

Results of the 1992 CQ World-Wide DX SSB Contest

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

Everyone kept their fingers crossed as the contest approached. Would the sun cooperate? The answer was not long in coming. The 1992 CQ WW DX SSB Contest experienced some of the best conditions in memory. The A index was 0 at one time! And the bands from 160 to 10 rolled open to allow some of the biggest scores in the history of the contest.

In this article it is impossible to pay tribute to all the many stories that took place to bring about the success of this CQ WW. There are literally thousands of operators who by their participation make the CQ WW a truly world-wide event. We receive many logs where the participant has made less than 100 QSOs—US Novices on 10 meters having their first experience with contesting, newly licensed IK and FD operators finding the thrill of the potential of the amateur radio fraternity. Each person looks for his or her call in the results. Are you looking to see how you did as compared to last year's score, against your buddy across town? It's easy to write about the top scorers and praise their accomplishments. They are only a few. I am sure that each top scorer would want to thank the guy who called him before having to go to work; the beginner who worked up enough courage to call that station who was sending so fast; the casual operator who decided to work a few before meeting his busy schedule.

Calling CQ on 20 you might find that operators from Finland have traveled far afield to answer you from PJ9P or FM/OH1MA and FM/OH3UU. XE1/AA6RX took time off from playing music for the Mexico City Philharmonic orchestra to give you zone 6. Three multi-stations—HCØE, YS1X, and PUØF—brought together national teams to give you three good multipliers. You turned your beam to Africa and picked up Carl and Martha operating with the strange call 9ER1TA. They sure get around. There is Yoshi, 5U7M, who has given thousands of operators 5U7 while taking time off from work to help in the JA Peace Corp. And when was the last time a 5R8 called you! 5R8DF probably called you. What a thrill. You had a chance to work four HZ stations, three multi-singles, and Ahmed, HZ1HZ. Toshi, JA1ELY, took time off from publishing 59 magazine to help put S79J on the air. Jim, W7EJ, put 9M8R on, but first the towers had to be shipped down the river to his QTH in Sarawak. And who was that —SS station? Why, N6SS/MM in zone 34 calling. Preston sent a navigational chart with his log showing where he was at each hour of the test.

These are just a few of the colorful stories that took place. But let's get on with the results!

*1816 Poplar Lane, Davis, CA 95616

**12041 Walker Pond Road, Winter Garden, FL 34787

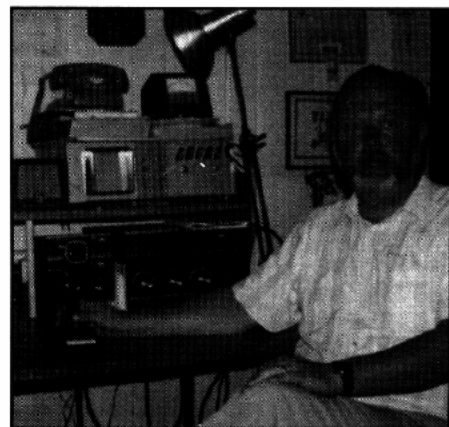


The great operators from IQ4A, The Monte Capra contest team. Standing left to right are I4IND, I4IKW, I4W4ANU, I4K4NPD, I4EWH, I4YRW, I4LCK, I4K4JSI; kneeling I4K4EWK, I4K4CFZ, I4LEC, I4VEQ, I4EAT, and I4K4DCT.

Single Operator All Band

The top honors this year in this hard-fought category went to Rich, N6KT, operating HC8A. Rich seems to have located a QTH which propagationally plays very well. If you look at a map you will see that HC8 is exactly due south of the Mississippi river. But the QTH does not begin to tell the story. The real story is Rich, who broke the all-time record and set a new QSO record for a single operator. Looking at slides of the HC8A QTH it is hard to believe that it is on the equator, because the towers are almost always enclosed in a cool fog. Winning was not an easy task considering that Martti, OH2BH, operating at EA8BH, was pushing him the whole way. Martti's QTH has a beautiful 270-degree view of the ocean.

Third place was taken by Glenn, K6NA,



Long-time CQ contest expert CE6EZ.

TROPHY WINNERS AND DONORS

SINGLE OPERATOR, ALL BAND

World

HC8A (Opr. Richard Smith, N6KT)
Donor: Dave Rosen, K2GM
 WA2RAU Memorial

World-Single Operator Assisted
WM5G (Opr. Jeffrey Steinman, KRØY)
Donor: Richard Newell, AK1A

World QRP

Henry Rand, Jr., AA2U
Donor: Doc Sayre, N7AVK

U.S.A.

John Dorr, K1AR
Donor: Potomac Valley Radio Club
 KC8C Memorial

Caribbean/Central America

KP2A
 (Opr. Jose Carlos Cardoso Nunes, CT1BOH)
Donor: Alex M. Kasevich, VP2MM

Europe

Tine Brajnik, S52AA
Donor: Potomac Valley Radio Club
 W4BVV Memorial

Africa

EA8BH (Martti Laine, OH2BH)
Donor: Gordon Marshall, W6RR

Asia

Kazuhiko Endou, JAØQNJ
Donor: Japan CQ Publishing Co. Ltd.

Japan

Satoshi Hara, JH5FXP
Donor: Japan Crazy Contesters Club

Oceania

9M8R (Opr. Jim Sullivan, W7EJ)
Donor: Northern California DX Club

South America

9Y4H (Opr. Glenn Rattmann, K6NA)
Donor: CQ Magazine

SINGLE OPERATOR, SINGLE BAND

World—28 MHz

ZW5B (Opr. Jim Hoffman, N5FA)
Donor: Joel Chalmers, KG6DX

World—21 MHz

ZV5A (Opr. Atilano de Ohms, PY5EG)
Donor: CQ Magazine

World—14 MHz

PJ9P (Opr. Ari Vessalainen, OH6MW)
Donor: North Jersey DX Assn.
 W2HLB Memorial

World—7 MHz

PJ9E (Opr. Tapani Nisula, OH5BM)
Donor: Fred Laun, K3ZO, K7ZZ Memorial

World—3.8 MHz

T11C (Opr. Carlos Fonseca, T12CF)
Donor: Fred Capossela, K6SSS

USA—28 MHz

N4RJ (Opr. Bill Fisher, KM9P)
Donor: Donald Thomas, N6DT

USA—21 MHz

John S. Taylor, K5MR
Donor: Bill Gioia, K2EK

USA—14 MHz

Wilbert Kollenbaum, K4XS
Donor: Southern California DX Club

USA—7 MHz

W7XR (Opr. Dan Honda, W7WA)
Donor: Stanley Cohen, WD8QDQ

USA—3.8 MHz

Jeffrey Briggs, K1ZM
Donor: Arnold Tamchin, W2HCW

Caribbean/Central America

NP2E (Opr. Robert Hayes, KW8N)
Donor: CQ Magazine

Europe—28 MHz

IT9A (Opr. Fabio Grisafi, IT9GSF)
Donor: Chod Harris, VP2ML

Europe—21 MHz

Jiri Sanda, OK1RI
Donor: Robert Starling, N4GVF

Europe—14 MHz

OH2BH (Opr. Pasi Luoma Aho, OH2IW)
Donor: A.G. Anderson, GM3BCL

Europe—7 MHz

Drago Turin, S59UN
Donor: Roger Burt, N4ZC

Japan—28 MHz

Yuzo Hara, JA5ONK
Donor: Take Yokoyama, JL1BLW

Japan—21 MHz

Akira Minagawa, JAØJHA
Donor: DX Family Foundation

MULTI-OPERATOR, SINGLE TRANSMITTER

World
VP2EC (Oprs. K5RX, KC5EA, N5AU)
Donor: Southern California DX Club
 W6AM Memorial

U.S.A.

K1DG
 (Oprs. K1DG, K1TR, KM3T, N1RC, WZ1R)
Donor: Carolina DX Association

Europe

UW2F
 (Oprs. UA2FJ, UA2FM, UA2FX, UA2FZ)
Donor: Bob Cox, K3EST

Caribbean/Central America

8P9Z (Oprs. K3KG, K3ZR, K4FJ)
Donor: K3NA

OCEANIA

NH2C (Oprs. JF8FSI, JH7QXJ, JI3ERV,
 JR7MZC, JR8PPG, WX8M, 7K1EHK)

MULTI-OPERATOR, MULTI-TRANSMITTER

World
PJ1B (Oprs. K2SS, K3EST, KB2XZ, N3ED,
 N7ZZ, NL7GP, W3UM, WA3LRO)
Donor: W6QHS and KK6QM

U.S.A.

N2RM (Oprs. N4HY, KA2AEV, WM2H, KZ2S,
 K2TW, N2AA, N7BG, N2NT, KR2J, WC4E,
 W2RQ)
Donor: Paul Hellenberg, KS9K

Europe

GØKPW (Oprs. G4BAH, G7ABQ, G3VHB,
 G4BUO, G3XTT, G4FAM, G4VMM, GØCYB,
 G4PIQ, G4BWP, G4WFR, G3ZAY, G4DQW,
 GØRRC)
Donor: Finnish Amateur Radio League

Japan

JA7YRR (Oprs. JA7CEC, JA7CXV, JA7FDY,
 JA7JUD, JA7LBY, JA7MQM, JA7OZW,
 JH7MEV, JH7VHZ, JR7LVA, JJ1XGF)
Donor: Nippon Television Network Corp.

CONTEST EXPEDITIONS

World—Single Operator

TJ1GG (Opr. Giorgio Beretta, I2VXJ)
Donor: Stuart Meyer, W2GHK

World—Multi-Operator

CEØY (Oprs. AB6BH, HC1OT, N6AA, N6ZZ,
 W6MKB, W6XD)
Donor: The German CDXG & SDXG
 (DJ3NG & DJ4EI Memorial)

operating 9Y4H. Glenn has spent several years building up the station in Trinidad.

Special mention must be made of the all-band entry of ZD8Z operated by Jim, N6TJ. Jim worked 40 zones on 20 meters! Only 6 other stations accomplished this feat of 40 zones: PJ1B, N2RM, K1RU, W5FO, IR4T, IT9A, and LY5A. These stations were either multi or single band.

In the US John, K1AR, took top honors. He

did not win in a little way. He won in a big way. Setting a new US record, John caught the right waves on 10 to surge into a tremendous lead. Looking at the number of QSOs in K1AR's and HC8A's log leads one to the conclusion that they took the same QSO rate course at summer camp.

Second place went to Bob, KQ2M, operating KM1H. Bob was securely in second place above Dean's third-place finish. Special men-

tion should be made about N5RZ and W9RE. Both of these fine operators broke into the top ten even though they operated west of Pennsylvania. In the far west (the land that multipliers forgot), the super efforts of Bob, N6EK, operating from downtown Berkeley and John, N7TT, operating from Washington must be fully appreciated.

Over in Europe another new record was produced by Tine, S52AA. As you may have



Making friends in far-away places. Left to right are 9M8DB, Mayor of Miri, and 9M8R (W7EJ).

noticed, the S5 boys began using their new call signs at the beginning of the CQ WW! Tino, operating from his country house, took advantage of the great conditions to beat OE6MBG, who came in second place, while Steve, GW4BLE, came in just behind OE6MBG.

