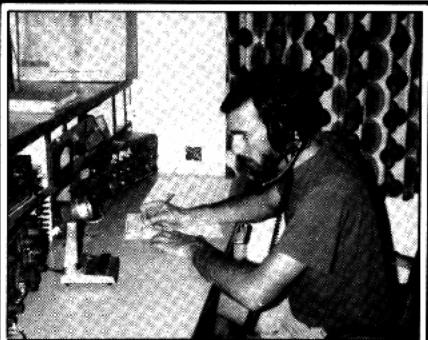




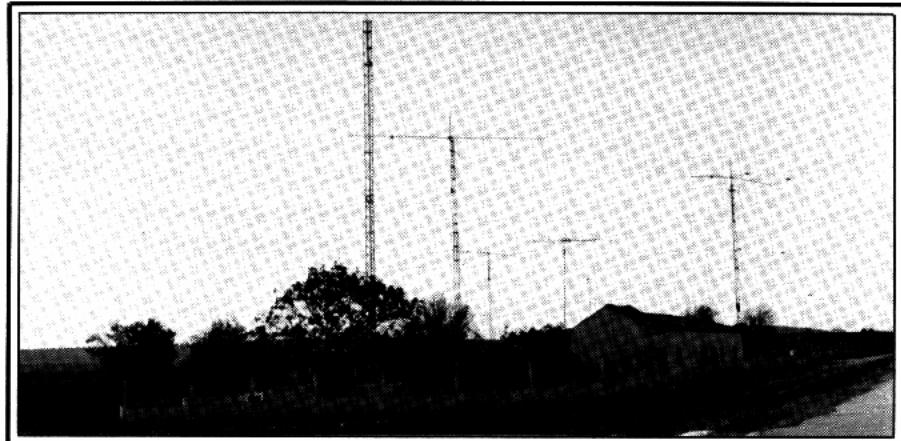
The outstanding crew at LZ7A: (left to right) LZ2DF, LZ2CC, LZ2HE, LZ2UA, LZ2PO, LZ1A-310/2.



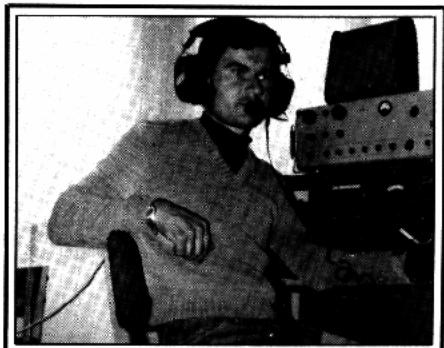
PJ2FR, with N6KT at the controls—world top score.



TI1C, world top multi-multi. Front row (left to right): TI2EY, TI2CC, N6BV, TI2JVA. Back row (left to right): TI2J, N6TJ, N6ZZ, TI2CF, N6AA, N6AW. Not shown: TI2JCJ, TI2TO, TI2WI.



ED7BB, Sevilla Contest Club.



HA8IE, Feri.

# 1984 CQ WORLD-WIDE DX CONTEST PHONE RESULTS

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

**C**onsidering our position in the sunspot cycle, conditions were quite good for the 1984 CQ World-Wide SSB Contest. Even though sunspots are declining, activity in the test remained high, and many areas of the world showed significant increases. Spain, Chile, Indonesia, India, and Korea are to be congratulated for dramatic increases in contest participation.

Increased activity level, superior equipment, and a keen knowledge of propagation enabled contacts to be

made that probably were not possible during the last sunspot minimum.

All-band activity showed itself to be as hot as ever. PJ2FR (Op. N6KT), Rich, repeated last year's top effort, racking up 8.4 million points. To give heart to those who think they will never have a chance without big antennas, P44A operated by K1KI, using only an 18 AVQ and a 160 dipole on the beach, took second place honors with 7.8 million points. From Asia, EX6F broke through the Zone 9 group to capture third place.

The USA top man was K1AR. John lead the pack with an outstanding multiplier. Several hours of over 125 QSOs per hour on 21 MHz didn't hurt. Second place went to K2VV. John beat everyone, including

the USA multi-singles, in QSOs on 14MHz. Third place went to K1DG, Doug.

## Single Band Scores

Conditions favored long skip on 28 MHz. Stations within 2000 miles of high population areas had restricted openings. Taking world honors was CE6EZ with 859K. He was followed by LU2FDR and LU1E, both with FB scores. In the USA, last year's winner, NU4Y, repeated his effort. Second place went to WB7FDQ. Quite a difference in location for first and second place.

It seems that 21 MHz was in excellent shape. More multipliers were worked on 21 than on 14 MHz. The world high score

\*c/o CQ magazine

\*\*P.O. Box 1225, Windermere, FL 32786

was HC1OT with 1.1 million points. Pedro was followed by KG6DX with 1.08 million points. Top USA honors went to K2EK and K7JA, respectively.

As always, 14 MHz provided lots of excitement in strange band openings and reliability. In the logs submitted, over 20 VU's, 30 YB's, and 18 HL's were counted. Three stations broke the million point mark. K0GU/8R1 lead the way, followed by 5N24AMA and LU6ETB. In the US, W2YV (KQ2M Op.) ran away with honors. Second place went to the fine effort of W7IL.

With decreased conditions on the high frequencies, the low frequencies showed continued signs of increased activity and openings. With signals pounding in from all over the world on 7 MHz, Fernando, EA8AK, edged out Frank, 9Y4VU, for world top honors. Fernando and Frank had 115 and 110 countries, respectively! The midwest took all three top spots in the USA. KJ9D was the winner, followed by KV0Q and N8RA.

The 3.7 MHz band was outstanding. Many stations had over 70 countries. YV3AZC had 82 and won world top score over NE4G/6Y5. More and more people are putting in real efforts to increase their signal strength on 3.7 MHz. There were probably 25 real beams or quads on this band during the contest! Using one of those beams, W6RJ took top USA honors, the first time in memory that a west coast station was number one in the USA. He was followed by W0MJ/5 down in Louisiana.

LZ2CJ was the world top 1.8 MHz scorer. Wally says if you don't believe that it is possible to work 1400 stations, come on over and try it yourself! The only prerequisite is that you speak Russian. Second place went to HB9AMO, an outstanding job from Zone 14. USA laurels went to K5UR down in Arkansas. Rick edged out AA1K/3 in Delaware.

## Multi-Single

The multi-single efforts always have a lot of stories behind them. Lots of work, lots of people, lots of time, a little recreation. Each station you see listed deserves a doff of our hats for their efforts. The world high winner was 4V2C, followed by LZ7A, the LZ2KTS boys, and ED9CM. In the US, K2BU just edged out N4CC for the top spot.

A special mention should go out to the boys who put VK9MR on the air especially for the contest. What a thrill they provided for lots of amateurs throughout the world.

## Multi-Multi

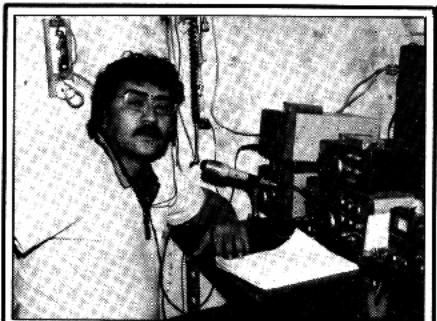
In the battle of the giants, TI1C won first place over the fellows from VP2VCW. Operating from TI1CF's QTH, a combined group of W6's and TI's lead all groups in total multipliers and QSOs.



VE7WWW and VE7AV fueling 20 kw generator for VE7ZZZ effort.



K7JA at the helm.



CE3DNP, Carlos.



VE2USA, with valuable Zone 2. Left to right are K8AQH, KD8SF, KA8POW, KA8SEW, AC8W, WD8CRY, N8CQA, K8DD.



ZY5EG, number 4 in the world multi-multi. Left to right back: PY5CA, PP5ABW, PY5NW, PY5VV, PY5BAB, PY1RR, PY5ZBU, PY5VM. Left to right front: PT9ZE, PY5IW, PY5EG.

## Team Contesting

This new category is being tried on an experimental basis. Its purpose is to generate interest between stations, promote activity, and increase competition. The winner of the first SSB team was the Frankford Radio Club + one, consisting of 6Y3M, N4NW/3D6, N3AD, W3BGN, and N2LT. They were followed by the Q-Processors: KJ9W/KH2, KG6DX, KD7P/KH2, and OH6JW.

## QRPP

Using less than 5 watts input, UP2BIM was the world top low-power champion. Second place went to 4X6IF, while K7SS and K3WS finished third and fourth, respectively.

## DXpedition Thanks

A special thanks goes out to the following stations who went on DXpeditions to make the contest more fun for all of us: WI4K/C6A, ZF2IM, ZF2HP, 6Y3M, N4WF/6Y5, NE4G/6Y5, XX9CS, 9K2BE, 9M2RT, CT2FH, OH0BH, K4YT/DU9, PJ2FR, P44A, K0GU/8R1, YV5TK, 4V2C, VP2MW, A22ME, D44BC, 3D6DX, 5B4ES, VK9MR, HB0BHA, HB0AON,

OE2VEL/HB0, 9H3DN, V2ARS, VP9AD, VP2VCW, VE2USA, TI1C, XE2SI, ZK1XC.

