price...\$6.50 But Only \$4.50 when bought with clock

SIX-DIGIT ALARM CLOCK KIT for home, camper, RV, or field-day use. Operates on 12-volt AC or DC, and has its own 60-Hz time base on the board. Complete with all electronic components and two-piece, pre-drilled PC boards. Board size 4" x 3". Complete with speaker and switches. If operated on DC, there is nothing more to buy."

PRICED AT.....\$16.95

Twelve-volt AC line cord for those who wish to operate the clock from 110-volt AC, with purchase of either of above clocks...\$2.95

\*Fits clock case advertised above.

### TOUCH TONE DECODER KIT

HIGHLY STABLE DECODER KIT. COMES WITH 2 SIDED, PLATED THRU AND SOLDER FLOWED G-10 PC BOARD, 7-567's, 2-7402, AND ALL ELECTRONIC COMPONENTS. BOARD MEASURES 3 1/2" x 5 1/2" INCHES. HAS 12 LINES OUT. ONLY \$39.95

DELUXE 12-BUTTON TOUCHTONE ENCODER KIT utilizing the new ICM 7206 chip. Provides both VISUAL AND AUDIO indications! Comes with its own two-tone anodized aluminum cabinet. Measures only 2 1/2" x 3 1/4". Complete with Touch-Tone pad, board, crystal, chip and all necessary components to finish the kit.

PRICED AT.....\$29.95

HAL 567-12 single line in, 12 lines out, complete with 2-sided plated-through G-10 board and all components. Uses seven 567's and three 7402's. PRICED AT.....\$39.95

HAL 567-16 single line in, 16 lines out, complete with 2-sided plated-through G-10 board and all components; includes 22-pin edge connector. Uses eight 567's and four 7402's. (See construction article in April 1981 Radio & Electronics for complete writeup.) PRICED AT.....\$69.95