The low-power category has been very popular and from your letters is very appreciated. The number of entrants now about equals the high-power category. The winner with a wonderful log was I2VXJ, operating at TJ1GG. He is also the winner of the single operator DXpedition trophy. On the other side of the earth, Craig, WB7RFA (new call is KH8AL), jumped on a plane on Thursday, operated the test, and returned to Oregon on Monday! Congratulations to all the great operators in the all band category.

High Bands

The three high bands were dominated by South American entrants. On 28 MHz N5FA, operating ZW5B from southern Brazil, had a gigantic win. To win a highly contested single band by more than a million points is quite an achievement. Second place went to Chris, ZS6EZ. His log had a low unique rate. It appears that you had to be in the southern hemisphere to take advantage of the great north-south openings available on 10 meters. In the US N4RJ pulled out all the stops to run up a great score from Georgia over KS1L, who did a fine job. In Europe IT9A avoided the flows of Mt. Etna and grabbed first prize.

This was not so true on the other high bands. ZV5A, operated by Ohms, PY5EG, sure put his great station on the map by taking top honors on 21 MHz. Second place went to KW8N, operating from NP2E—a real accomplishment from North America. Special mention should be made of JA0JHA's score from a very northern latitude.

For many places in the world 20 meters was the place to start the contest. It was open everywhere at once. Out of all those stations you heard, the top score goes to Ari, OH6MW, operating PJ9P. He was followed by the new European record holder, Pasi, OH2IW, operating from OH2BH's QTH while Martti was at

EA8BH. Second place went to the northern Swedish operator, SM2EKM. In the US Bill, K4XS, put his super station to use by taking the 20 meter trophy home.

Low Bands

The low bands did not suffer because of the great high-band conditions. The biggest surprise was 40 meters. The band was really alive with action. Many operators topped 120 countries. Japanese stations experienced great conditions to the east coast of the US, working up to 80 QSOs to the 1 to 3 call areas. Signals to Europe were also strong. The top score on 40 was PJ9E operated by Tapani, OH5BM. This sets a new world record. Second place went to ZF2RJ operated by N6RJ. Jim, who became a silent key in June, was a competitor who was gracious as well as very talented. His influence on amateur radio will be missed by all of us.

In Europe, Drago, operating from a hilltop in beautiful Slovenia with his new call, S59UN, took advantage of the great conditions to set an all-time new European 40 meter record. Trying hard from Gibraltar was Jorma, OH2KI, operating ZB2X. The big difference in their two logs was the number of JA's worked by S59UN. In the US the big competition was in the northwest. W7XR operated by Danny, W7WA, edged out the old record holder, KC7EM, for a new US 40 meter record.

On 80 meters Carlos, TI2CF, pushed the mic button to top honors. His station sure laid down a strong signal. 108 countries worked on 80 seemed impossible just 5 years ago. Taking up second place was TM5C operated by F6CTT. What a great score, considering all the noise in Europe on 80. Second place in Europe went to LY3BS. Third place in the world and top US honors went to K1ZM. Jeff squeezed out a new US record by working about 400 VE(1-3) stations. Over on the west coast Bob, W6RJ finished second in the US. He also worked a lot of VE's (7-5). Both of these guys outfoxed the multis who were asleep at the switch on the VE front.

Looks like the place to be for 40 and 160 in the world was the top of the Adriatic Sea. Top-

TOP 5 SCORES PER BAND (Regardless of Category)

Log	Band	Score	Pts/Q
9A1HCD	160	56,550	1.25
PJ1B	160	54,103	2.91
OH0W	160	43,476	1.06
DL0CS	160	42,106	1.00
4X4NJ	160	39,984	2.87
TI1C	80	498,037	2.11
PJ1B	80	355,819	2.92
TM5C	80	286,368	1.55
K1ZM	80	223,971	2.48
G0KPW	80	179,622	1.43
PJ9E	40	1,028,104	2.95
9A1A	40	919,710	1.92
ZF2RJ	40	917,316	2.46
S59UN	40	875,875	2.08
FM5CD	40	776,556	2.37
PJ1B	20	2,526,805	2.95
PJ9P	20	1,878,376	2.97
OH2BH	20	1,870,870	2.42
OH0W	20	1,522,422	2.33
IR4T	20	1,481,522	2.31
PJ1B	15	2,511,627	2.94
CE0Y	15	2,038,478	2.97
ZV5A	15	1,830,445	2.93
NP2E	15	1,725,360	2.53
G0KPW	15	1,596,672	2.75
ZW5B	10	2,828,202	2.96
PJ1B	10	2,381,535	2.95
ZS6EZ	10	1,805,714	2.97
HC8A	10	1,785,351	2.97
LU6ETB	10	1,729,195	2.96

band world honors went to 9A1HCD operated by 9A2LH from a mountaintop in northern Croatia, while second went to Luis at IV3PRK with his fine vertical. Third place in the world went to Riki, 4X4NJ. In the US, WB9Z from out in the midwest took all the marbles home. A special mention should be made of SM5AQD and OZ3SK. Both finished in the World top six running low power!

QRP

The QRP category got shook up a little in the standings. When the dust settled AA2U won the 5 watt category. The other side of the continent produced the second world high score of K7RI. Both stations were able to run pileups at certain times, believe it or not. Timing their calls and persistence paid off with good multipliers on all bands. This category traditionally has the lowest unique rate of any—about 0.5%. Just as in the US the two top Europeans came from opposite ends of the continent. First place went to SM3CCT followed by IK1GKE.

Assisted

As packet clusters spread like spider webs over the world, more and more people are enjoying this category. Clusters now tie together most of Europe, the US east coast, the US west coast, and parts of Japan. There were thousands of call outs during the contest. This category continues to grow in popularity. In your enthusiasm, remember that when you

TOP SCORES

WORLD

<p>SINGLE OPERATOR HIGH POWER</p> <p>All Band</p> <p>HC8A 16,316,568 EA8BH 14,307,041 9Y4H 11,351,808 ZD8Z 11,065,098 KP2A 10,430,993 P40W 9,766,080 VD3EJ 8,440,314 K1AR 7,810,446 ED8TK 7,739,052 8R1K 7,650,020</p> <p>28 MHz</p> <p>ZW5B 2,828,202 ZS6EZ 1,805,714 LU6ETB 1,729,195 A22MN 1,726,596 PJ9M 1,624,145 IT9A 1,492,920</p> <p>21 MHz</p> <p>ZV5A 1,830,445 NP2E 1,725,360 VD7SV 1,662,660 JA0JHA 1,430,856</p>	<p>OK1RI 1,404,068 FS/AI7B 1,397,928</p> <p>14 MHz</p> <p>PJ9P 1,875,300 OH2BH 1,870,170 SM2EKM 1,576,144 IR4I 1,481,522 S24BI 1,478,932 VO1QF 1,250,480</p> <p>7 MHz</p> <p>PJ9E 992,068 ZF2RJ 917,316 S59UN 875,875 FM5CD 776,556 H21A 736,422 V7MHZ 680,720</p> <p>3.8 MHz</p> <p>TI1C 498,037 TM5C 286,368 K1ZM 223,971 LY3BS 169,730 G3NAS 155,040 W6RJ 140,595</p> <p>1.8 MHz</p> <p>9A1HCD 56,550</p>	<p>IV3PRK 43,586 4X4NJ 39,984 SM5AQD 34,782 OH4NRC 33,660 OZ3SK 32,178</p> <p>LOW POWER All Band</p> <p>TJ1GG 5,925,760 KH8 4,301,640 /WB7RFA VP2MBA 2,509,821 P29KH 2,140,792 VY2SS 2,035,230 YJ0C 2,025,770 NH6T 1,999,408 N8II 1,864,747 II2A 1,835,883 7Q7XX 1,692,047</p> <p>28 MHz</p> <p>FK8FU 812,110 4X4VF 678,561 AM6VQ 454,986 TL8NG 379,960 JH7XMO 359,310 KE5FI 283,584</p> <p>21 MHz</p> <p>CT3BD 920,080 OA4ANR 596,124 ISJHW 499,500 IV3KYQ 431,254 JF4CTK 419,580 LU2NI 404,624 VO1SF 404,488</p> <p>14 MHz</p> <p>YO4NF 541,960 YV4DSB 346,035 CQ7BWW 330,660 UA4WII 318,396 YL2GN 136,528 JA7DOT 122,100</p> <p>7 MHz</p> <p>TG9AJR 395,488 S59CM 166,980 JA1LZR 132,348 N1XZ 69,906 FD1OZF 67,275 UB5QMA 60,145</p> <p>3.8 MHz</p> <p>S59ZA 70,240</p>
<p>SINGLE OPERATOR HIGH POWER</p> <p>All Band</p> <p>S52AA 7,134,192 OE6MBG 5,888,818 GW4BLE 5,806,410 4U1ITU 5,570,040 DJ4PT 4,683,290 YU7AV 4,170,107 RO0F 3,697,505 GM0ECO 3,674,904 DL8PC 3,505,320 AM3NY 3,331,373</p> <p>28 MHz</p> <p>IT9A 1,492,930 OG1M 902,700 S59DKS 825,132 SM6BJI 673,571 S57QM 615,183 ES1AR 595,580</p>	<p>21 MHz</p> <p>OK1RI 1,404,068 S58AB 1,248,650 LZ5W 1,224,520 S57EK 1,147,385 HA0MM 1,064,866 EH4MC 985,122</p> <p>14 MHz</p> <p>OH2BH 1,870,170 SM2EKM 1,576,144 IR4T 1,481,522 9A7A 1,207,311 S57DX 1,133,203 G3FXB 1,125,168</p> <p>7 MHz</p> <p>S59UN 875,875 ZB2X 554,140 I8UDB 518,661 IK3ORD 474,140 AM92KW 462,033 TF3CW 454,580</p>	<p>3.8 MHz</p> <p>TM5C 286,368 LY3BS 169,730 G3NAS 155,040 OH7UE 136,525 S51NA 135,642 S59KAB 93,656</p> <p>1.8 MHz</p> <p>9A1HCD 56,550 IV3PRK 43,586 SM5AQD 34,782 OH4NRC 33,660 OZ3SK 32,178 G3KMA 30,822</p> <p>LOW POWER All Band</p> <p>II2A 1,835,883 EA3BK1 1,269,996 F6FGZ 1,223,964 CU3LF 1,196,085 ON9CJM 979,600</p>