## Reminder

Please remember that duplicate QSOs can be grounds for disqualification. Dupe check your logs! Computer checking is fine. Any checking method actually is fine as long as your log is clean of dupes. Remember that the penalty for dupes left in the log is stiff. See the rules in this issue.

We would like to thank the CQ Contest Committee whose time and expertise are used in large amounts to check the logs: Frank, W1WY; John, K9DX; Terry, N6CW; Rick, N6ND; Dave, K2SS; John, K1AR; Ed, N3ED; Fred, AD6C; Jan, N6AW; Glenn, K6NA; Jim, W7EJ; Gene, N2AA; John, K2VV; and Doug, KR2Q.

Congratulations to all the winners. CU in 1985 tests.

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

# 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
PJ2FR	91/7/12	509/23/58	969/28/81	888/28/79	1767/28/86	1443/20/53
P44A	46/5/12	589/20/50	1222/30/84	917/28/82	1906/25/90	713/20/53
EX6F	87/5/20	467/23/46	1080/30/78	850/31/84	1873/26/88	216/18/35
YV5TK	19/8/10	518/22/59	792/27/89	708/30/83	1554/28/84	584/21/55
KJ9W/KH2	28/10/9	250/20/31	880/29/45	448/32/66	1721/32/62	591/22/25
CN8ES	14/3/10	194/12/44	473/17/57	773/29/93	1073/24/82	529/18/64
6Y3M	168/13/24	736/18/42	781/24/82	631/20/60	1381/23/82	623/14/32
FR0FL0	2/2/2	121/22/37	379/26/60	480/30/70	1288/24/85	328/13/49
CE3DNP	3/2/2	51/8/9	266/23/40	709/30/71	1045/21/63	895/21/48
ZP5JCY	10/5/6	40/14/17	449/29/56	646/30/86	930/23/55	544/19/42

## WORLD TOP MULTI-OPERATOR SINGLE TRANSMITTER

4V2C	156/8/19	1117/24/71	1170/30/92	1404/32/107	2077/28/81	974/21/49
LZ7A	153/15/53	232/21/81	1024/32/102	1332/39/110	1406/36/114	195/25/76
ED9CM	103/11/36	261/14/51	528/19/82	1395/34/102	1450/28/99	313/20/75
VP2MW	210/8/12	916/19/65	1077/28/86	1345/30/98	1744/27/93	421/15/32
ED7BB	52/8/32	424/18/67	464/21/80	1214/32/94	1446/32/107	176/19/74
D44BC	155/12/29	325/15/41	494/25/80	779/27/85	1204/21/74	646/18/61

## WORLD TOP MULTI-OPERATOR MULTI-TRANSMITTER

TI1C	440/13/23	1479/24/69	2475/35/96	3940/35/125	3714/34/126	1894/26/79
VP2VCW	869/19/51	1326/25/92	2042/28/99	3616/32/108	3338/27/94	1241/19/40
VP9AD	750/15/31	1580/22/67	1978/32/99	2899/34/120	3275/32/128	522/20/55
ZY5EG	15/5/7	206/18/33	1363/33/101	2204/39/135	2712/29/96	1272/24/76*
XE2SI	236/7/8	1082/20/43	1938/30/65	2726/34/100	2259/32/86	711/20/48
V2ARS	248/14/24	1023/13/40	1829/26/90	1751/29/86	2109/24/89	1121/20/49

## USA TOP SINGLE OPERATOR—ALL BAND

Station	160	80	40	20	15	10
K1AR	29/9/14	83/18/48	79/24/51	834/32/109	804/27/114	63/14/29
K2V	34/11/19	87/15/42	86/21/49	1026/32/99	588/25/96	57/12/23
K1DG	22/9/15	100/20/54	117/25/64	665/31/101	683/27/106	73/12/30
W1ZM	21/8/11	135/23/62	87/23/51	658/28/93	613/26/105	55/15/33
W3BN	24/7/13	107/22/57	120/23/55	676/28/89	537/28/96	56/12/27
K2XA	25/8/13	64/16/37	77/21/43	679/30/95	658/26/106	64/13/31
W2RQ	16/5/6	66/15/39	113/26/64	553/26/91	708/26/104	27/9/16
K1TO	18/7/12	65/13/37	85/24/51	574/26/90	629/28/98	76/15/32
N2LT	17/7/9	88/17/47	90/24/54	550/31/87	532/24/90	70/13/30
W0ZV	28/11/16	73/22/47	124/26/49	347/32/76	721/30/85	46/15/28

## USA TOP MULTI-OPERATOR SINGLE TRANSMITTER

Station	160	80	40	20	15	10
K2BU	32/11/19	140/23/72	161/26/62	853/35/100	587/28/113	74/17/35
N4CC	7/7/7	73/24/58	183/32/84	637/32/107	797/31/120	60/19/48
NABV	23/9/15	84/20/58	153/31/75	881/37/110	533/30/109	64/15/37
N4ZC	13/8/12	136/24/69	140/32/82	490/33/116	697/32/126	79/19/56
N4RJ	33/14/23	116/25/72	148/30/71	497/34/126	513/31/120	74/20/49
K4VX/0	28/13/18	70/23/61	217/29/75	461/36/110	576/29/121	86/15/39

## USA TOP MULTI-OPERATOR MULTI-TRANSMITTER

Station	160	80	40	20	15	10
N2AA	80/15/25	509/31/100	498/34/102	1497/37/135	1049/29/137	124/19/48
W3IPL	70/12/23	435/26/84	381/33/105	1281/36/130	992/31/137	163/19/58
W4DR	62/13/23	374/26/81	442/33/104	1521/35/137	784/31/128	135/19/53
NSAU	55/13/23	208/26/65	413/33/82	1090/35/126	1081/31/121	221/24/57
N6RZ	51/11/15	150/23/46	357/25/51	712/34/98	1370/34/101	215/20/46
K0RF	42/10/16	254/24/61	353/30/71	829/35/111	717/31/103	130/16/48

## WORLD TOP 10 QRPs

(5w input)

All Band

1. UP2BIM	348,440	6. AH6EK	168,198
2. 4X6IF	220,159	7. K7BTB	134,505
3. K7SS	209,132	8. K7UR	115,868
4. K3WS	193,800	9. OK3IAG	104,095
5. YU2OB	182,608	10. YO2AQB	54,769

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

## SINGLE OPERATOR NORTH AMERICA

### UNITED STATES

K1AR	A	2,662,116	1189	124	365
K1DG	"	2,358,850	1709	124	370
W1ZM	"	2,160,082	1572	123	355
<b>(Op. K1ZM)</b>					
K1TO	"	1,799,548	1447	113	320
K1EA	"	1,564,156	1322	107	311
K1YR	"	1,499,284	1238	111	311
K10X	"	1,478,688	1227	115	307
<b>(Op. K1CF)</b>					
K1VR	"	971,529	922	100	277
AG1C	"	870,656	855	100	258
W1YK	"	617,968	1051	60	148
<b>(Op. K1PM1)</b>					
AK1A	"	540,531	731	69	192
WIWEF	"	534,870	722	77	193
KA1GG	"	531,180	726	78	184
AA2Z/1	"	523,200	764	69	171
K1KJ	"	511,940	620	86	200
KB1W	"	356,400	532	71	169
W1CWU	"	341,280	468	74	196
KR1R	"	302,087	428	83	186
K1EFL	"	292,776	412	74	190
K1TR	"	291,500	489	62	150
WA1ZAM	"	287,799	374	86	205
W1RM	"	178,815	142	30	67
K1RO	"	139,742	250	74	143
KA1DWX	"	116,564	260	46	115
KA1FSO	"	115,926	288	40	99
K1YRP	"	101,231	226	51	118
W1HK	"	90,598	178	60	134
W1YN	"	78,668	203	37	106
KE1E	"	62,244	194	37	89
KB1IZ	"	54,778	172	28	84
K1WW	"	50,318	138	49	90
N1CW	"	45,360	143	37	75
KB1GN	"	30,508	121	36	72
K1MEM	"	27,625	95	51	74
K1RB	"	15,390	27	24	54
W1WAI	"	13,400	82	38	62
KA1PF	"	11,200	57	23	47
<b>(Op. W1HG)</b>					
W2BNU	"	127,328	250	53	131
W2PAU	"	111,554	218	59	134
W2AYA	"	89,814	195	51	115
W2VYA	"	89,184	107	33	111
K2AF	"	42,510	127	42	47
W2KZ	"	109,402	319	68	111
K2LW	"	210,081	329	68	111
K2JLA	"	190,442	314	57	156
K2LS	"	174,040	395	62	128
K2JL	"	151,287	266	63	148
K2ZWN	"	140,967	259	62	145
W3ARK	"	127,328	250	53	131
W3BN	"	109,402	319	68	111
W3W	"	89,814	195	51	115
W3AP	"	54,180	156	45	95
W3DVB	"	44,200	151	45	85
W3AVC	"	33,070	436	79	190
W3BGP	"	325,260	433	81	197
K2Z	"	1,313,284	1079	123	311
K3D	"	1,312,480	1142	108	308
K3MT	"	834,309	838	101	268
K3ZJ	"	685,832	757	95	236
K3ZJ	"	540,708	668	82	205
W3VY/4	"	480,192	535	93	235
W3VY/4	"	330,870	436	79	190
K4Z	"	1,313,284	1079	123	311
K4Z	"	292,230	418	78	177
K4JF	"	445,968	541	87	217
K4GFH	"	439,930	553	83	237

## DX QRM

Thanks for a nice contest... **UO4OWR**. Did not work any JA's on 15 meters!... **UR1RWX**. We could use a few dozen more sunspots this year... **UZ9AYA**. First time on 160 meters. Bad conditions on 10 meters the first day... **CE2AA**. Condx not very good. Lot of stations don't know dupe sheets. Enjoyed first operation from D44 on top band... **D44CB**. Working Mellish on 40 for new one and KL7 on 40 for WAS last one... **HZ1AB**. Can't wait until next year... **KP4BZ**. First contest CQ WW DX very good!... **LU4US**. Hope band conditions better next year... **VE6EP**. Hope contestants happy to hear Mellish in CQ WW... **VK9MR**. Enjoyed giving 4V2C some competition this year... **VP2MW**. Our club tested out the beam. Next year we will go for it... **ZS4WRC**. Where were the Caribbean multipliers this year?... **ZS6BPL**. Last-minute arrangements had us sleeping at border gates and missing out on a 40 meter beam... **3D6DX**.