### SEND SASE FOR FREE FLYER

"HAL" HAROLD C. NOWLAND W8ZXH



CZECHOSLOVAKIA		ROMANIA		YUGOSLAVIA		YUGOSLAVIA	
OK1KRG	3,493,732 2780 129 413	Y08GKA	224,224 607 54 154	UK50CI	70,794 432 36 102	N8COA	7,344 60 20 31
OK1KSO	2,839,275 2423 135 350	Y08GKH	3,815 132 9 31	UK5ECT	21,312 187 18 54	EAEY	7,331 64 15 24
OK1KQJ	937,056 1239 97 247			UK5IGL	14,872 166 14 30	WA3FNK	5,106 38 17 29
OK3KEE	766,480 1291 83 203					K19A	4,648 46 21 27
OK2KPS	677,564 905 79 235					Y03CVG	1,215 27 10 17
OK3RKA	466,444 822 74 194					W2JEK	450 14 7 11
OK3RJB	328,659 797 85 128					DK5RY	408 18 5 3
OK3KTD	164,430 506 56 133					SM0CHA	192 16 3 3
OK2KYC	157,028 600 41 107						
OK3KKO/P	150,200 486 45 155					JAEF	28 92,583 205 25 55
OK1KXP	91,749 497 29 90					JA1MCU	81,700 370 25 51
OK1KTW	71,400 350 33 52					KB0HA	54,201 214 24 65
OK1KZW	64,284 293 31 101	SM5GMG	4,053,616 3448 124 352			YU1NR	45,492 261 23 45
OK1KFZ	35,844 177 34 69	SK5AA	1,278,930 1940 82 185			UA9FKM	37,185 217 15 42
OK1KUJ	35,245 274 25 70	SK0LM	1,037,295 1466 84 231			JH1ARC	7,644 69 14 25
OK1KMP	17,712 145 22 60	SM2JUR	337,155 1310 36 69			OK1OKW	5,952 87 13 19
OK1KOK	11,270 112 31 51					UB5UGO	4,212 68 10 17
OK2KOD	9,170 109 21 49					OZ8E	1,738 35 8 14
OK1KYS	8,968 50 34 42					SP2UO	1,666 41 8 6
OK3KFO	4,044 122 5 7	HB9AJ	99,941 403 43 96			Y22ZL	1,584 40 10 12
		HE90ZH	1,947 59 5 6			UB5RBT	738 23 5 13
DENMARK						PA8ATG	627 23 5 6
0Z5EDR	657,621 1188 77 190					W0KNI	21 134,992 398 31 87
ENGLAND						OH5WH	90,727 449 27 64
GB2MM	2,683,296 2792 100 296	GW3RRS	3,293,346 3380 105 294			HS5KK	88,151 488 25 57
GGUW	2,589,348 2526 115 338					UT5GP	64,672 368 23 63
G3SSD	2,449,386 2615 103 299	YU3EY	7,674,190 4051 150 545				
G8JC	243,032 1555 68 185	YU4EXA	428,708 1037 64 180			UR2CR	48,650 306 21 49
FINLAND						45,525 210 25 50	
OH2AA	3,746,234 2580 143 444					JM1LHW	30,250 191 20 35
OH8AV	2,465,964 2813 105 282					JA1TLK	21,634 127 19 39
OH2VY	2,059,600 2164 106 294	UK2AAK	339,456 1115 52 140			Y22PM	21,528 233 15 36
OH7AB	1,961,090 2526 94 241	UK2ABM	149,645 499 46 127			OH1CN	15,520 202 15 25
OH5BM	1,529,580 1549 110 280	UK2AAP	47,047 377 28 49			OH7VG	15,228 117 18 36
OH9PH	548,500 1233 70 180	UK2AAQ	4,829 156 7 24			PABANK	10,608 151 11 23
OH3AC	16,368 166 18 48	UK2ABC	1,275 24 9 16			G3CWL	6,480 98 12 24
FRANCE							
F3TV	3,959,040 3480 124 356					JI1TLL	1,496 25 11 11
F6KAW	2,534,301 3877 99 272	ESTONIA				JI1EBU	1,700 29 9 11
GERMANY (FRG)						SM7BNG	1,334 34 8 15
DK0TU	3,537,681 3116 116 355	UK2RDX	3,595,218 2999 133 384			NA9RT	312 8 6 7
DL8CM	1,732,710 1863 102 268					JM1NMB	36 4 2 1
DL8JR	1,109,934 1330 106 277						
DK0SU	816,240 1321 79 196						
GERMANY (GDR)							
Y23DL	1,353,994 1747 97 250	EUROPEAN U.S.S.R.					
Y59ZA	358,683 867 71 150	BYELO-RUSSIA					
Y43ZK	318,599 907 59 140						
Y32ZN	245,640 762 52 132						
Y41ZA	128,480 373 52 108						
Y41ZF	44,820 203 35 48						
GUERNSEY							
GU3SXW	2,486,380 3130 95 270	ESTONIA					
GU3HPN	2,100,897 2658 86 247						
HUNGARY							
HG5A	3,664,364 3383 125 359	UK4FAV	2,886,688 2698 133 376				
HG6V	3,625,734 3293 124 395	UK6LZAZ	2,320,539 2286 137 370				
H@OK-E	1,346,926 1921 88 234	UK6LGEZ	2,176,842 2212 125 346				
HG8U	1,182,000 1519 111 283	UK6LAA	1,971,288 2515 102 291				
H@5KKC/7	874,240 1719 77 179	UK3XAB	1,439,887 2046 88 265				