EUROPE

<p>SINGLE OPERATOR HIGH POWER</p> <p>All Band</p> <p>S52AA 7,134,192 OE6MBG 5,888,818 GW4BLE 5,806,410 4U1ITU 5,570,040 DJ4PT 4,683,290 YU7AV 4,170,107 RO0F 3,697,505 GM0ECO 3,674,904 DL8PC 3,505,320 AM3NY 3,331,373</p> <p>28 MHz</p> <p>IT9A 1,492,930 OG1M 902,700 S59DKS 825,132 SM6BJI 673,571 S57QM 615,183 ES1AR 595,580</p>	<p>21 MHz</p> <p>OK1RI 1,404,068 S58AB 1,248,650 LZ5W 1,224,520 S57EK 1,147,385 HA0MM 1,064,866 EH4MC 985,122</p> <p>14 MHz</p> <p>OH2BH 1,870,170 SM2EKM 1,576,144 IR4T 1,481,522 9A7A 1,207,311 S57DX 1,133,203 G3FXB 1,125,168</p> <p>7 MHz</p> <p>S59UN 875,875 ZB2X 554,140 I8UDB 518,661 IK3ORD 474,140 AM92KW 462,033 TF3CW 454,580</p>	<p>3.8 MHz</p> <p>TM5C 286,368 LY3BS 169,730 G3NAS 155,040 OH7UE 136,525 S51NA 135,642 S59KAB 93,656</p> <p>1.8 MHz</p> <p>9A1HCD 56,550 IV3PRK 43,586 SM5AQD 34,782 OH4NRC 33,660 OZ3SK 32,178 G3KMA 30,822</p> <p>LOW POWER All Band</p> <p>II2A 1,835,883 EA3BK1 1,269,996 F6FGZ 1,223,964 CU3LF 1,196,085 ON9CJM 979,600</p>
<p>SINGLE OPERATOR HIGH POWER</p> <p>All Band</p> <p>K1AR 7,810,446 KM1H 6,110,260 N6BV/1 5,063,702 N2LT 4,687,611 W3BGN 4,172,161 N5RZ 4,170,400 W9RC 3,835,302 K3ZO 3,799,400 K2DM 3,795,265 W2HPF 3,643,750</p> <p>28 MHz</p> <p>N4RJ 821,648 KS1L 765,310 KO4QW 438,964 WS1M 429,678 KA1ILG 359,568 KE5FI 283,584</p>	<p>21 MHz</p> <p>K5MR 1,168,044 W0UN 1,094,052 W6QHS 877,401 K2MT 817,380 K3ZU/B 748,328 N4ZZ 662,475</p> <p>14 MHz</p> <p>K4XS 941,192 K1RU 840,775 W0ZV 591,724 W8TWA 300,120 W5FO 265,880 K9CAN 221,354</p> <p>7 MHz</p> <p>W7XR 363,900 KC7EM 332,619 K1UC 264,922 K8PO/1 196,910</p>	<p>3.8 MHz</p> <p>K1ZM 229,295 W6RJ 140,595 WE3C 125,440 W1GIH 95,928 KN6M/5 60,149 KM0J 51,142</p> <p>1.8 MHz</p> <p>WB9Z 21,681 W2FOR 3,432 AA4MM 1,922 KG7D 1,612 WC0Y 1,426 K4TEA 1,026</p>

USA

<p>SINGLE OPERATOR HIGH POWER</p> <p>All Band</p> <p>K1AR 7,810,446 KM1H 6,110,260 N6BV/1 5,063,702 N2LT 4,687,611 W3BGN 4,172,161 N5RZ 4,170,400 W9RC 3,835,302 K3ZO 3,799,400 K2DM 3,795,265 W2HPF 3,643,750</p> <p>28 MHz</p> <p>N4RJ 821,648 KS1L 765,310 KO4QW 438,964 WS1M 429,678 KA1ILG 359,568 KE5FI 283,584</p>	<p>21 MHz</p> <p>K5MR 1,168,044 W0UN 1,094,052 W6QHS 877,401 K2MT 817,380 K3ZU/B 748,328 N4ZZ 662,475</p> <p>14 MHz</p> <p>K4XS 941,192 K1RU 840,775 W0ZV 591,724 W8TWA 300,120 W5FO 265,880 K9CAN 221,354</p> <p>7 MHz</p> <p>W7XR 363,900 KC7EM 332,619 K1UC 264,922 K8PO/1 196,910</p>	<p>3.8 MHz</p> <p>K1ZM 229,295 W6RJ 140,595 WE3C 125,440 W1GIH 95,928 KN6M/5 60,149 KM0J 51,142</p> <p>1.8 MHz</p> <p>WB9Z 21,681 W2FOR 3,432 AA4MM 1,922 KG7D 1,612 WC0Y 1,426 K4TEA 1,026</p>
<p>SINGLE OPERATOR HIGH POWER</p> <p>All Band</p> <p>K1AR 7,810,446 KM1H 6,110,260 N6BV/1 5,063,702 N2LT 4,687,611 W3BGN 4,172,161 N5RZ 4,170,400 W9RC 3,835,302 K3ZO 3,799,400 K2DM 3,795,265 W2HPF 3,643,750</p> <p>28 MHz</p> <p>N4RJ 821,648 KS1L 765,310 KO4QW 438,964 WS1M 429,678 KA1ILG 359,568 KE5FI 283,584</p>	<p>21 MHz</p> <p>K5MR 1,168,044 W0UN 1,094,052 W6QHS 877,401 K2MT 817,380 K3ZU/B 748,328 N4ZZ 662,475</p> <p>14 MHz</p> <p>K4XS 941,192 K1RU 840,775 W0ZV 591,724 W8TWA 300,120 W5FO 265,880 K9CAN 221,354</p> <p>7 MHz</p> <p>W7XR 363,900 KC7EM 332,619 K1UC 264,922 K8PO/1 196,910</p>	<p>3.8 MHz</p> <p>K1ZM 229,295 W6RJ 140,595 WE3C 125,440 W1GIH 95,928 KN6M/5 60,149 KM0J 51,142</p> <p>1.8 MHz</p> <p>WB9Z 21,681 W2FOR 3,432 AA4MM 1,922 KG7D 1,612 WC0Y 1,426 K4TEA 1,026</p>

BAND-BY-BAND BREAKDOWN—TOP ALL BAND SCORES

Number groups indicate: QSOs/Zones/Countries on each band

WORLD TOP SINGLE OPERATOR, ALL BAND

Station	160	80	40	20	15	10
HC8A	125/11/25	357/20/51	638/28/74	1166/34/111	2031/36/127	4001/31/120
EA8BH	82/11/41	263/21/58	591/27/81	2234/37/117	1531/31/110	2393/31/112
9Y4H	174/11/25	251/15/59	538/24/82	1750/35/105	1147/33/102	2326/29/104
ZD8Z	15/10/16	88/1/4/7	330/30/84	1285/40/139	1424/38/135	2090/36/126
KP2A	198/12/35	397/16/61	740/29/93	1414/33/96	1269/35/96	2959/31/103
P40W	147/9/23	233/14/45	640/26/83	1026/30/89	1169/32/101	2523/29/95
VD3EJ	243/12/20	477/15/60	546/23/64	741/39/116	1601/35/118	978/30/114
K1AR	24/10/21	239/15/73	311/26/88	969/39/133	913/33/125	192/32/119
EJ8TK	4/3/4	156/13/46	129/22/69	1401/36/124	1080/31/109	1556/29/118
BR1K	76/9/24	109/12/40	546/24/72	955/26/83	1111/30/91	2115/27/92

WORLD MULTI-OPERATOR SINGLE TRANSMITTER

Station	160	80	40	20	15	10
VP2EC	137/16/49	281/23/90	920/33/122	1389/39/130	2522/38/151	2185/34/143
VP9AD	119/8/24	430/20/76	615/27/93	2662/39/150	2260/37/150	2052/32/146
8P9Z	83/11/28	276/13/61	521/28/102	3238/36/138	2189/35/136	1340/32/130
P40J	57/8/17	254/15/42	854/29/88	1507/33/112	637/32/124	3881/31/110
V31DX	119/8/24	370/19/94	1054/29/78	1401/30/107	1681/33/120	3286/32/122
ED9DX	158/11/44	227/12/62	756/27/96	1470/35/121	1234/33/110	1720/36/113

WORLD MULTI-OPERATOR MULTI-TRANSMITTER

Station	160	80	40	20	15	10
PJ1R	332/14/42	952/27/101	1631/33/127	4118/40/168	4381/37/158	4140/34/161
GØKPW	358/9/57	1185/20/86	1725/38/137	2489/38/153	3072/33/151	2183/39/161
9A1A	431/0/56	1045/19/75	2737/36/132	2684/39/152	2896/39/136	2877/39/142
CEØY	13/9/9	331/19/37	1088/29/68	2869/37/136	4063/37/132	3804/30/101
OH4W	631/10/55	1123/22/87	2074/34/130	3630/39/141	2360/37/124	1852/37/123
N2RM	95/14/41	485/23/98	721/32/128	1654/40/178	2367/40/178	1688/36/170

USA TOP SINGLE OPERATOR, ALL BAND

Station	160	80	40	20	15	10
K1AR	24/10/21	239/15/73	311/26/88	969/39/133	913/33/125	1292/32/119
KM1H	26/8/17	189/18/65	193/29/82	830/39/139	785/38/133	989/30/112
N6BV/1	29/8/13	262/16/67	137/21/74	831/34/118	349/31/110	764/27/103
N2LT	26/7/18	33/16/50	126/23/78	568/35/109	657/33/102	1190/30/122
W3F6N	42/12/25	182/13/57	184/22/72	602/34/100	561/34/91	932/27/92
N5RZ	31/8/19	79/17/45	229/25/78	284/35/108	590/34/114	1071/31/136
W9RF	24/8/17	112/15/63	117/26/73	356/29/115	712/33/114	771/31/122
K3ZD	17/7/11	192/15/61	205/26/85	356/31/102	590/32/106	857/26/103
K2DM	5/4/3	144/16/58	157/16/58	696/33/114	721/31/106	652/27/84
W2HPF	15/6/11	30/13/48	146/22/62	515/32/111	591/33/109	831/28/108

USA MULTI-OPERATOR SINGLE TRANSMITTER

Station	160	80	40	20	15	10
K1DG	39/14/33	206/18/82	312/30/117	940/39/161	1105/37/152	786/32/156
N3RS	34/12/27	110/18/71	145/30/105	725/40/153	832/37/162	1095/34/157
KS9K	24/9/23	89/18/66	195/35/111	745/39/149	1150/38/137	695/34/156
KC1XX	11/5/8	172/17/73	256/30/110	847/38/150	544/35/146	850/30/148
K4ISV	26/9/24	99/20/68	132/33/101	413/39/132	1125/38/143	996/35/151
K8AZ	28/10/23	135/17/69	149/29/98	657/39/143	1048/36/145	664/32/155

USA MULTI-OPERATOR MULTI-TRANSMITTER

Station	160	80	40	20	15	10
N2RM	95/14/41	485/23/98	721/32/128	1654/40/178	2367/40/178	1688/36/170
W3LPL	76/14/37	487/23/99	579/33/122	1588/40/178	1762/37/173	1561/36/167
K2TR	113/12/38	511/21/89	479/32/111	1547/39/164	1715/38/158	1435/34/157
K3LR	124/13/32	392/21/82	492/31/109	1436/40/166	1750/28/157	1626/35/164
N5AU	65/11/28	188/23/63	393/35/115	1095/40/166	1989/37/166	1416/34/167
NX1H	33/11/20	522/22/85	327/33/108	1636/39/167	1215/36/147	1334/34/155

work a call, which you copied off the screen, make sure you confirm that the call is correct. Sometimes it isn't.

The big winner was Jeff, KRØY, operating from WM5G station east of Dallas, Texas. Jeff took advantage of his skip to VE by working many stations. Second went to K3WW, a driving force in the Frankford Radio Club. Taking time off from teaching, Ulli, DJ2YA, took home the top DX score, while JA8RWU from Hokkaido was second.