It was my first participation in CQ WW DX Contest. I liked it very much. Next year I will be there again making "QRM"! My congratulations!... **CT1CLR**. My first CQ WW DX Contest! Lots of fun!... **CT7AFN**. Terrible propagation most of the time. Good fun as always, despite the bad conditions... **CT2DL**. Got engaged a month ago so it wasn't too easy to spare some time for contesting and repairing my antennas in time... **DK8AX**. Bad conditions on 40 meters, but makes a lot of fun... **DF9ZP**. My first contest effort on top band. Really enjoyed it. Great to work VP2VCW on SSB with 75 watts and a 45 foot vertical... **DK2WH**. Broken antenna rotor made me a good sprinter. Guess I'm below 10 seconds at 100 meters now!... **DL6RAI**.

After some hours of operation I lost my voice and at the end I was lucky to claim these 772 QSO's in spite of my extreme hoarseness... **DL1MAJ**. Gracias a los colegas con buenas antenas que han podido escucharle hasta el año que viene; 73... **EA3DEE**. Congratulations!... **EA2BUF**. Es mi primer concurso y prometo que no sera el ultimo! Divertiidísimo!... **EA6SX**. This is "the contest"... **EA6GP**. For my birthday I hope a 4-el 40 meter and Long John Yagi's and 1 kw (I can dream)... **F6GDK**. What? No Zone 23?... **G3SNN**. Congratulations to XL1CV for putting a beautiful clear signal into Europe (40 m) on Sunday evening and working just about every station that called him... **G4XTM**. So nice to hear so many "non-contest" stations get caught up in the fun of the contest... **G4UPS**.

SSB contests on 160 are hard work!... **G4OBK**. Thank you for opening 21 MHz!... **G4IUF**. The only time that I get onto SSB from one end of the year to the other is during the CQ WW SSB Contest! Otherwise it's all CW!... **G3TXF**. Big thrill to work VP2MW—my brother (G4BGH)... **GI4MWA**. I managed to get four new countries on 40 meters, including KL7 for a new zone as well... **GM4KHE**. My ears feel as if I've gone 14 rounds with Ali!... **GM4JFS**. This was my first contest on phone. I worked the first day for fun, but the second day—no... **IK2DVG**. Golden dreams contests. Fifteen was dead from 21 to 0700 each time... **I3ON**.

VK9MR was my #242 DXCC country on 40... **I4RYC**. 42 hours of operation—beautiful time. 50 hours of logging—terrible! I wish I had a computer... **OK6RA** (**OK2FD**). Only 24 W stations worked... **OH3XZ**. Most QSOs were made with my 2-year-old son in my lap... **SV1RP**. In Greece we can work only 3.685 to 3.700 on SSB. It was a feat for me to work 151 stations on a 15 kHz band... **SV1MO**. I've added a second vertical in phase with the one I've been using last year. The result was that I've had to explain to almost every second QSO that I'm not a pirate... **LZ2CJ**.

My 1937 vintage call puzzled some operators and time wasted in explanation!... **GM8SQ**. TVI "stopped play" for a while... **GW4RHW**. 15 meters was excellent—2.9 points per QSO average, even with my 100 watts (linear in bits!!)... **GW4BLE**. It always makes a lot of fun to be in your contest. It's really the best one!... **HB9VV**. Fantastic feeling for me. It was the first time. A real thrill! Thank you to CQ magazine for this pleasure!... **HB9CWA**. Completely surprised when Zone 3 came through on Sunday evening (21 MHz)... **HB9ZY**. My country ought to be in Zone 40 like Iceland... **OY1A**. Had to participate in family activities to show my good side when I will be away for almost 3 weeks on expedition during the CQ WW CW from 5H3BH... **SM0AJU**. 73's to the Contest Committee. You sure are doing a hell of a job!... **SM2CEW**.

## USA QRM

Sorry to say I observed several instances of poor sportsmanship by multi-multi stations... **W7FGT**. Very annoyed by certain W operators going out of band on 40 meters, urging DX to "listen up." Here is a list of their calls... **W9SE/7**. DX stations should ID more—and after giving a partial callsign of who they are working, *must* repeat back the complete corrected callsign of the station worked... **KS77**. First contest since 1949—had a ball!... **K7CC**. Propagation on 10 was decent the

2nd day, but activity poor... **WB7FDQ**. Brutal conditions on 20, except great to Japan... **W7IL**. Transmitted on the wrong sideband for 20 minutes... **KT7H**. Lost my new tower... **WA7GVM**. Is it true conditions will get worse?... **N8ATR**. Barely got new 40m beam up Friday, then overslept and missed the morning openings... **WD8QDQ**. Ban weird prefixes... **K8TMK**. Hats off to the DXpeditioners who added to our fun... **W4BAA/8**. Good African participation... **KC9EW**. Saturday wind took down the power lines for 10 hours... **K9YAX**. First contest after 23 years—I'll be back!... **WA9BXB**. We need sunspots in zero-land!... **KC0XK**. (*Don't we all—ed.*) Jogging for an hour on Saturday helped relieve the frustration from bad conditions... **W0RXL**. Got the last state (KL7) I needed on 160m for my WAS and a multiplier... **K0GT**.

QRPPing on 20 is rough!... **W6CN**. How about an ID requirement? It takes a lot of listening to get the call of some fellas!... **KT2M**. I worked 5 new band countries... **WA2VYA**. Found amp wouldn't load. Went outside and found hy tower on fire on top!... **N2VW**. Leaky cable TVI forced limited operation... **N1CW**. New type of interference—CPI (Campus Police Interference)... **W1YK**. First contest from home in 29 years... **K1VR**. Explaining to my wife of 6 weeks what this is all about!... **WB1FSW**. Where was Mellish on 20 meters?... **NB2P**. Frustrating to hear two 5X7 VK's ragchewing at sunrise (160 meters) and not be able to work them... **AA1K**. Nicest op—**KP4BZ**... **N3BNA**. Phone is painful... **W1RM**. Three new countries; 230 now with QRPP... **K7BTB**. Startling what 4 watts can do with good antennas... **K3WS**. Ten meters—"the night of the living dead"!... **K7SS/QRP**. Working Zone 3 on 10 was harder than FO8... **KG1D**. We need a multiplier station... **K2BU**. Lost a few hours celebrating my 50th wedding anniversary... **W2UI**. Had a communal prayer for a 10 meter opening... **NW4B**. Biggest thrill: my neighbor threatening my life because of TVI... **K47KDU**. Neighbor cuts down a tree and takes out the power lines with only 4 hours left in test... **N8CXX**.

## Station Operators

### Multi-Operator, Single Transmitter

**A22ME & A22TE, CE2AA:** CE2BN, CE2BXN, CE2CC, CE2EOQ, CE2HO, CE2MH, CE2WO, CE3CM, **CE4TA:** CE4AET, CE4BCO, CE4COT, CE4EBJ, CE4EM, CE4ETZ, CE4EV, CE4EV, CE4FXV, CE4FXY, CE4FY, CE4HBY, CE4KX, **CE5BYU:** CESBNC, CE5CYT, CE5EZ, **D44BC & D617D:** **DF8BV:** DL8MBS, DL7MAT, DL7LX11, DL7MAE, **DL8JK:** DK1DU, DK2XX, DK8ZL, DF2ZN, DF7FR, DL1FAK, DL4ZY, Ingrid, Harry, **DL8UE:** CJ5FT, DL7BL, DL1KDT & DL1KDS, D, GUP, **DL3MAA & DL5MAE:** **DL8X:** DU1AU, DU1LB, DU1TDY, DU1TW, **EA1RC0:** EA1BCF, EA1AMV, EA1CRM, EA1DDG, EA1CXI, **EA3EZD & EA3ACW:** EA3OL, EA3BKS, EA3CCN, EA3CU, EA3DPB, EA3OJL, EA3EXO, EA3FBP, **ED3CBE:** EA3BOW, EA3BOX, EA3CVA, EA3DU, EA3DQG, EA3EIO, **ED6MDX:** EA6MR, EA6MQ, EA6JW, EA6KZ, EA6W, EA6MS, **ED6WWC:** EA6VQ, EA6UL, EA6VL, EA6VTL, EA6LA, EC6LY, **ED7BB:** EA7CEC, EA7EL, EA7TH, EA7BU, EA7L, EA7FF, EA7DF, EA7CFW, Jose, Angel, **ED9CM:** EA9FN, EA9GS, EA9HE, EA9HY, EA9IB, EA9IE, EA9JL, EA9JV, EA9KF, EA9KL, EA9KN, EA9Q, EA9KS, EA9LD, EA9LZ, EA9MM, EA9QV, EC9FS, EC9HB, EC9HR, EA9AD, and EA7CQV.