H@2KZ	843,700 1526 77 198	UK4PNZ	1,408,064 1562 111 338				
H@9KHW	637,864 1065 78 206	UK6GLTA	1,234,080 1737 96 264				
H@3KNA	491,547 983 78 185	UK4WAB	931,296 1363 96 260				
H@6KOA	447,532 1163 65 147	UK4WAA	833,054 1444 74 197				
H@8KAX	417,456 1001 61 162	UK4LAZ	597,536 1079 79 205				
H@7KLG	396,975 746 73 164	UK4ABW	526,516 1260 61 175				
H@8KVK	337,176 746 66 153	UK1TB	440,370 875 53 180				
H@9KOL	221,751 661 58 133	UK1TBB	320,190 803 51 144				
H@5KMB	173,415 554 48 117	UK6GAP	234,000 822 45 135				
H@7KTM	121,212 501 43 105	UK3DBV	122,320 431 22 66				
H@5KHT	67,235 335 37 82	UK4ACE	109,532 474 37 102				
ITALY							
I2UIY	255,208 814 48 104	UK3ACM	94,550 667 22 39				
LIECHTENSTEIN		UK3APV	47,110 487 19 30				
HB0AYZ	292,656 658 60 141	UK6OAA	29,040 192 16 39				
THE NETHERLANDS							
PA6GN	1,016,495 1725 74 189	UK2KRW	2,141,457 2278 126 269				
NORWAY							
LA1H	2,776,480 2347 125 344	UK2KGP	1,570,894 1756 131 272				
POLAND							
SP2ZFJ	1,030,760 1525 96 257	UK2KZD	1,094,554 1656 106 192				
SP6PAZ	580,800 1027 90 174	UK2KG	558,296 1062 77 212				
SP5KTR	357,532 833 72 154						
SP9PDG	83,768 327 35 113	UK5MCT	83,746 501 23 79				
THE NETHERLANDS							
R5I	4,892,184 4209 153 441	UKRAINE					
UK5MAF	2,294,604 2268 120 348						
UK5YAA	1,882,285 1994 118 367						
UK5UDX	1,115,840 1688 89 255						
UK5QDE	939,455 1388 94 247						
UK5MCQ	936,000 1423 93 235						
UK5SAZ	379,610 901 87 151						
UK5MCP	361,000 818 69 181						
UK5MEG	354,915 756 71 168						
UK5NAJ	312,246 1071 50 148						
UK5GKW	226,032 531 63 141						
UK5FAB	190,736 591 50 132						
UK5HAB	185,322 495 56 145						
UK5MDI	140,876 514 48 116						
UK5MCT	121,836 613 36 96						
THE NETHERLANDS							
PA6WW	4,312,440 4612 121 363	SPAIN					
LA40	1,528,534 2230 110 220						
U.S.S.R. EUROPEAN							
ESTONIA							
U2R	5,656,896 5599 123 360						
OCEANIA							
Y08GKA	224,224 607 54 154	AH6BK	2,167,170 2934 104 161				
Y08GKH	3,815 132 9 31						
SWEDEN							
EA3CNY	1,525,828 2005 92 257						
EA3MM	875,597 1435 69 277						
EA3RCR	778,752 1681 70 186						
SWITZERLAND							
HB9AJ	99,941 403 43 96						
HE90ZH	1,947 59 5 6						
YUGOSLAVIA							
UK50CI	70,794 432 36 102						
UK5ECT	21,312 187 18 54						
UK5IGL	14,872 166 14 30						
YU3APR	8,604,960 6560 152 472						
	8,450,047 5971 152 455						
OCEANIA							
TA1EF	28 92,583 404 25 55						
JA1MCU	81,700 370 25 51						
KB0HA	54,201 214 24 65						
YU1NR	45,492 261 23 45						
UA9FKM	37,185 217 15 42						
JH1ARC	21,634 127 19 39						
OK1OKW	5,952 87 13 19						
UB5UGO	4,212 68 10 17						
W0KNI	21 134,992 398 31 87						
OH5WH	90,727 449 27 64						
HS5KK	88,151 488 25 57						
UT5GP	64,672 368 23 63						
YRPP	QRPP						
N8COA	7,344 60 20 31						
EAEY	7,331 64 15 24						
WA3FNK	5,106 38 17 29						
UP2BFC	441,881 753 81 208						
OK2PD	321,984 773 62 146						
K4LTA	281,082 441 77 160						
N4BP	268,832 410 74 174						
AJ7	267,544 502 81 131						
VE3KZ	261,632 450 70 154						
HP1XAT	253,215 699 57 96						
DF4RD	220,712 566 52 136						
WB8VSK	216,104 329 73 165						
WAGPDC	186,200 383 62 113						
SM8BYD	185,656 475 49 135						
WABVBW	183,080 338 67 132						
W9PNE	179,861 335 64 133						
N3RS	577,205 622 93 242						
UP2BFC	441,881 753 81 208						
K4LTA	281,082						