Multi-Single

After careful analysis of this hotly contested category, and making sure the ten-minute rule was adhered to, VP2EC emerged as the big winner. The crew from Texas really got those calls correct, as their log was very free of miscopied calls. Demonstrating an equally fine job with copying was the Frankford Radio Club DXpedition to VP9AD's QTH. The top score in Europe was UW2F, followed by Y34K, now of the Bavarian Contest Club.

Taking this highly competitive category in the US was K1DG. Second place went to perennial top scorer N3RS of the Frankford Radio Club. Far from the east coast KS9K put together a super effort to place, while still farther west W6GO from near Sacramento gathered in enough QSOs to take top honors for the far west.

Multi-Multi

The winner in the goliath category was PJ1B. Except for the towers, this perennial team sets up their station "field day" style every year—one solid week of eight guys working from 7 AM to 5 PM each day to get ready for 48 straight hours of waking hours followed by taking down the entire 11 beams and wires on Monday. Wow, that's motivation! Second place went to GØKPW. This fine team amassed a great QSO total to edge out the 9A1A boys from Croatia.

The SCCC boys went to zone 12 this year to put CEØY in many logs.

In the US, N2RM and W3LPL battled it out for control of the multi plaque. N2RM from his NJ coast QTH once again beat Frank's team. N2RM worked 40 zones on two bands, the only station in the contest to accomplish this feat. Farther out west AA6TT/Ø down in SW Colorado turned in the top score west of Texas. What a great job they did! The second highest score from the west was NK7U. Joe, besides being a retired professional baseball player, has assembled a great station and is giving enthusiastic new contesters an opportunity to experience the CQ WW from eastern Oregon. And everyone thought they were working Father Paul when they worked WØAIH/Ø, but he was far away taking part along with W4ETO in the first US-UL multi-multi from RLØL.

Comments

We sure appreciate all the disks that we received for last year's contest. No matter how small your score, please send it to us. We made extensive use of many scores to cross check the validity of top competitors. Please send us a disk of your log no matter how small your score. Of course all top scores (potential box scores) are required to submit a computer disk. The formats we would like to have are: If you use CT we want your .BIN file; if you use N6TR we want your .DAT file; if you use D-Base we want your .DBF file. Of course, there are many other formats we receive such as W2HPF, NA, K7RI, etc. The generic form we want is a single, vertical column of calls in chronological order for each band.

Remember that your disk file should be the same as your paper log. Which brings us to another question that several people have asked: "Why don't you guys allow us to submit only disks?" Here is our reason. The CQ WW is a fun and/or serious event for tens of thousands of people. We have an obligation to cer-

tify winners and record holders. You cannot check logs thoroughly with just a computer. If you have ever tried writing a long paper or a book on the computer, you know that in order to understand the flow of words and to get a feeling for your document it is *always* necessary to print out a hard copy to edit. You can't flip pages with a computer like you can with a hard copy.

We are looking for your suggestions of ways to increase the activity and a feeling of competitiveness in areas (100 or more log submissions) which traditionally produce few national or world winners (areas such as the midwest and far west US).

Obeying The Rules

The rules that are printed in this issue are the ones you should obey. Please review them. We feel it is necessary to remind the multi stations that they must obey the distance rule as described in rule III.3. We have received several letters regarding certain European multi stations that are scattered all over their country. Come on, fellows; that's not right. One of the problems that a multi has to solve is cross station interference. It can be done. It just takes some thinking. Several multi-multis have even solved the interband problem. They can look for mults up to 5 kHz from their running station! This is perfectly okay, but it breaks the rules to have 20 meters in one city and 40 meters in another 50 km away.

For Your Information

It was a great pleasure to find so many rare countries on the air in the contest. The multi-single efforts of ZA1A, KC6WW, HSØAC, 7Z1AB, 7Z2AB, HZ1AB, and 4J1FW were a welcome surprise to many people. In a world with increasing tensions, it is a tribute to amateur radio that people can come together, have fun, and go away satisfied that they tried their



Here are some faces with those familiar callsigns. Left to right: KW8N (NP2E Op.), KP2A, and CT1BOH (KP2A Op.).

best, that they talked to old friends or made new ones. The S5 boys for various reasons timed the debut of their proud new callsigns for the beginning of the CQ WW.

Since the last contest several new countries have come into existence. Here is a list of new countries to put in your country files: T9 Bosnia, Z3 Macedonia, OK, OL Czech republic, OM Slovakia. Here are new PX's for the former USSR: Armenia (UG)EKA-EKZ; Azerbaijan (UD)4JA-4JZ; Belarus (UC)EUA-EWZ; Georgia (UF)4LA-4LZ; Kazakhstan (UL)UNA-UQA; Moldova (UO)ERA-ERZ; Kirghizstan (UM)EXA-EXZ; Russia (UA1-6)UAA-UIA, all R, 4K; Tadjikistan (UJ)EYA-EYZ; Turkmenistan (UH)EZA-EZZ; Ukraine (UB,UT,UY)URA-UZZ, EMA-EOZ; Uzbekistan (UI)UJA-UMZ. Some guys are using these new prefixes already and some are not. When in doubt, ask, "What is your country?"

Have you ever wondered who really had the top score on a particular band regardless of category? Then check out the "Top 5 Scores Per Band" box. The top 5 scores without regard to category are shown along with their point/QSO average.

And case you wondered what percentage QSOs of a log from various QTHs are from Europe, Asia, or somewhere else, check out the "Average Percentage . . ." box. As you can see, the percentages vary greatly depending on where you are on the planet. Nothing is intuitively new here, but it's nice to see real data. It looks as if everyone has more or less the same shot at Oceania, Africa, and South America, while Europe, Asia, and North America vary greatly. Differences in Oceania percentages are entirely due to the number of VK/ZL's worked. In the coming years, speaking Spanish, Russian, or Japanese at certain times will increase your QSO totals on certain bands.

Here and There

Another important issue has surfaced along with the OG1M single band entry. It's a matter of the final authority over the use of a license exercised by the licensee over the "guest operator," in today's popular contesting scenario. While the OG1M entry has its own merit,

it may prompt another rule clarification; it is reasonable that the station licensee will always have the final word concerning the use of his license. So watch out, guys, and make sure your host is always happy with a complete understanding of your contest effort.

This year we received several complaints about SSB operation too low in the 40 meter band. SSBers should respect the CW boys and stay above 7040. Of course, it is quiet at 7010. That is because it is respected as the CW band!

This year marks a watershed of sorts. We compiled the largest database ever constructed. On SSB it consisted of 900,000 log entries representing 378 different logs (1550 "band logs"). Every geographical area was well represented. The 900,000 log entries represented 84,779 different log entries (including typos). This can be further broken down to 48,765 calls worked by just one person in our data bank and 36,014 worked by more than one person. Most of those 48,765 calls are bad calls, believe it or not! And some of the 36,014 are likewise no good.

We estimate that the number of real calls on for the SSB test was 30,000, give or take a couple of thousand. Almost two thirds of the dif-

ferent calls in the data base represent errors of some sort. Transmitting, copying, or typing errors all contribute to the bad calls. Here is an example of some representations of HC8A in the data base: HC8A (255 people in data base worked HC8A—our max is 255), HC8E (4), HC8A (2), HC5A (1), IC8A (1), HC8D (1), HC8I (1), HC2A (1), HC8S (1). All the calls are wrong except for HC8A! As you can see, one call gave rise to at least eight bad calls!

The opinion of those of us who check such things is that the logs we are receiving are showing far fewer errors than three or four years ago. Operators are trying to get calls right. Congratulations to all who have increased their copying ability. Remember the old adage: "To err is human; to ask for a repeat of a call is divine." If your score has a chance of making the Top Box scores in any category, it will definitely be checked carefully.

If you are interested in receiving a list of uniques in your log, send your request to K3EST. For a more detailed, personalized report on your log send \$6.00 (mailing costs plus disk plus time). You must send a disk (see rules for the format we want), if you have not done so already, for such information. We will make such information available to entrants beginning in June (SSB) and July (CW) for the previous year's contest.

Every year we come to count on hearing friends in the CQ WW. This year as we tune the band some familiar calls will be missing. In addition to Jim, N6RJ, we lost two Hall of Fame members when G3FXB and W3GRF passed away. We will miss these fellows.

Thanks

Last year we forgot to thank K5ZD for helping as a log checker for several years. We wish Randy the best in his new job and hope to welcome him back someday.

Your log checkers were K3EST, KR0Y, W9RE, WA8YVR, N3ED, K1DG, W2RQ, W7EJ, K6NA, N6AW, KR2Q, and N6AR. Our database was compiled by N6AA using N6TR's software. Our DX advisors are JE1CKA, I2UIY, G3SXW, OH2BH, OH2MM, OH2KI, S52AA, EA5RS, CT1BOH, OK2FD, and PY5EG. Our special advisors are N2AA, K3ZO, and K1AR.

Congratulations to all the winners and see you in the '93 contest!

Bob, K3EST/6, and Larry, N6AR/4

THE DX ENGINEERING REMOTE COAX SWITCH-

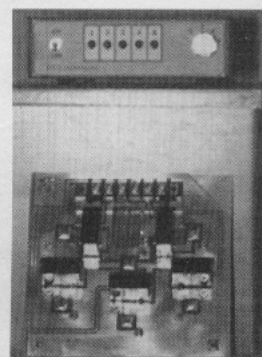
It works better because it's built better.

- Quality epoxy-glass circuit boards
- Sealed relays rated to 5 KW at 30 MHz.
- Flat SWR through 440 MHz.
- Antennas may be grounded or isolated.
- Rainproof galvanized/painted steel outdoor enclosure fully protects connections.
- Convenient indoor remote control.
- \$195.00 Postage prepaid in U.S. (VISA/MC)

DX ENGINEERING, INC.

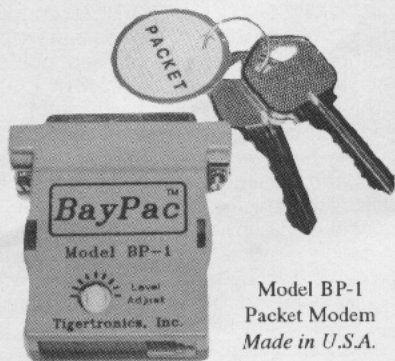
618 Spaulding Ave., Brownsville, OR 97327

(503) 466-3138 FAX (503) 466-5453



CIRCLE 36 ON READER SERVICE CARD

- Packet Radio - Portable & Affordable!



Model BP-1
Packet Modem
Made in U.S.A.

- ★ Simple Installation
- ★ No External Power
- ★ Smart Dog™ Timer
- ★ Perfect For Portable
- ★ Assembled & Tested
- ★ VHF, UHF, HF (10M)

Whether you're an experienced packeteer or a newcomer wanting to explore packet for the first time, this is what you've been waiting for! Thanks to a breakthrough in digital signal processing, we have developed a tiny, full-featured, packet modem at an unprecedented low price. The BayPac Model BP-1 transforms your PC-compatible computer into a powerful Packet TNC, capable of supporting sophisticated features like digipeating, file transfers, and remote terminal access. NOW is the time for YOU to join the PACKET REVOLUTION!