**F3TV:** F1DDA, F6ARC, F6CTT, **F6INW & F5BYJ:** F6AWN, **F6KAW:** F6IFR, I6BPX, F6CWN, F6GIF, F6DZS, F6GKD, FD1JDS, F6GWW, **G3XEP:** G3VMW, G3ZGA, G3ZGA, G1IN1, G4DZ1, G4EZY, G4LYM, G4UFP, G4VKA, G4ULC, G4XWM, G4YEK, G4ONA, **G4TNB & G4PWA:** G4VNZ & G5XVN, G4YYY, **GU3HFN:** GU3SMS, GU3BUO, GU3EON, GU4IUW, GU4WRP, GU4WNT, GU4XEA, GU4XIT, GU6JOF, **HA1KRR:** HA17Z, Jozsai, HA1XO, HA1ZN, HA1XU, HA1XV, **HA2KHP:** Erdelyi, Illes, Kohalmi, Merve, Gyarmchi, Tolgyesi, **HA4KYH:** HA4XX, HA4YJO, Janos, Lasi, Ferenc, **HA4KYN:** HA4HX, HG4WF, Peller, Tabor, **HA6KXN:** Gyurko, Josef-Gyurko, Gyula, **HA8KAX:** HABLK, HABLK, HAB8T, HAB8T, **HA8BON:** JF1JC, DK5EZ, DJ2YE, DL3EBX, DL4JV, DL6EAQ, **HB8BHA:** HB8BHA/DK6VN, DJ2EH, DL9NAP, DL8NBH, DF4NN, DL5NP, DL4NAC, DF9Q, **HB9AUS & HB9CFU:** HB9CLV, HB9SFD, HE9ASD, HE9EE, **HB9CAT & HB9ALM:** HB9CVN, HB9BLQ, **HB9CHR & HA9ACA:** HB9ADQ, HB9BNJ, HB9BOU, HB9BOP, HB9CJG, **HG5A:** HG5F, HG5OM, HG5ML, HG5MK, HG5MF, HG5WE, HA5U, HA7SU, HA7RY, **HG6BN:** HG6ND, HG6N, HG6ON, HG6NO, HG6NO, HG6NF.

**HG6V:** Simon, Suszter, Varga, Wingender, Peto Dienes, **HG7B:** HA7UO, HA7UG, HA7UX, HA7UL, HA7PL, Cele, Csai, HA5WA, HA5OL, **HG9R:** HA9RB, HA9RP, HA9RU, HA9RX, HA9PF, HA9PV, **HL8U:** Kim Cheul-Min, Kc Ja-un, Jung Jun, Kang Sue-Nam, and Park Young-Yun, **HZ1TAB:** G3VUV, G3ZSS, G4FTC, G4WZI, K2XR, K8CSG, N5DM, W7KJU, WA3MOA, **I2MOP & I2VXJ:** I5JHW & I5OV5, I5CR, IK5AWI, Nicola, **I09WPO:** IT9WPC, IT9UJU, IT9RYJ, IT9BLB, IT9GYK, IT9WHW, IT9BW, DA2YD, DA2YV, **JAY1XP:** JL1ROT, JN10PR, JN1AUQ, JN10J, JF20LY, **JAY2DC:** JE2EZO, JF2K2D, JF2PEO, JE2EVK, JF2RIO, **JAY2KA:** JJ1BTA, JJ1BTC, JF2MC, JE2JCV, JE2VYM, JF2DQJ, JF2PZH, JG2MTC, JG2VTD, JI2JXR, JI2NPL, JG3OET, JI3LDL, JA9SSY, JA9XKS, **JAY3VB:** JR4AGT, JA9T0J, JG3ZL, JI3XBE, JI3PYI, JA9VIZ, JE6BXJ, JA9IZK, JA9UXW, JA9GRM, JF3GYI, Furuya, Yamada, Dohue, **JAY3CK:** JA3BCT, JA3ESG, JA3QYV, JA3QWV, JK3QIP, JA3QJW, **JH3YJM:** JA3QGI, JA3XGF, JH3QKV, JH3QZU.

**JAY5AV:** JA5MVU, JR6JZF/5, JH5PHC, **JAY6YR:** JH5GLL, JR6JQH, JE6WML, JF6BHN, JF6DEA, JF6EAO, JF6LOK, JF6ZQE, JF6TMH, JF6WWT, Abe, Masa, Shiba, Tomo, **JAY6YH:** JF6PSL, JE6VFJ, JF6GQC, JF6KDI, JF6PKJ, JF6QHK, **JAY7YCQ:** JR7M2C, JN1RPG, Ikeda, **JH7YV:** JA7OVM, JH7NHE, JH7LRS, JR7KOR, **JAY8VQ:** JA8BRAV, JH9CZT, JH0DPM, JH0ELL, JH0FB0, JH0FCV, JH0GAT, JH0MVJ, JH0NVX, JH0PDX, JH0SDA, JH0VXW, JH0XUP.

**K1AX & K1K1, KB1H & K1GX, WA1CDP, WA1HYN, WA1IVD, WA1RLV, **KG1D & KA1VE:** KM1C & KB1T, W1PH, WB8BTB, **KO1F & K1XM:** KS1N & KA1KVF, WB1FYI, **KT1D & KA1MBW:** K2B1 & WA2HGM, K2XR & KC2GE, KT2B, N2ESP, WA2PID, WA2VUN, WB2EGI, WB2INB, WB2LU0, WB2SP0, WR2WPK, K3DM, NV60, **KA2LR & KW2AE:** KC2N & NB2W, W2FRC, WB2UL1, **KY2P & KA2JMN:** KY2O, K3KG & K4AS, K4BA1, N4KUJ, N4TX, W4NL, **K3TUP & K3SA:** K3JL, N3BJ, A1B5, KB81Z, W8CY, **K4VX & K9BGL:** KQ9Q, K9P, KR8Y, N0SS, WB8UN, KP4BZ & K4HC, NP4CC, NP4Z, WP4C, **K5RR & K5KJ:** NR5K, WD5YJF, **KD5RW & KA5B00:** KA5DLM, **K6KSY & WA6TMJ:** K6K0W & K5KT, K6SUL, K6GIP, N6AHV, N6DKZ, N6HCS, N6JWV, N6KNN, WB8BOP, **K6ZM & AK6T:** NB6L, **K47KDU & N7FNW:** KG7Z & N0DWR.**

**KL7HFA & KL7HNU & NL7CT, KL7IRT & AL7AS, AL7FG, AL7FO, AL7L, AL7Z, KL7ENY, KL7GL, KL7LF, KL7IC, KL7XD, KL7XO, **KB8LH & K3DMG:** KB8AM, KB8WV, KB8KF, VBATZ, N8FEB, WD8MIJ, **KC8PO & N8CPD:** K9B1L & WB9NOV, **K9SD & K9QAL:** K9FU, **KC9XF & N94DN:** N9EJL, N9AM, **K59K & K9CJL:** KS9Z, KE9U, N9AW, WB9QZ, WB9AU, WB9OJE, SM7DZT, **KS90 & KA9OUY:** N9B7, **KBUK & KD7EY:** N9Z4A, **KF8J & K2C8:** WD0EWD, **KJ8G & K0GAS:** KM8P & KM8R, **KRB8 & AF3T:** KD6KF, N6BK, N0BK, **N0BKX:** N0FKK.**

**K1A1:** LA8VK, LA6TP, LA9QL, LU4US & LU1UDZ, **LZ1KBL:** Keremiditchiev, Miladinov, Hristov, **LZ1KDP:** Petrov, LZ1-0-275, LZ1KZ, Ivanov, Kolev, Nelev, Grudov, Kirov, Dobrev, **LZ1KVZ:** Nikolov, LZ1ZF, **LZ2KAE:** Christov, Nikolov, Kovatchev, **LZ7A:** LZ2E, LZ2PO, LZ2DF, LZ2CC, LZ2U, LZ1A310/2, **N1CQ & KA1XN:** K1AQ, K1CQ, K1JN, K1P, **N3ARK & K3IE:** WB3FZ, **N4RS & K21TG:** N4BS & WA4GOH, WA4LSD, WA4IVV, WB4FOT, WB4LSG, WB4PRV, WN4NIS, **N4CC & K4UTE:** N4KE, N4RJ & K4EWG, K4PI, K4UEE, K4CGR, N4PN, N4VX, WD4IKI, W60KX, W8ZF, **N4ZC & K2SD:** N4CQ,