Just...
\$49.95
+Shipping



400 Daily Lane
P.O. Box 5210
Grants Pass, OR
97527

1-800-8BAYPAC

VISA 1-800-822-9722 MasterCard (503) 474-6700

CIRCLE 134 ON READER SERVICE CARD

NOW HEAR THIS!

FINALLY!

High-Powered Sound from your HT.



- 12 DB of Audio Gain
- 3.5 inch Oval Speaker
- Automatic Shut-Off
- Internal NiCad Charger
- External Power 5-15 VDC

NEW FEATURES

- *Tape Trigger*® (automatic logging)
- Auto Polarity Switch
- Input Level Adjustment
- Even Lower Battery Drain

\$29.95

Model HTS-2

Naval electronics inc.

5417 Jet View Circle, Tampa, Florida 33634
Phone: (813) 885-6091 Telex: 289-237 (NAVL UR)
Fax: (813) 885-3789

CIRCLE 92 ON READER SERVICE CARD

DX QRM

Somebody stole my 40m vertical-radials!? Copper is very expensive here, but my SWR was too high! . . . *UT2L*. My first entry *SO/15m*. Broken ant for 80m put me to single band category . . . *UT4UX*. Look for me next year with a new antenna farm in the mountains of Puerto Rico . . . *WP4U*. This was the very best contest I have been in to date, the conditions were great, and I learned some new tricks about propagation. I also found that the new tower made a big difference to the effectiveness of my old and weathered *TA33jr*. Now if I could only figure out how to beat my two contest buddies, *VE3ZD* and *VE3WSM*, without using an amplifier . . . *VE3RRH*. We had great fun—three multi-singles from HZ land. WOW! . . . *Z2AB*.

I was excited in this contest! It was hard to contact to Caribbean and Africa! . . . *JK6ISK*. I enjoyed DX QSOs and contest very much from Mongolia. Tnk you for all of call! . . . *JT1/JI2MED*. Great problems with US stations. They used big power and bad receivers, or perhaps they don't care about weak signals from abroad? . . . *LA4KGA*. Hawaii is a nice place to have fun. *KH6UU*'s B&B was charming . . . *KH6/NY6Y*. Wish folks operating other than their zone would have to sign portable at the zone they are in . . . *KH6GMP*. After the typhoon, we had many troubles to build antennas but fortunately no blackout during the contest . . . *NH2C*. The high band saga: the states were HOT and Europe, NOT! . . . *KL7Y*. Not bad considering all the troubles—American Airlines smashes one amp, one computer blows 30 mins into test, AC line voltage slightly low—95 instead of 220! We shall return . . . *J68DX*.

Conditions to the south were very poor this year. But over the pole propagation was quite good. . . . *NL7KJ*. Murphy strikes! Twenty meter RF hung up computer constantly, local cluster node died, buggy version of CT. Oh well, we had fun for 32 hours! . . . *6D2X*. Propagation was poor from here. The great absent; *JAs*. But, as every year from 1977, enjoyed the test . . . *LU4MEE*. Nice contest even though I didn't work "like blood taste in my mouth" . . . *OG7MMY*. Very narrow bands only on 28 MHz is enough room. Hi! Very good signals from USA . . . *OK2KMR*. Sorry I couldn't spend more time in contest. It was a real struggle with low power and the tall mountain . . . *3A/K4UEE*.

My new QTH in Singapore was a total disaster. I have spend 2 days in the contest and got just over 100 QSOs. Even had a problem to get 9V1 to copy me on 75 meters. I have just activated my old 9V1XE call after 4 years but cannot repeat my 1987 signal. In CQ WW CW '87 over 2 mega points and all rig is the same, just different place on the island. This place must be under Murphy's spell . . . *9V1XE*. It was the only time I can use AM3 prefix in Spain, only in 1992, my first contest monoband in 3.8 MHz, very beautiful work USA . . . *AM3FQV*. Very high wind, ten hour power shut down . . . *F6ACJ*. My HB9cv 28 MHz suffered because of the wind . . . *FD1RAB*. Conditions seemed good but no luck working anyone in Zone 23, 24, 26. One highlight was a 305 JA run Saturday afternoon . . . *FS/AI7B*.

Conditions were fair. Plenty of stations to work. Europe was hard to work as it seemed that the only way to work Europe was on back scatter, as most contacts with Europe were on the back off the beam. . . . *G0NKL*. This was our first entry in multi-multi category. There can be no return to multi-single! . . . *GW8GT*. "Contest"—the ultimate "test" of skills equipment and knowledge. My score was limited only by my need for sleep, food, and stretch breaks . . . *VE3WSM*. The bands were HOT! This made it very hard to sacrifice 6 hours of prime operating time Saturday night to watch the world series! . . . *VE3ZD*. Work commitments and "Murphy" into my low-band antenna didn't allow me to work as much as I wanted to. Started off as single as all-band low-power, but a friend gave me spots on 2m for 9ER! TA and 3X0HLU, I couldn't resist, but it was worth changing categories for them . . . *VE6JAJ*.

I wish when stations call CQ they would listen longer than one-half a second . . . *VK3SM*. Wanted to operate longer, but had heavy noise from power lines. Hey—point your beams to zone 29; we are here . . . *VK6BHL*. Have trouble with 160 meters first night (RF arcing), but enjoyed and break my own record! Thanks *K1EA*! . . . *XE2BEU*. I am very glad with this program. I received in Indonesia very high QRM . . . *YC8SBB*. Propagation was not so good. We use this special call-sign, and hope we enjoyed some people with a new prefix from Romania! . . . *YR6F*. *ZL2IR* was heard to say in a loud excited voice on a believed dead band "turning his beam round to us" next we had worked a station on four bands! . . . *ZM2K*.

First time we could run high power in CQWW! All worked well, except when a lightning strike hit us just before the contest, destroying four transceivers, an amplifier, and two computers. Next year we will use the call OT3A for all contests . . . *OT2C*. We will ever witness the A and K index to be so low during CQWW SSB contest A=1, K=1? Contesting under these conditions is the limit! . . . *PIATUE*.

Condx weren't good, but I appreciated the contest very much. *PU1Z* was a special call for CQWW contest . . . *PU1Z*. Amazing propagation on Sunday evening. When the band was almost dead I worked 9ER1TA, Martha, on the pile-up between big pistols from "W" . . . *SP5XAR*. After 32 years of activity I found how fine is contesting! Will continue . . . *I2CMA*.

Good propagation at day. Not very excellent on night—nothing from Africa and South America, but good condition for U.S.A and Japan. Not many DX stations on band! . . . *IN3XUG*. First 40m experience in this contest. Very bad weather, immediately broken rotor most of time spent up and down the tower, the cubical quad worked only six hours in all! I hope next year will be better . . . *IT9BLB*.

Very hard to have QSOs after 1930 GMT of second day! . . . *IT9JWV*. Twenty meters was very bad. But how happy we are that we could get more multipliers than any other years, especially 20m in heavy QRM! . . . *JE6ZIH*. I'm very happy to y QSO with zone 2, *VO2BC* in the contest. This was the first zone 2 in 20m SSB . . . *JF3LOP*. ARS since 1937 and my age is 78 years old . . . *CT1QF*. Fantastic propagation on all bands! . . . *DL0BY*.

INTRODUCING THE UNIVERSAL M-400

A totally new concept in code / tone readers!



- A RTTY-reader and tone-decoder in one!
- Easy to read two-line 40 character LCD.
- No computer or monitor required.

- Baudot
- Sitor A/B
- ASCII
- Swed-ARQ
- FEC-A
- FAX
- POCSAG
- GOLAY
- ACARS
- DTMF
- CTCSS (PL)
- DCS (DPL)

Forget the limitations you have come to expect from most "readers". The self-contained Universal M-400 is a sophisticated decoder and tone reader offering an exceptional range of capabilities. The SWL will be able to decode Baudot, SITOR A & B, FEC-A, ASCII and SWED-ARQ. Weather FAX can also be decoded to the printer port. The VHF-UHF listener will be able to copy the ACARS VHF aviation teletype mode plus GOLAY and POCSAG digital pager modes. Off-the-air decoding of DTMF, CTCSS (PL) and DCS is also supported. The M-400 can even be programmed to pass only the audio you want to hear based on CTCSS, DCS or DTMF codes of your choosing. The M-400 can run from 12 VDC or with the supplied wall adapter. The American-made Universal M-400 is the affordable accessory for every shortwave or scanner enthusiast.

Only \$399.95 (+\$6 UPS).

Universal Radio
6830 Americana Pkwy.
Reynoldsburg, OH 43068

- ◆ Orders: 800 431-3939
- ◆ Info.: 614 866-4267

FREE CATALOG

This huge 100 page catalog covers everything for the shortwave, amateur and scanner enthusiasts. Request it today!

TERRAMAR SYSTEMS COMPANY

The Fully Automatic Amateur Antenna Matcher



ONLY
\$99.

Move Over Maxcom!

MATCH ALL has finally captured Maxcom technology. Not only captured it, but specifically adapted it for amateur radio operation.

MATCH ALL instantly matches your high frequency amateur transmitter to your antenna (long wire, vertical, whip, or dipole) with less than 1.5:1 V.S.W.R. on all H.F. amateur bands.

In addition, **MATCH ALL** goes Maxcom one better—it handles S.S.B. voice and C.W. operation.

Constructed of marine aluminum (6061-T6), stainless steel, and epoxy. For

your security and comfort **MATCH ALL** includes a fifteen day Money Back Guarantee and a full year "No Questions Asked" free replacement should your matcher ever fail.

All Bands. All Modes. All for \$99.

To place your protected C.O.D. order call 305-523-3123 or mail check/M.O. to:

Terramar Systems Co.
3299 S.W. 11th Avenue
Ft. Lauderdale, FL 33315

Please add \$4.00 shipping charge and 6% Florida sales tax if applicable.

CIRCLE 87 ON READER SERVICE CARD

USA QRM

Fabulous conditions, wall-to-wall Euro's on 10/15/20m, went looking for YU new DX countries, only found S5... *K6MA*. Worked S79J on 20m at 2359Z on Sunday afternoon!... *K6XO/7*. Trying to convince an AP2 STN that MT is in zone 4! There are hams living in MI!... *K7ABV*.

Better than expected propagation for decline of cycle 22, but little from the Pacific... *K9DN*. XYL stung, allergic reaction to bees, had to spend 5 hours in hosp. Next test XYL in shack with me!... *KA1YYI*. I had a dream was walking around for three days after test saying 59051... *KA2ZIU*.

After a disappointing start Friday evening, I was shocked to have Europe coming in so good Saturday morning... *KA8WEO*. Five new countries—TJ, VQ9, 5Z, 6W, and 7Z—all with 80W and a vertical... *KB1GN*. Electric storm the 24th wiped me out, dog got jealous and hid my log sheets... *KB2DQE*. First time assisted. Confusion!... *KB2SE*. My first CQ WW (we call it World War—Hi!). Age is 14, heard a lot of zone 14, hope to do this again despite the terrible score... *KB3ADQ*. I just got my license 10 months ago. I will definitely participate again... *KB8NNU*.