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IC-BP2 7.2 VDC, 425 mAh, Ni-Cad Batt. Pack.	39.50
IC-BP3 8.4 VDC, 250 mAh, Ni-Cad Batt. Pack.	29.50
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IC-BP5 10.8 VDC, 425 mAh, Ni-Cad Batt. Pack.	49.50
IC-BP7 13.2 VDC, 425 mAh, Ni-Cad Batt. Pack.	67.50
IC-BP8 8.4 VDC, 800 mAh, Ni-Cad Batt. Pack.	62.50
BC-35 Drop-In Rapid Charger: IC-BP2, 5.7.8	69.00
IC-CP1 Mobile Charging Cord	9.50
IC-DC1 DC Converter	17.50
IC-HM9 Speaker/Microphone	34.50
LC-5 Leatherette Case, IC-2AT W/IC-BP5	17.95
LC-7 Leatherette Case, IC-2AT W/IC-BP3	17.95
LC-11 Leatherette Case, IC-02ATW/IC-BP3	17.95
LC-14 Leatherette Case, IC-02ATW/IC-BP8	17.95
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HS-10SB PTT Unit For HS-10	19.50
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**TOKYO HY-POWER LABS**

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HC-400L 200 Watt PEP Antenna Coupler	164.64
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**WELZ**

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**ASTRON**

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RS-20A 13.8 VDC, 20 Amp Int., 16 Amp Cont.	82.90
RS-35A 13.8 VDC, 35 Amp Int., 25 Amp Cont.	125.60
RS-12M Same As RS-12A, With Meter	80.46
RS-20M Same As RS-20A, With Meter	98.76
RS-35M Same As RS-35A, With Meter	141.46
VS-20M Same As RS-20M, Adj. Volt./Curr.	117.06
VS-35M Same As RS-35M, Adj. Volt./Curr.	159.76
VS-50M 13.8 VDC, 50A Int., 37A Cont., Adj.	226.86

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## PHONE TROPHY WINNERS AND DONORS

### SINGLE OPERATOR, ALL BAND

#### World

**PJ2FR (Opr. Richard J. Smith, N6KT)\***

Donor: Special CQ Plaque

#### World

**P44A (Opr. Thomas Frenaye, K1KI)**

Donor: Bill Leonard, W2SKE

#### World QRPP

**Saulius V. Zalnerauskas, UP2BIM**

Donor: Adrian Weiss, K8EEG/0

#### U.S.A.

**John Dorr, K1AR**

Donor: Potomac Valley Radio Club  
Canada

**Gary Vernon Hammond, XN3XN**

Donor: Jack Baldwin, VE7RG

#### Carib./Central America

**John Troost, TG9VT**

Donor: Alex M. Kasevich, VP2MM

#### Europe

**Tom Stiehl, PA2TMS**

Donor: Thomas J. Peruzzi, Jr., W4BVV

#### Africa

**Charles A. Jones, CN8ES**

Donor: Gordon S. Marshall, W6RR

#### Asia

**A.M. Karamyan, EX6F**

Donor: Japan CQ Magazine

#### Japan

**Tadao Katsuta, JH7DNO**

Donor: Japan Crazy Contesters Club

#### Oceania

**David Patton, KJ9W/KH2**

Donor: Northern California DX Club

#### South America

**Thomas Koppel, YV5TK**

Donor: David Novoa, KP4AM

### SINGLE OPERATOR, SINGLE BAND

#### World

**James Kesterson, K0GU/8R1**

Donor: K2HLB Memorial (NJDXA)

#### World—21 MHz

**Pedro Katz, HC1OT**

Donor: Lee Wical, KH6BZF

#### World—3.8 MHz

**Alberto Llavia, YV3AZC\***

Donor: Special CQ Plaque

#### World—3.8 MHz

**G. Edwin Grooms, NE4G/6Y5**

Donor: Fred Capossela, K6SSS

#### USA—28 MHz

**James R. Iori, NU4Y\***

Donor: Special CQ Plaque

#### USA—28 MHz

**Michael S. Cortright, WB7FDQ**

Donor: Donald Thomas, N6DT

#### USA—3.8 MHz

**Robert Ferrero, W6RJ**

Donor: Arnold Tamchin, W2HCW

#### USA (21 MHz)

**William Gioia, K2EK**

Donor: Southern California DX Club

#### Canada (7 MHz)

**Yuri Blanarovich, XN3BMV**

Donor: Gene Krehbiel, VE7KB

### Carib./Central America

**Garry Murphy, KG4DX**

Donor: Pedro Piza, Jr., NP4A/KP4ES

#### Memorial

**Europe—28 MHz Zone 14**

**Helmut Winter, DJ1ZU**

Donor: A.G. Anderson, GM3BCL

#### Japan—21 MHz

**Masanori Kawakami, JR1CBC**

Donor: DX Family Foundation

### MULTI-OPERATOR SINGLE TRANSMITTER

#### World

**4V2C (Oprs. AA4GA, AA4NC, HH2MC, N4DVW, NQ4I, W5VUX)**

Donor: Don Wallace, W6AM Memorial from Frank Anzalone, W1WY

#### U.S.A.

**K2BU (Oprs. K2BU and WA2HGM)**

Donor: Carolina DX Association

#### Canada

**XN3BVD (Oprs. VE3BVD, VE3KZ, VE6DU)**

Donor: Calgary Amateur Radio Association

#### Europe

**LZ7A (Oprs. LZ2HE, LZ2DF, LZ2PO, LZ2CC, LZ2UA, LZ1A310/2)**

Donor: Bob Cox, K3EST

### MULTI-OPERATOR MULTI-TRANSMITTER

#### World

**TI1C (Oprs. N6AA, N6AW, N6BV, N6TJ, N6ZZ, TI2CC, TI2CF, TI2EY, TI2J, TI2JCJ, TI2JVA, TI2TO, TI2WI)\***

Donor: Special CQ Plaque

#### World

**VP2VCW (Oprs. K1RX, K3EST, KB2XZ, KT6V, N3ED, N6CW, N7ZZ, WA3LRO)**

Donor: Radio Club Venezolano

#### U.S.A.

**N2AA (Oprs. N2AA, K2BQ, K2NG, K2SS, K2TT, K2TW, K2UR, KR2J, KR2Q, KU2M, WB2BHC, K5NA, K8TD)**

Donor: Dale Hoppe, K6UA

#### Europe

**YT7W (Oprs. YU1NZV, YU6ZAX, YU7AD, YU7AU, YU7BB, YU7KW, YU7PFR)**

Donor: OH-DX Ring, OH2AM

### CONTEST EXPEDITIONS

#### World—Single Operator

**P44A (Opr. Thomas Frenaye, K1KI)**

Donor: Stuart Meyer, W2GHK

#### World—Multi-Operator

**VK9MR (Oprs. VK2CIA, VK2WU, VK3CE, VK5ARO)**

Donor: DJ3NG & DJ4EI Memorial (SDXG & CDXG)

\*Winner from previous year. See rules.

## ZONE WINNERS

Zone	Call	Score	21	EX6F	6,362,000
1	KL7AF	756	21	VU2JXO	297,864
2	No Entry		22	JT1AO	454,637
3	W7EJ	1,642,410	23	XX9CS	14,940
4	W0ZV	1,666,281	24	JH7DNO	1,885,750
5	K1AR	2,662,116	25	No Entry	
6	XE1IF	1,294,308	26	KJ9W/KH2	4,337,092
7	TG9VT	1,323,893	27	YB4FW	546,612
8	6Y3M	3,615,344	28	VK6DU	417,261
9	PJ2FR	8,420,220	29	VK2WU	594,000
10	HC1OT	1,112,620	30	KH6ND	1,972,870
11	ZP5JCY	2,873,404	31	AH8A	1,283,559
12	CE3DNP	2,956,080	32	CN8ES	4,195,706
13	LU1BR	2,107,668	33	No Entry	
14	PA2TMS	1,834,012	34	5N24AMA	1,057,264
15	OK6RA	1,942,575	35	5Z4DU	177,777
16	RB5FF	779,868	36	N4NW/3D6	1,726,550
17	UA9MR	170,060	37	FR0FLO	3,172,668
18	UZ9UN	46,926	38	TF3CW	227,149
19	UA0QEP	225,060	39		
20	LZ1CW	227,240	40		

## Team Contesting

1. Frankford Radio Club + one (6Y3M, N4NW/3D6, W3BGN, N2LT, N3AD) **10,418,669**  
 2. Q-Processors (KJ9W/KH2, KD7P/KH2, KG6DX, OH6JW) **7,212,262**

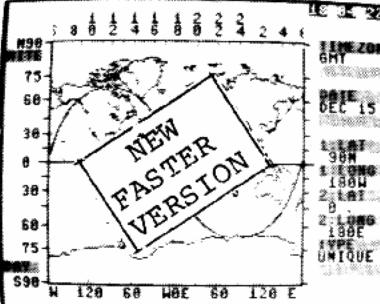
W47TW	"	103,323	382	23	78	K6XT	"	254,330	336	106	184	NC7K	"	208,208	487	57	97		
W4VZB	"	61,388	214	27	76	K6DR	"	198,331	365	81	122	W9SE/7	"	191,684	411	66	107		
KC4BX	"	54,450	205	27	77	W2KVA/6	"	187,758	393	67	104	K7GEK	"	158,260	343	62	102		
W4RKV	"	50,127	195	25	68	WC6I	"	187,395	355	75	120	KY7F	"	155,708	322	57	109		
W4WMQ	"	12,462	77	21	41	N6AN	"	178,155	356	65	120	K57T	"	145,885	316	54	109		
KB4FHE	"	11,770	75	14	40	NE6I	"	160,599	304	75	126	VE7EWG	"	/W7	"	119,980	321	52	88
KT4M	"	7,379	62	13	34	VE2AOS/	"	136,086	277	83	139	W7KRR	"	103,700	242	70	100		
KC4I	"	5,082	62	16	26	W6	"	127,908	267	72	115	W7GUR	"	96,188	247	43	96		
WG4P	"	3,854	39	13	28	KB6GV	"	118,767	245	71	112	K7GWK	"	93,177	233	66	87		
KI4JB	"	3,108	35	12	25	W6MFC	"	116,850	239	76	114	W7HXG	"	84,588	243	44	89		
W4YAN	"	1,224	21	10	14	W6RCL	"	109,395	240	56	109	K57L	"	63,196	189	50	72		
N4DLE	"	494	6	5	7	W6SC	"	98,629	218	67	112	AG7J	"	55,212	163	55	74		
K4RIG	7	29,667	126	25	61	W6UEF	"	98,072	220	64	100	W7QN	"	49,770	149	48	78		
N4IZ	"	15,879	73	23	27	N6ADK	"	91,000	167	70	130	K7RMV	"	46,224	158	44	63		
W4MGX	"	9,130	64	18	37	WG6FGV	"	93,730	281	55	75	K7CC	"	42,670	184	39	69		
W4FHI	"	1,175	18	9	23	K6YRA	"	87,019	192	66	107	WA7HHX	"	31,562	138	39	47		
W4PZV	3.7	22,032	111	23	58	KV6I	"	81,438	199	55	92	KC7MM	"	18,703	116	26	33		
W4FLA	"	12,028	80	18	44	N6MB	"	80,400	208	64	86	W7IT	"	17,263	99	29	32		
WB4IUX	"	6,030	60	13	32	KO6X	"	76,464	208	55	89	W7MI	"	13,182	65	34	44		
KAC2QD/4	"	3,232	47	9	23	W6ABW	"	55,002	191	41	62	KA7EEF	"	6,640	63	18	22		
N4SU	1.8	3,380	54	12	20	W6BYH	"	51,923	145	59	78	N7EFC	"	4,371	51	15	16		
K8CFU/4	"	1,254	36	9	13	W6GCS	"	49,404	143	54	84	KD7EJ	"	4,300	56	21	22		
N4IN	"	357	11	5	11	N6UW	"	48,336	159	50	64	KB7M	"	990	17	9	13		
NA5R	A	1,489,176	1150	139	342	N6JM	"	46,230	130	56	78	WB7FDQ	28	26,496	175	20	49		
NR5M	"	1,097,400	1201	112	242	W6AKS/6	"	37,080	131	44	99	K7IDX	"	5,400	47	14	26		
N5DU	"	897,472	193	123	256	K6DKZ	"	25,134	77	50	68	K7JA	21	429,750	1096	34	103		
K5RX	"	890,724	823	120	278	K9AGL/6	"	22,698	109	34	44	KETC	"	188,471	670	26	71		
KI3L/5	"	790,024	988	100	196	W6QJO/6	"	22,525	101	40	45	K7DXD	"	159,537	524	29	78		
K5AW	"	581,221	619	108	251	W6TKF	"	22,100	100	36	49	W7AYY	"	47,730	225	25	49		
K5DX	"	561,000	658	100	230	G3MHV/	"	21,840	87	47	57	K07G	"	26,795	163	22	36		
N5IM	"	462,400	539	95	225	W6FPRZ	A	20,175	96	32	43	KX7J	"	13,715	79	22	43		
W5LMG	"	142,209	268	74	133	W6	"	13,275	73	35	40	KU7A	"	9,600	85	17	23		
KC5UC	"	123,630	239	73	122	K6RQ/P	"	13,690	72	32	42	K7CV	"	7,248	57	19	29		
W5OSJ	"	93,766	215	66	107	AA6EE	"	12,265	85	29	26	W6BNH	"	/7	"	6,055	63	16	71
KC5YB	"	89,380	222	60	104	KJ6Z	"	10,111	59	30	37	K7WA	"	4,544	51	13	19		
W5OB	"	53,862	149	51	90	N6GRM	"	11,424	90	30	26	W7IL	14	391,035	1034	33	98		
N5HB	"	40,299	127	57	67	W6AM	"	11,111	57	30	37	W7FP	"	199,629	597	31	92		
KAS1AU	"	34,028	134	32	62	N6CGB	A	6,820	46	28	38	AG7M	"	172,325	559	29	84		
K5UV	"	33,462	125	43	74	W6YLY	"	2,618	33	15	19	K7TH	"	141,703	539	29	72		
N5EPA	"	32,205	123	39	56	W6JII	"	1,830	23	12	18	WA7GVM	"	66,960	274	23	67		
N3BBS/5	"	29,028	99	56	67	W6AM	"	1,518	25	16	17	K7ABV	"	43,920	204	20	60		
KD5RQ	"	28,583	122	42	59	NG6W	28	12,031	85	17	36	W71SX	"	20,485	87	24	61		
W5KCR	"	22,275	99	31	50	AA4M/6	"	11,424	82	17	34	K7LXC	"	7,526	50	23	30		
N7AIH/5	"	19,110	127	22	48	W6MBF	"	9,072	68	16	32	WA7APW	7	8,832	73	19	29		
WB5LYT	"	16,274	86	32	47	K6LY	21	276,150	898	30	75	WA7KPH	3.7	9,116	68	18	35		
W5Y	"	15,456	72	33	59	(Opn. K560E)	"	125,064	406	32	76	KG7D	1.8	3,248	93	12	17		
KB5OX	"	14,283	85	26	43	K4KIU/6	"	59,986	239	27	62	K8CW	A	227,994	352	68	169		
NA5F	"	3,950	36	21	29	N6HR	"	21,096	98	24	55	N8ATR	"	180,557	278	82	165		
KN5S	"	3,384	36	18	18	W6FCF	"	5,472	53	16	20	W6QDO	"	138,944	244	83	125		
WB5UDX	21	91,832	309	27	77	K560	"	3,984	60	13	11	AD8W	"	136,335	281	64	119		
KJ5W	"	78,008	264	27	71	K6HMA	"	1,998	37	8	10	K6MR	"	93,060	177	61	119		
K5TSQ	14	241,902	597	35	116	W6B	14	282,321	839	32	85	K6TMK	"	84,429	196	46	113		
W5FO	"	155,632	449	35	102	K6BHW	"	1,364	24	10	13	W8ANM	"	81,836	195	54	110		
W5AE	"	3,404	48	13	24	W6ADI	7	38,000	181	28	48	W4BAA	"	25,705	103	31	66		
W5SJQ	"	454	18	9	13	W6RJ	3.7	92,910	404	28	67	N6EKS	"	24,300	98	35	65		
K5NW	"	34,528	152	28	55	W6AMS	"	11,340	97	17	28	K6KUH	"	19,929	99	27	64		
K5BDX	"	8,586	63	20	34	WB6MS	"	2,262	36	11	18	K6CV	"	64,883	161	58	103		
W5SLYT	"	3,131	38	14	17	AE6U	1.8	4,200	114	15	20	K6BT	"	14,480	74	26	54		
WBMJ/5	3.7	91,952	486	28	84	KA6W	"	1,740	24	13	17	W8EX	"	59,895	152	56	109		
KO5E	"	27,262	131	25	61	AE6U	1.8	3,045	180	13	16	K6BT	"	41,148	116	33	94		
K5BZU	"	12,992	74	18	40	W6US	"	989	20	11	12	K6BT	"	25,705	103	31	66		
K5UR	1.8	11,600	169	18	32	K6SE	"	266,037	483	80	133	KC6UP	"	1,767	24	12	19		
KGHNZ	A	1,532,240	1550	121	237	W7EJ	A	1,642,410	1493	124	261	W8VEN	"	17,670	79	37	56		
ABV	A	1,517,620	1560	115	223	N7ABJ	"	684,537	918	95	164	K6FEH	"	10,664	86	11	26		
K6EID	"	886,418	960	110	221	K7HBN	"	357,905	538	81	142	K6NCG</							