Good propagation, but heavy lightning crashes cut out at least 10 hours of operating time... *KC7DB*. Better prop. this year. First time worked a YO station in contest... *KE8NH*. Breaking own QSO record... *KE8UI*. Forty over 9 static crashes here Friday night, much better Saturday (80m)... *KG6AO*.

Biggest thrill working zones 36, 37, 38, and 40 on only 75 watts and 40m ant. Definitely need better ant. I could hear lots of JAs, but few could hear me... *KI4HN*. I got so excited when 15m opened up to Africa, I blew up my beam tuning up!... *KM6XX*. Blew the front end of the 40/10m rig and missed lots of QSOs before I realized it. Still best one yet. Good conditions!... *KM8L*.

When trying to reach VQ9 through a big pileup, Gary, KD4JQV, called "KQ4AX BEGGING." We made the contact... *KQ4AX*. Many hi-power stations with poor radio = excessive splatter!... *W1GOU*. Phoebe on packet spotting cluster networks. It's more fun the old fashioned way—pencil, paper, and wits!... *W1OP*. My first serious DX test ever. Contest software makes it more fun than ever! But I forgot to work USA on 40 + 80!... *W2GRS*. Forty meter phone very disappointing, too much QRM from foreign B.C... *W2OAE*. I worked every station I called. I didn't have the time to work longer, and I am slower in my old age!... *W4WJJ*.

Logging/duping program crashed three times. Continued twice, lost last 8 hrs... *W6MFC*. I worked HC8A again and PR2R for country number 145 while "mobile"... *W9CNF/M4*. Hearing a VU on 40m, hope next year, working a VU on 40m, wish they would listen up... *W9GXR*. Best conditions ever heard after four sunspot cycles of contesting... *W3BGN*. 5Z4 begging for contacts in last hour of contest. Nailed him first call... *WO1N*. Our best contest yet; probably had the happiest operator in this test—NU3Y back after his second heart transplant... *WT3Q*. First home contest. Fun all over!... *WP4DLX/W3*. Finally worked VR6BX after almost two years of trying. Very happy to work eastern Is... *WA1UOL*.

The ZS9A pileup was not funny. However, I did fall off my stool listening to it! Really enjoyed operating during this contest... *WA2ALY*. Working zone 31 meters before the contest was over... *WA2LMC*. Only put in half the contest but had fun. Had 7Z1AB stop pileup to say he knows me from 2m AM days!... *WA2UDT*. Trying to figure out what all the special prefixes were and where?... *WA6RNF*. Conditions were fantastic! Worked 97 countries with 100 watts and a vertical antenna... *WA7BNM*. Enjoyed the single unlimited class... *WA8ZZA*. Working contest with my daughter for first time... *WA8ZBL*. In 31 years first contest I've operated in that was interrupted by a thunderstorm, flu attack, two out-of-town visitors on separate days, and an XYL who likes to do her own contesting... *WB2ABD*.

Messed up wiring in my remote antenna box caused me to operate with the 10m dipole instead of the beam for the first 30 minutes of test! What a Bozo!... *WB2ULI*. Fifteen minutes before contest start we had an outrageous electrical/rain storm. Delayed over 1 hour while storm dominated this "dry" area! Band propagation were extremely good. Forty was better than I've heard it for a long time!... *WB6NFO*. Thrill: Working Kuwait when he didn't seem to hear much of anything stateside. Biggest blunder: not getting in on the "end of contest" rush to pick up some easy 10 meters. Also, didn't get U.S. for multiplier!... *WB8FVB*.

I worked VK6YS via crooked path over the north pole; couldn't hear him short path... *WI9H*. Bands sizzling!... *K1WJL*. This is the last year with a vertical and low power! There is a 4 ft. by 4 ft. by 5 ft. hole in my backyard as I write this! My tower is about to be vertically polarized after 6 years of rest... *K2UVG*. Worst test—two amps blew up (one caught fire), third amp had bad fil. xmfr. Ahhh!... *K3SME*. Tremendous signals on 40m LP from zone 17!... *K3TW*.

Managed to work 5R8DF just 3 minutes before long-path propagation dropped out... *K4UVT/6*. VQ9IO comment "what a booming signal you have in here"... *N2INN*. I was surprised at the good conditions on 10 meters considering we are on the downward swing of Cycle 22. Last year... *N2LDU*. Working 6V6U with a lot of QRM... *N2LSJ*. The Russian prefixes are out of control!... *N2MR*. I earned my Novice HF privileges only four days prior to your contest. The operating experience I gained, was unlike anything I've ever done in this hobby. CQ WW should be a requirement for all amateurs!... *N2QNN*. First CQWW from the States in many years. Wires worked fine on 20 through 160. Missed operating from PJ1B... *N4RV*. Still too many operators not repeating calls. Low bands are tough... *N4XMX*. More brews, more Q's, less blues... *N4YKD*.

Excellent propagat on entire weekend! Also pleased to work 5R8DF for all time new country... *N6HK*. Eight times last year's score. Upgrading paid off! Glad I got a new radio, as well!... *N6TPT*. Was a thrill to work about 45 countries in 12 hours after being off the air for 30 years... *N7WWWQ*. Hearing this incredibly loud signal only to find out it's FR5DX!... *N10G*. Not expecting much on 80m because I can't split freq's. Worked TI on first try... *AA2GS*. I think this was the highest-ever USA multi-multi score "West of N5AU"... *AA6TT*. My first CQ WW. Now I'm hooked!... *AA0Z*.

WHEN LUKE TALKS AMPS, WE DELIVER . . .

24 HOURS A DAY
7 DAYS A WEEK
52 WEEKS A YEAR



**LUKE HIGH CURRENT
CONTINUOUS DUTY
POWER SUPPLY**

S40-40AMP-13.8V	\$275
S55-55AMP-13.8V	\$310
S65-65AMP-13.8V	\$425
S80-80AMP-13.8V	\$540
S100-100AMP-13.8V	\$585
S35H-35AMP-28V	\$445
S55H-55AMP-28V	\$540
S25VH-25AMP-50V	per quote
S55VH-55AMP-50V	per quote
OPTIONAL FAN COOLING	\$50
OPTIONAL LCD METER	\$75

- Electronic Regulated
- Fold Back Current Limit
- Dual Crowbar - Auto Reset - 1 Pico Second Latch - 1 u Second
- Input Surge Protection
- Digital LCD Volt/Amp Meter w/display hold (optional)
- Modular Capacitor Array
- Soft start on most models

- Made in U.S.A.
- One Year Warranty
- Over Temp Protection
- Over Temp Indicator
- Crowbar Indicator
- 120/240V all models
- Continuous duty with optional fan cooling (not required S40/S55)
- Heavy duty transformer manufactured in U.S.A.



LUKE CO.
7113 North 9 Mile, Lake City, MI 49651
(616) 229 4593



CIRCLE 83 ON READER SERVICE CARD

1993 GREATER LOUISVILLE HAMFEST / COMPUTER SHOW

And

ARRL KENTUCKY STATE CONVENTION

OCTOBER 2ND & 3RD

- COMMERCIAL VENDORS
- FLEA MARKET
- FORUMS
- FCC TESTING
- LADIES PROGRAMS



Location:

**COMMONWEALTH CONVENTION CENTER
221 FOURTH AVENUE
LOUISVILLE, KENTUCKY**
80,000 Sq. Ft., ALL INDOORS - AIR CONDITIONED

HAMFEST TICKETS:

\$6 ADVANCE, \$8 AT THE DOOR

FOR TICKETS OR INFORMATION, SEND BUSINESS SIZE SASE TO:

**GREATER LOUISVILLE HAMFEST
P. O. BOX 34444 -C
LOUISVILLE, KY 40232-4444**

PHONE (502) 551-4118 TALK-IN 146.28/88



Operating from the beautiful Aland archipelago with OH0W were (left to right) OH1NOA, OH1MDR, OH2MM, OH6YF, OH1JD, and OH6MFN.

AK3B: UA3-142-1034, UA3AGW, UV3DCX, RA3AUU, UL7IDX, RV5HM, UJ8LJ, RL5P: UL7PAE, UL7PCZ. **RL6DX:** UL7-029-79, UL7-029-152, UL7-029-178. **RN5WW:** RA1NA, RA1NF, RA4ITX, RA6LS, TV4IV, UV3DAZ. **RW9C:** RA9CU, UW9CK, UW9CZ, RW9CZ. **S55AA:** & S53BM, S53EO, S59KW, S53WW. **S57MM:** & S59MM, S54CW. **SK5SE:** SM5PAX, SM5SYC. **SK6AW:** SM6CVE, SM6DLD, SM6DER, SM6EHY, SM6LJQ, SM6LJF, SK7JD: SM7HQJ, SM7EWG. **SK8UX:** SM0TQX, SM0DRD, SM0KCCO, SM0PYP, SM0JHF. **SL0CB:** SM0NZY, SM0NSJ, SM0TXT, SM3LGO, SM3SGP, SM1TDE. **SN6F:** SP6ECA, SP6FV. **SP2KVF:** SP2CMD, SP2JVR, SP2QG, SP2LJU. **SP3KPN:** SP3GXU, SP3SFV. **SP6YFU:** SP6BNV, SP6PE. **SP9PRO:** club. **T7GA:** T7TC, T7T1, T77GM, T72NM, H5JZ, I4ZQS, IK4BHO. **TM1L:** FE1LGB, FE1LCT, FE1NNW. **TM2V:** F63LH, F6GLI, F6GTY, F-108B1. **TM4KX:** F6IFR, F6ASS, F6GWW. **TU2CI:** T2XZ, TU4EF, TU4EG. **UB4DWW:** Rakusciniec, Meyhesh. **UB4HNB:** UB4HD, UB4HQ. **UB7W:** UB5-068897, UB5WAN, UB5WCX, UB5WVY. **UW2F:** UA2FJ, UA2FM, UA2FX, UA2FZ. **UW1A:** UA1AE, UA1ARL, RW1AC, RV1AW. **UZ10WZ:** UA1-113-244, UA1-113-298-UA1-113-630, UA1-113-743. **UZ1TWW:** UA1-144-1081, UA1TGE.

UZ4HXC: UA4HVV, RA4RHL, UA4HGX, UZ4WVA. Markov, Kuznetsov, Mantorov, Zapolskih, Afranasyev. **UZ9XWH:** UA9XFY, UA9XLZ, UA9XJV, UA3-142-1326. **UZ9YXI:** Ermakov, Selivanov. **V29Y:** JL1MUT, JF1NWX. **Y31DX:** KIGIM, N6YRU, VE3SUN, WA6SHD, WA9L. **VD2QK:** VE2MCZ, VE2PEC, VE2ZC, VE2QK. **VD4VY:** VE4XT, VE4VY. **VD7DX:** VE7AHA, VE7AS, VE7GAS, VE7GFC, VE7GFS, VE7NS. **VD7ON:** VE7CC, VE7NTT, VE7ON, VE7SZ. **VE2CSI:** VE2ZY, VE2NN, VE2QBQ, VE2DYX, VE2KV. **VE3CRD:** & VE3HQW. **VE3DC:** VE3NYX, VE3OCC, VE3QZY, VE3TJB, VE3VMO. **VE6AO:** VE6VDX, VE6DBC, VE6AMR, VE6GUN, VE6REG, VE6MUF, VE6HJH, VE6SRL, VE6GHM, VE6CIZ, VE6KLO, VE6CLV, VE6RW, VE6OGW, VE6CA, VE6KC, VE6AJL, VE6MVA, VE6GAV, VE6SWR, VE6VNK, VE6NAO, VE6TFM, VE6GLR, VE6EDY, VE6SUY, VE6RCI.