## TOP SCORES

	WORLD	USA	
	Single Op	Single Op	
	All Band	All Band	
PJ2FR	8,420,220	K1AR	2,662,116
P44A	7,814,839	K2VV	2,389,164
EX6F	6,362,000	K1DG	2,358,850
YV5TK	6,107,744	W1ZM	2,160,082
KJ9W/KH2	4,337,092	W3BGN	1,992,977
CN8ES	4,195,706	K2XA	1,971,549
6Y3M	3,615,344	W2RQ	1,807,491
FR0FLO	3,172,668	K1TO	1,799,548
CE3DNP	2,956,080	N2LT	1,670,514
ZP5JCY	2,873,404	W0ZV	1,666,281
		W7EJ	1,642,410
<b>Single Op</b>		<b>Single Op</b>	
<b>Single Band</b>		<b>Single Band</b>	
<b>28 MHz</b>		<b>28 MHz</b>	
CE6EZ	859,165	NU4Y	38,078
LU2FDR	589,572	WB7FDQ	26,496
LU1E	573,138	W8WPC	19,560
CX5AO	498,386	NG6W	12,031
CX4HS	326,616	AA4M/6	11,424
LU5MDO	261,250	KB8LM	10,664
<b>21 MHz</b>		<b>21 MHz</b>	
HC1OT	1,112,620	K2EK	498,648
KG6DX	1,080,576	K7JA	429,769
9Y4AT	697,125	N4UM	424,853
EA4LH/CE3	643,710	NO4J	406,120
I1KN	605,382	K6LY	272,150
YC0DPO	587,340	K1VUT	246,312
<b>14 MHz</b>		<b>14 MHz</b>	
K0GU/8R1	1,251,096	W2YV	640,640
SN24AMA	1,057,264	W7IL	391,035
LU6ETB	1,033,659	NB2P	315,972
CT2FH	887,656	KV4P	300,824
G3FXB	821,028	W6BH	282,321
KD7PKH2	781,550	K2WK	255,860
<b>7 MHz</b>		<b>7 MHz</b>	
EA8AK	776,700	K9JD	103,362
9Y4VU	700,488	KV0Q	55,610
T32AF	677,844	N8RA	43,935
XN3BMV	546,615	K1MM	41,912
XL1CV	391,629	N6ADI	38,000
I2VRN	309,672	K5NW	34,528
<b>3.7 MHz</b>		<b>3.7 MHz</b>	
YV3AZC	351,324	W6RJ	92,910
NE4G/Y5	278,520	W0MJ/5	91,952
ZL1BIL	142,560	K1UO	89,200
HA8IE	117,819	WB2ITR	38,048
XN3EEW	103,870	N7DF/0	31,980
OH1RY	101,088	W9RN	31,244
<b>1.8 MHz</b>		<b>1.8 MHz</b>	
LZ2CJ	107,818	K5UR	11,600
HB9AMO	42,092	AA1K/3	10,258
I4JMY	28,969	AE6U	4,200
SP3IBS	28,892	KA1SR	3,510
IK0BYO	28,152	N4SU	3,360
YV2IF	18,291	KG7D	3,248
<b>Multi-Op</b>		<b>Multi-Op</b>	
<b>Single Transmitter</b>		<b>Single Transmitter</b>	
4V2C	8,448,099	K2BU	2,791,019
LZ7A	7,243,456	N4CC	2,718,682
ED9CM	6,860,565	NA8V	2,677,584
KP4BZ	6,804,200	N4ZC	2,653,413
VP2MW	6,509,970	N4RJ	2,305,635
ED7BB	5,095,400	K4VX/0	2,283,966
<b>Multi-Op</b>		<b>Multi-Op</b>	
<b>Multi-Transmitter</b>		<b>Multi-Transmitter</b>	
T11C	22,157,695	N2AA	7,418,328
VP2VCW	17,842,662	W3LPL	6,402,844
VP9AD	16,794,200	W4DR	6,270,623
ZY5EG	13,342,416	N5AU	5,173,860
XE2SI	9,984,236	N6RZ	4,003,272
V2ARS	8,762,040	K0RF	3,576,748

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CIRCLE 66 ON READER SERVICE CARD

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Outstanding performance of MB-ANTENNAS is well known. Now enjoy multi-band slopers - reliable, compact, very low SWR - coax feed - 3 kw power - compact - FULLY ASSEMBLED to your specified center frequency each band - Easy to install - very low profile - Complete instructions. Your payment checked accepted.

MB-SLOPER - 160, 80, 40, 30, or 20 MHz

2 - " " " " 80, 40, 40M

2 - " " " " NO-TRAP DIPOLE - 160, 80, 40M

2 - " " " " NO-TRAP DIPOLE - 160, 80, 40M

1-BAND SPACE-SAVER DIPOLE - 160 thru 10M\* - 48ft. long - \$ 85 ppd

\*Requires wide-range tuner (80, 20, 15M without tuner).

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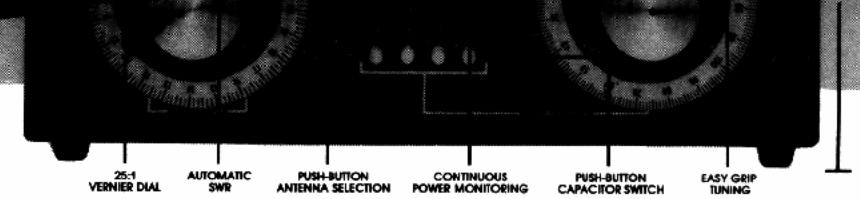
## NOW AVAILABLE! The NEW MB-V-A A great tuner is now even better!

We Added:

- Taut band Jewell meters.
- Beeted up internal shielding.

- Auto-switching meter to 3,000 watt scale.
- Higher voltage input capacitors.

Our MB-IV line carries the same improvements.  
Also New - ALL BAND antenna for use with our tuners.



## MB-V: NYE VIKING RUGGED 3KW ANTENNA TUNER

PI Network. Low Pass PI Network tuning - 15 to 30MHz. Heavy duty, silver plated continuously variable inductor with 25:1 vernier dial. 7000 volt variable capacitor and 15,000 switch selected fixed capacitors on output side. Tuned 40 to 2000 ohm antennas. Also provides harmonic suppression.

Automatic SWR. Hands free metering of SWR. No reset or calibration needed. Separate power meter - 300 or 3000 watts. Easy to read 21% reseated, backlit meters show SWR and power continuously.

Antenna Switch. New! PUSH-BUTTON antenna switching to 4 antennas (2 coax, single wire and twin lead). Tuner bypass on first coax output. We designed this rugged switch to handle the power.

3KW Balun. Trifilar wound, triple core torroid gives balanced output to twin feeders from 200 to 1000 ohms and unbalanced output down to 20 ohms.

Model Options. MBV-01 includes all MB-V features less antenna switch and balun. MBV-02 is identical to MB-IV-01 with the addition of a double core balun.

OTHER NYE VIKING PRODUCTS:  
Straight Keys Squeeze Key, Code Practice Set, Electronic and Memory Keypers, Phone Patches, 2kW Low Pass Filter, Automatic SWR and Power Meters for HF and 2m (plus a model for the blind), 200w PEP antenna tuner...and more!

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## WM. M. NYE COMPANY

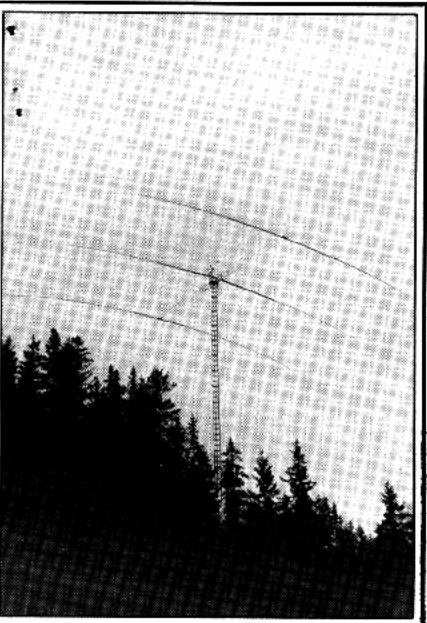
1614-130th Avenue N.E.  
Bellevue, WA. 98005  
(206) 454-4524



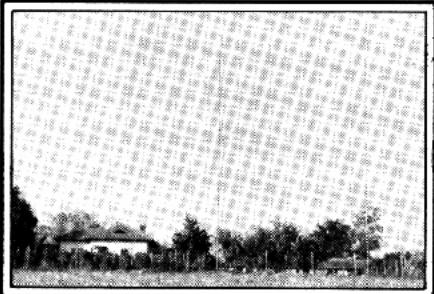
## WE BUILD IT SO YOU CAN BRAG ABOUT IT!