VE6SV & VE6NAP: VE6WQ. **VE6ZC:** VE6MSN. **VE7UBC:** VE7FVH, VE7HBD, VE7EWL, VE7HUN, VE7CNY. **VK4DMP:** & others. **VK6YS:** & VK6BE, VK6LW, VK6JKR, VK6XC. **VP2EC:** K5RX, KC5EA, N5AU. **VP2EX:** NBDLU, N5LL. **VP50:** N2ZVW, WB2F, WB2YOF. **VP9AD:** & N3AD, N3RD, N8ET. **VQ9IO:** & VQ9AC, VQ9BB, VQ9RB, VQ9YA. **VG6WQ:** NABD, VS6VW, WX3N. **WI00:** & K1JKS, KN1M. **WI10K:** & KA1SYG. **W1XE0:** & W0KFA, KI0G, N4ZA, WB0ITG, N80CC, K0CL, KR0U, K9MMW. **W2UI:** & N3KR. **W2WVC:** club. **W3HVQ:** & N3EJR, KA3TOI. **W3XJ:** & N3FDL, N3WY. **WA4QL:** & N9HZQ, N7FYT, WD4DWN, K0DI, KC4JAY, WA4ABY, KC4WDH, N9JR, KD4RF. **W4PRO:** & K04FM, W8HDD, WB4GCS, WH9AAF. **W6EEN:** & K6XC, W6TKV. **W6GO:** & AA6WJ, K5HHK, KF6A, N6IG, N6BG. **W8AH:** & KC6FS. **W8BI:** N8AG, N8BJQ, W8LCL, KB4TLH, KB8IDM, N8MBZ, WX8F, KF8HM, KF8FF, N8FFP. **W8UMD:** KA0JTW, N8VCO. **W9KDX:** & K9RN. **W9JZ:** K9IMM, W9N0V, K9KVA, KF9FT, KF9XN, KF9AF, N9UHL, K9JL, N9CHN, <A9GYP. **W0CP:** & K0ELU, N00V, W0UO, WY0J. **W2E0V:** & WT2F, K2SIG. **W6GIE:** & KJ6BK, N6CG, W2KYA, W6TKF. **W6NKQ/7:** & N6HR, WR2S, N7WDN, N7OKV, N7PLP, <B70DX. **WATEGA:** & JA7CZY, WB7AVD, W57I. **WADPUJ:** & K0JL, KC0ZC, N0BSG, W0PLP. **W80FP:** & K8BYR, K8MBP, W8R0D, K8P0M, K8BFD, W8S8D, AB0W, K8BJL, K8QK. **W8BK:** & K8YSE, W8CZN, W8GMH, W3JUQ, W8XD, W8BBN, W8BVPA. **W8BMT:** W8BMMW, K8CBM, W8SPJ, K1K8L, N8SFD, N80YX. **W80F:** & WC0CHW, K80K, N8NVI, N80BG, W8WJ, N8LIK, KE2YO, K80EK. **W2FA:** & KB2MUG/AF, AA2FO. **W73D:** & AB2F, NU3Y, KA3PLS. **W75U:** & N5LH, N5RH. **XA5T:** XE2KB, XE2DRM, XE2YU, XE2LV, XE2GV, XE2CRT, XE2ARM. **Y34K:** DL30J, Y2SEK, Y24UK, Y32VK, Y33UL, Y33VL, Y42MK, Y5ANL. **YR6F:** Y0SLV, Y06DDF. **YS1X:** YS1AC, YS1FAF, YS1GMV, YS1MAE, YS1OC, YS1RRD, YS1TG. **YV5NCK:** & YV5LIX, YV5LMW, YV5LMX, YV5NCJ. **ZA1A:** ZA1B, ZA1D, ZA1T, ZA1AE. **ZF8AA:** K5GA, K3SL, N5DU, K06G, W5ASP, W0LSD. **ZK1JC:** W6KNC, KD6K0.

STATION OPERATORS Multi-Operator Multi-Transmitter

3Z25PAZ: SP6DVP, SP6GCU, SP6LUV, SP6IHE, SP6OJK, SP6SNF, SP6CYK, SP6TTQ, SP-23022/0P. **6V6U:** K3IPK, WB2P. **9A1A:** 9A2AW, 9A2DQ, 9A2OG, 9A2OH, 9A2HJ, 9A2LJ, 9A2N1, 9A2KM, 9A2FA, 9A2MP, 9A2CT, 9A2YW, 9A2MY, 9A37W, 9A3FJ, 9A3WK, 9A2EJ, 9A2NO, 9A2ABX, 9G0R, 9A3GW, 9A5G. **AA4S:** & W04V. **AA6TT:** & W6JQF, N0ST, AB5K, N6WU, K4VH, N6ND, N5SDO, N0XX, N6W, AD90, N3SL, W7L, AA7NH, OH6DO, N2PC, K6JOY, N7KA, Bruce, Hevelore. **BY4SZ:** BZ4SAB, BZ4SBY, BZ4SBN, BZ4SBC, BZ4SBB, BZ4SFC, BZ4SBQ. **CEBY:** AB6BH, HC10T, N6AA, N6ZZ, W6MKB, W6XD. **CT5P:** CT1AHU, CT1A0Z, CT1B0P, CT1C0K, CT1D0Z, CT1D0V, CT3BX, CT3EE, CT4NH, HB9DRV. **DF3OG:** & DF1QO, DJ1FC, DL1DCJ.

DF8DX: DF6AE, DF6XC, DK2DM, DL1YAW, DL4YEM, DL1YD. **DL0CS:** DD7LO, DG5LAK, DF7RX, DF9LJ, DK20Y, DK4LI, DK4VW, DK6WL, DL1LAA, DL3LAB, DL4RDJ, DL5LS, DL6RAI, DL9LBA, RA2FA, UA2FF. **E33FHT:** & EA3RQ, EA3FVS. **ED4UPM:** EA4DYN, EA4KT, Julian, Patricia, Germa, Benjamin, Fatael, Jesus, Miguel, Alfonso, Erik, Angel, Manuel, Luis, Pedro, EA4BB. **JU1BSN:** E26L: UA6LI, UA6LV, UB5ITW, UB5IBG, UA6-150-1103, UV6LPL, UA6-150-1403. **G0KPV:** G4BAH, G7ABQ, G3VH, G4BLD, G3XTT, G4FAM, G4VMM, G0CYB, G4PIQ, G4BWP, G4WFF, G3ZAY, G4DOW, G0RRC. **GW8GT:** GW3KYA, GW3NWS, G30AY, G5NFN, GW4JBD, G4VXE, GW6ZU, GW6MAW, G4IFB, G3SOX, G4BKI, G00FE, G4BLX, G3LNS, JA3AER, NZ1W, G4FNL. **HC0E:** HC1BI, HC1HC, HC1JQ, HC1H, HC1HT, HC1PF, HC1KQ, HC1HN, HC1EEV, HC1XC, HC2NW, HC6XE, VE3LAI, VE3ONK, JA7FYF.

HG73DX: HA1YA, HA1YQ, HA1YU, HA1WD, Binny, HA5GF, HA5VH, HA7RY, HA6WX, HA5UA, HG5CCC, HA5FM, HA5AWH, HA5BG, HA7VB, HA5OM, HA5MK, HA5ML, HA6ND, HA6NF, HA6QO, HA5ON, HA6NH, HA6LB, HA0DU, HA0LC, HA0YAR, HA0IE, HA8LLK. **IK3VW:** & IB3UJ. **IK6NGH:** & IK6QRH, IK6RG, IK6FOH, IK6JH, IK6SLB, IK6RYU. **J68ZR:** W7ZR, AATCM. **JA1YDU:** JH0NZN, JJ30LZ, JF7FK, J01BRW, 7K1GLE, JG3APX, J01BMV, J01FVM, J01RUR, JAV9DA, J89SSY, JE1REE, JS1ACQ, J2UYK. **JA1YXP:** JS1INN, J01UXN, JE1BHJ, JI1WYS, JI2KRK, JI7QFC, JKTUC, 7M1DVT, 7NIAP, Nakamura, JF100W, JH0JQ, JS1XEX, 7NISYP, JPIAEC, 7K1QOE, JS2XHN, JI6WOH, JFOEJ.

ATTENTION !!!



GREAT ALUMINUM TOWERS

- Lightweight
- Rugged strength
- Easy assembly
- Rust free

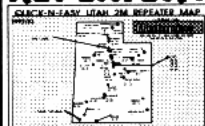
FREESTANDING
20ft to 100ft ...

Universal Manufacturing Co.
43900 Groesbeck Hwy 313-463-2560
Clinton Township, MI 48036 FAX 313-463-2964

CIRCLE 135 ON READER SERVICE CARD

CALL NOW! 1-800-377-2339

REPEATER MAPS



2M MAP NOW FULL COLOR!

Use the **QUICK-N-EASY REPEATER MAP** to find the repeater you are looking for! **HIGH QUALITY** laminated plastic card with map of your state (California residents specify North or South CA) with 2m repeaters on the front and other bands on the back. Because it's laminated, it's tough and rugged. **YOU'LL LOVE IT!**

\$3.95 INCLUDES:
144 MHz 220 MHz
440 MHz 900 MHz
1.2 GHz
PER CARD
ORDER 3 CARDS FOR JUST \$10

REPEATER MAPBOOK



NEW! 1993-94

INCLUDES:
10M, 2M
220 MHz
440 MHz
900 MHz
1.2 GHz

Our quality Repeater Maps are now available in book form! That's right, our new book includes all U.S. States, all Canadian Provinces, Mexico, Central America and the Caribbean! Maps show city location, repeaters, highways, ham dealers, and tourist information! **PERFECT FOR TRAVEL!** More than 175 pages!

ORDER TODAY! \$9.95

NEW REGIONAL REPEATER MAP GUIDES

A whole new way to enjoy our map cards! The regional guide includes six laminated state cards, spiral bound for easy use. Very handy, and super for regional travel!

\$9.95 PLUS \$1.00 S/H COLOR/LAMINATED

F Benterprises

23801 NW 1st Ave.

Ridgefield, WA 98642-8830

CALL TODAY! 1 (800) 377-2339

Dealer Inquiries Welcome

QUICK-N-EASY SHORTWAVE

New book includes everything you need to know to have fun with shortwave radio! Great book for beginners and also experienced listeners

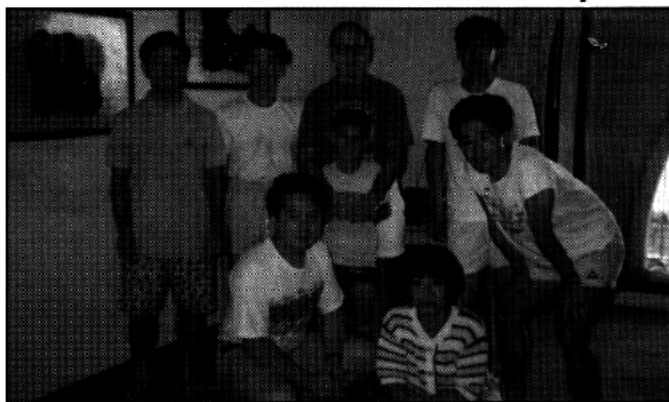
ORDER TODAY! \$9.95

CATALOG \$2

REFUNDED WITH PURCHASE

CARD ORDERS ADD 50¢ SHIPPING

BOOK ORDERS ADD \$3.00 SHIPPING



The crew of NH2C poses with KG6DX and son. Left to right back are JH7QXJ, JE8XRF, KG6DX, JR8PPG, JR7MZX, and in front JI3ERV and JF8FSI.

JA2YAF: JA2JAO, JA2KFZ, JA2POT, JI2RFS, JK2NQE, JR2VOC, JL2ONQ, JN2ALI, JN2IYG, JN2QZJ, JO2AXB, JS2NCK, JS3VEX, JG4IOC, JI4UWO, JI4BKK, JE5NYZ, JI6DAA, **JA3YKC:** JG3MRT, JG3WDM, JI3HEY, JF9GMX, JM3FU., JO3UGI, JP3AIK, JE5CTS, JG4LSR, JK4FLM, JF5BUA, **JA7YRR:** JA7CEC, JA7CXV, JA7FDY, JA7JUD, JA7LBY, JA7MOM, JA7OZW, JI7MEV, JI7VIZ, JR7LVA, JI1XGF

JK1ZHH: JE1HXZ, JA1LNA, JA6GP, JK1SZX, 7K2LMR, JA7SYG, JR3QZS, JR1BTG, **K1GW** & **KC1EO**, **K2TD** & **K3GYS**, WB2VCV, K2OP, **K2TR** & **K2XA**, K2WR, K2ONP, NJ1F, NQ2D, N2DU, N2MG, N1CC, WK2H, KB2HPX, WB2LXC, WA4VKD, WA2SPL, **K3AMS** & **NU3L**, KU3K, WU3M, KF2BH, WA2MKM, **K3II** & **NA3K**, **K3IE**, **K3LR** & **WR3G**, N3BJ, N8L, WM3I, K8CX, WR3D, W8BYVR, K3JA, K5ZD, W0CC, **K4VX** & **N9UF**, K4XU, W9WI, K3ZD, NS0Z, AA0CR, K9BGL, A19B, W9VQ, **K89FIN** & **NSKUT**, **KC6WW:** KC6DX/JH2BNL, KC6YU/JH2JIM, KC6FM/JI2UAY, KC6NM/JH2BCN, KC6YH/JH7JLU, KC6IN/JR7OEF, KC6OH/JR7GYC, KC6YN/JF2XJE, **KN8Z** & **NZ8O**, WX8T, N8JEC, WUBA, **KY1H** & **AK4L**, WA1ZAM, AA1AS, WT2Q, KB1W, NJ1T, WK1O, NU1P, KY1K, **KY3N** & **N3ADL**, WB3FZ, WB3HAZ, WB3LFZ, NK3LI, **LA1K:** LA1BFA, LA2RY, LA2ZHA, LA4OFA, LA5GIA, LA5TIA, LA6MGA, LA6NGA, LA6PFA, LA6JHA, LA7HFA, LA7IHA, LA7VV, LA8AEA, LA8RGA, LA8UGA, LASIY, LA9NGA, LA9RGA.

LA7VM: LA8FAZ, LU1FJH, LU8FDZ, LU2FFD, LU4F9Q, LU5FAO, LU7FW, LU2FYU, LU9F0G, LU6FEC, LU7FN, F6GSM, LU4F0V, LU2FYA, LU5FFG, LU5FDQ, LU4FYP, LU1JRL, LU0FIO, A2BFAD, LU2FID, LU5FAU, **LY7A:** LY2NK, LY2BFH, LY2BMX, LY2BUH, LY3B8C, LY3BN, LY1DF, LYR-346, LYR-1751, LYR-1853, **N2RM** & **N4HY**, KA2AEV, WM2H, K2ZS, K2TW, N2AA, N7BG, N2NT, KR2J, WC4E, W2RQ, **NSAU:** KY5N, W5XZ, N5CR, KM5X, NM5M, WN4KKK, KA5WSS, W5SVZL, N5TF, K15NE, NA4M, AA5BL, N5OAO, W5SN, **N6AW** & **N6AV**, NC6J, NF6H, W6HT, K7JYE, N7QQ, KA7CQH, **NF2L** & **KY2T**, K2TCK, WY2X, WB2DIN, WB3X, **NK7U** & **K1CDV**, WA6QDF, W36LMN, KM6VF, KG6LF, KN6BP, KE7HU, WZ7J, **NX1H** & **K1FWE**, K1XM, NX1P, NW1U, K1MNS, K1BG, NX1G, KC1Q.

OH0W: OH1JD, OH1MDR, OH1NOA, OH2MM, OH6MFN, OH6YF, **OT2C:** DL1SBR, ON1AEI, ON1ARZ, ON1AWB, ON1BCB, ON1GL, ON2AAC, ON2AJC, OY2ALO, ON2ALY, OY4ADO, ON4AFZ, ON4ALC, ON4AME, ON4AMT, ON4ANV, ON4AOI, ON4ASE, ON4AWU, ON4AZL, ON4BI, ON4DB, ON4GG, ON4FZ, ON4OE, ON4WW, ON5DH, ON5FF, ON5OT, ON5SH, ON5UM, ON5WL, ON6EY, ON6JF, ON6LK, ON6MR, ON6PU, ON6SV, ON6TT, ON6UL, ON6VK, ON6WU, ON7BD, ON7CS, ON7KB, ON7SF, ON7TK, ON7ZM, **OZ4HAM:** OZ2JZ, OZ2ADY, OZ1KWB, OZ4FZ, OZ1LUS, **PJ1B:** K2SB, K2SS, KB2XZ, K3EST, N3ED, WA3LRO, W3UM, NL7GP, N7ZZ, P3JEE, **PT4A:** PY4AEJ, PY4BA, PY4BH, PY4NL, PY4OY, **PU1Z:** PY1NEZ, PY1NEW, PY1MGM, **RL0L:** UL7LEZ, UL7LDC, UL7LO, UL7LEZ, UL7LT, UL7LZ, 9L7LW, UL7FZ, UL7LA, UA9MA, UW9AR, WO4H, W4ETO, W4EUG, UL7LAD, JI7-026-796.

RY1I: RB4IZ, UB3IO, UB3IM, RB4II, UB5IUA, UB5IKV, RB1IA, R34H, **S59DBQ:** S52CI, S52OK, **VD1DH:** AC4MP, K2NJ, NR2H, VE1DH, VE1GJ, VE1VH, VE1NH, VE1VF, VE1VH, VE1VY, **VD2ZZ:** VE2VMS, VE2SPY, VE2GSX, VE2MAM, VE2JPD, VF2AJW, VF2GP, VF2DZS, VF2P, **VE7COR** & **VE7SGW:** VE7ZZZ, VE7AV, VE7CV, VE7RK, VE7SK, VE7BK0, VE7BUX, VE7DRS, VE7EAP, VE7EME, VE7ENS, VE7EQJ, VE7EON, VE7EJZ, VE7JNM, VE7JWK, VE7LKM, VE7MKA, VE7NMM, VE7OLE, VE7PHI, VE7RBL, VE7STV, VE7WJA, VE7XYL, VE6EZ, VE5FN, **W3PL:** KH2F, N03A, W3EKT, KC3EK, N3GB, K3NA, KF3P, WZ3Q, WA3VUQ, K3RA, K3SD, W3ZZ, K65H, **W4MYA** & **K64DI**, WB4GZ, K4GAM, WK4Y, WA4P6M, K04PI, WU4G, KC4URI, K04MF, W4DR, KD4HE, WA4DAI, M4EH, KB1GW, WB4BYV, WA4HMX, KB6GHD, M4YSI.

WB4IH/9: K0FVF, W0UC, K9FOX, A49D, WB9EEA, N9KAU, N0AXL, **W80SE:** AA0FB, KB0JC, KC0ZW, K00AY, KGBAP, N0PDL, N0MEH, N00T, N00Y, N5PEF, K8UON, **YB0ZCE:** YC2UBE, YC0TE, YB0MM, YC0VM, YD0FTD, YC0BYTL, YF0ANK, YG0BXX, YG0BEU, YD0NWX, YD0GOF, YG0BHF, **ZF2JI:** K4IIF, W860KK, KJ6KH, W8AEH, WB4TIN, **ZM2K:** ZL2BI, ZL2MF, ZL2IR, ZL2T, ZL2AM, ZL2BSJ, ZL1AIZ, ZL40Y, ZL2ASD, ZL2ULG, ZL2TIQ, ZL2TJG, ZL2UDF, **ZS5HAM:** ZS5JM, ZS5JR, ZS5NK

ZONE LEADERS SINGLE OPERATOR

Zone	Call	Score	Zone	Call	Score
1	KL7Y	5,091,840	21	AP2MYC	298,352
2	AH9B/VO2	2,767,660	22	VU2NTA	237,046
3	VD7SV	1,685,502	23	JT1/JI2MED	922,680
4	VD3EJ	8,440,314	24	BV2CR	158,485
5	K1AR	7,810,446	25	JA0QNJ	3,907,467
6	XE2BEU	2,501,871	26	HS1BV	879,010
7	TG9AJR	395,488	27	DU9RG	3,509,568
8	KP2A	10,430,993	28	9M8R	7,639,030
9	9Y4H	11,351,808	29	VK8AV	251,340
10	H8CA	16,391,450	30	VK2BIR	983,235
11	ZW5B	2,828,202	31	WR6R/KH6	4,615,380
12	3G3R	4,463,500	32	YJ0C	2,035,770
13	LU6ETB	1,729,195	33	EA8BH	14,307,041
14	GW4BLE	5,806,410	34	N6SS/MM	110,888
15	S52AA	7,134,192	35	5U7M	3,924,387
16	R00F	3,697,505	36	ZD8Z	11,065,098
17	UA9KW	267,287	37	C9RJJ	1,826,064
18	RV0AR	377,671	38	ZS6EZ	1,805,714
19	UA0LCZ	204,108	39	5R8DF	615,042
20	LZ5W	1,234,135	40	JX3EX	709,320

Table listing radio stations by continent (GUINEA, KENYA, MADAGASCAR, MADEIRA IS., MALAWI, MOZAMBIQUE, NIGER, REPUBLIC OF SOUTH AFRICA, REUNION, ZAMBIA, ZIMBABWE, ZONE 34, ASIATIC RUSSIA, SAUDI ARABIA, BAHRAIN, CYPRUS, GEORGIA, HONG KONG, INDIA, ISRAEL, JAPAN) with call letters, frequencies, and power.

AVERAGE % OF STATIONS WORKED ON EACH CONTINENT. Log from Europe, Asia, Europe, N.A., Africa, OC, S.A. Japan, USA Call Area.

Table listing radio stations with call letters, frequencies, and power, including stations from Saudi Arabia, Bahrain, Cyprus, Georgia, Hong Kong, India, Israel, Japan, Kazakhstan, Korea, and Lebanon.