CIRCLE 7 ON READER SERVICE CARD

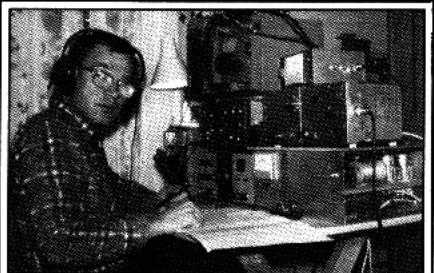




*OH1RY on top of his 80 meter beam.*



*The world number one 160 location of LZ2CJ, Wally.*



*SP5INQ.*



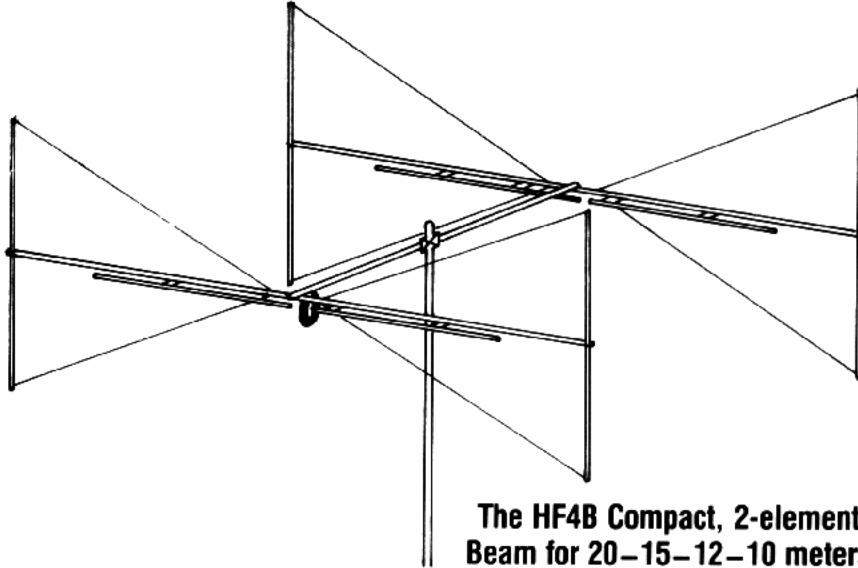
*LU1E (Bob, LU3AJW).*

OH4ML	"	82,485	201	57	178	OH6ZH	"	9,540	139	12	41	Y54XL	"	169,830	577	49	136
OH7NW	"	24,966	180	27	87	OH1RY	3.7	101,088	787	26	78	Y49ZF	"	165,900	562	55	155
OH1TD	"	20,952	172	26	71							Y37UF	"	152,866	717	39	140
OH5MQ	"	17,615	233	13	52							Y54VA	"	143,252	560	32	86
OH2BYS	"	15,318	98	26	85							Y58ZA	"	134,697	531	43	134
OH2BBF	"	12,922	60	35	56							Y22WD	"	122,500	332	55	141
OH5JJ	"	11,022	150	16	50	F6AWW	"	79,105	429	29	92	Y28XL/A	"	118,904	558	40	127
OH6LL	"	9,055	133	24	55	F3VX	"	67,410	290	36	90	Y36YM	"	111,758	383	47	126
OH1PY	"	8,385	54	24	41	F6API	"	31,824	126	41	95	Y36UE	"	105,967	433	57	142
OH2BLC	21	740	22	7	13	F6AJA	"	29,830	127	38	57	Y4200	"	90,013	445	39	128
OH1AF	14	422,295	1579	32	109	F6CLM	"	10,656	100	25	49	Y240H	"	87,423	266	53	108
						F6GDK	"	5,408	73	16	36	Y21HB	"	81,102	304	38	99
						F6KLN	"	4,440	97	13	27	Y22HF	"	54,750	204	45	105
						F9JS	21	52,512	218	24	72	Y24SK/A	"	54,150	241	45	105
						F6CQU	14	185,270	726	29	76	Y32PH	"	53,676	334	32	94
						F9DK	"	31,930	319	17	45	Y51WO	"	50,184	280	36	100
						F6FNA	7	2,130	71	5	25	Y78XL	"	46,056	336	27	87
						F6BV	3.7	6,384	151	5	37	Y48ZA	"	45,981	279	32	85
												Y23YK	"	42,588	201	37	89
												Y49XN	"	42,224	210	35	77
												Y24NG	"	41,382	183	38	83
												Y63VG	"	41,208	368	26	75
												Y45VJ/P	"	39,567	272	26	95

#### FRANCE

F6AOJ	A	544,187	812	73	216	Y54XL	"	169,830	577	49	136
F6AWW	"	79,105	429	29	92	Y49ZF	"	165,900	562	55	155
F3VX	"	67,410	290	36	90	Y37UF	"	152,866	717	39	140
F6API	"	31,824	126	41	95	Y54VA	"	143,252	560	32	86
F6AJA	"	29,830	127	38	57	Y58ZA	"	134,697	531	43	134
F6CLM	"	10,656	100	25	49	Y22WD	"	122,500	332	55	141
F6GDK	"	5,408	73	16	36	Y28XL/A	"	118,904	558	40	127
F6KLN	"	4,440	97	13	27	Y36YM	"	111,758	383	47	126
F9JS	21	52,512	218	24	72	Y36UE	"	105,967	433	57	142
F6CQU	14	185,270	726	29	76	Y4200	"	90,013	445	39	128
F9DK	"	31,930	319	17	45	Y240H	"	87,423	266	53	108
F6FNA	7	2,130	71	5	25	Y21HB	"	81,102	304	38	99
F6BV	3.7	6,384	151	5	37	Y22HF	"	54,750	204	45	105
						Y24SK/A	"	54,150	241	45	105
						Y32PH	"	53,676	334	32	94
						Y51WO	"	50,184	280	36	100
						Y78XL	"	46,056	336	27	87
						Y48ZA	"	45,981	279	32	85
						Y23YK	"	42,588	201	37	89
						Y49XN	"	42,224	210	35	77
						Y24NG	"	41,382	183	38	83
						Y63VG	"	41,208	368	26	75
						Y45VJ/P	"	39,567	272	26	95

## Introducing the BUTTERFLY™ Beam from Butternut!



**The HF4B Compact, 2-element Beam for 20–15–12–10 meters**

#### Compact Size

The HF4B's 12½-foot elements and 6-foot boom are ideal for home-station use and for weekend retreats, condos, apartments and other places where oversized beams are prohibited. Its light weight (17 pounds) means it can be turned with a tv rotator, yet it is robustly constructed in the best tradition of our world-famous Butternut verticals.

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#### Performance

The HF4B **BUTTERFLY™** has not sacrificed performance for compactness. Its unique design with fanned elements and L-C circuits avoids use of power-robbing traps yet provided high-efficiency operating on all bands. The **BUTTERFLY™** outperforms anything in its class.

The HF4B offers an SWR of 1.5:1 or less at resonance. Its 2:1 bandwidth is 200 kHz on 20 meters, 450 kHz on 15, 1.7 MHz on 10, and across the entire 12 meter band. And it will handle the legal power limits both CW & SSB. Gain is at least 3 dB on 20, 4.5 dB on 15 and 5 dB on 10 & 12 meters. Front-to-back is up to 18 dB on 10, 12 and 20m, and up to 15 dB on 15m.

**BUTTERNUT ELECTRONICS CO.**

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Lockhart, Texas 78644

Please send all reader inquiries direct.

ITALY																			
Y47YM	"	29,541	101	44	85	I4CSP	A	118,594	342	53	144	CT1AHU	"	32,549	199	32	89	EC1BOF	"
Y44J0	"	29,082	176	35	76	I5MXX	28	68,598	365	23	106	CT1BFN	"	15,364	102	33	59	EC1SCH	"
Y26BM/A	"	27,141	188	26	83	I5IEXX	"	42,315	219	22	71	CT1AW	"	13,600	87	29	56	EC3PE	"
Y51KH	"	26,370	189	29	61	I2ARC	"	17,754	121	18	47	CT1AZS	"	7,504	66	18	38	EA4BV	"
Y33ON	"	25,956	239	28	58	I1KN	21	605,382	1385	35	128	CT1CVF	"	3,510	68	8	37	EA3AYA	14
Y54TO	"	25,623	140	40	77	I2KBVG	"	359,522	1033	35	101	CT4MS	21	145,755	847	20	59	95,632	585
Y38TI	"	24,192	146	37	71	I3ON	"	330,912	862	31	113	CT1CLR	"	89,523	643	19	68	21	65
Y37XJ	"	20,207	118	36	85	I8BYG	"	111,989	623	26	81	CT1AV	"	30,702	215	16	35	EA3DZG	"
Y75XH	"	15,150	195	20	55	I0BRS	"	61,677	361	21	58	CR1BKW	14	807,540	2510	36	112	31,808	303
Y44UI	"	14,697	87	27	44	I3TQE	14	491,211	1352	35	126	CU0UW	"	105,090	549	22	71	23,108	184
Y44WA	"	12,212	159	15	56	I0BOLS	"	455,429	1993	32	104	C11UO	"	12,936	144	13	43	10,462	100
Y42WB	"	11,786	166	22	49	I2KAWK	"	19,598	85	15	50	CQ6NH	7	295,008	1182	26	85	4,662	100
Y46ZC	"	11,408	163	13	49	I2VRN	7	309,672	1318	32	104	EA2400	"	3,492	83	11	25	3,492	83
Y24ND	"	10,764	74	23	46	I4JYJ	1,8	28,959	461	9	50	I5D0HE	"	7,149	258	16	63	EA3CTI	7
Y32VJ	"	9,875	73	29	50	I4RYC	"	202,825	848	30	103	EA1SY	"	4,590	73	11	34	4,590	73
Y45WM	"	9,823	103	17	30	I5FCX	"	194,640	1084	28	92	EA5DKS	"	1,218	37	6	23	20,254	160
Y44NO	"	8,692	92	18	35	I4EWH	"	116,739	809	25	84	EA5BH0	3,7	30	5	2	4	19,578	163
Y36UG	"	7,548	75	25	49	I3N0BR	"	73,600	660	18	74	EA7BTZ	1,8	36	4	2	2	3,458	74
Y47SF	"	6,499	70	22	45	I4QQA	3,7	87,219	602	23	76	RA3VA	"	24,396	239	17	59	12,741	23
Y46XF	"	6,496	50	23	35	I5D0HE	"	(Opn. I4EAT)				RA3QK	"	20,596	192	22	54	12,741	23
Y22GC	"	6,210	48	29	40	I4JYJ	1,8	28,959	461	9	50	RA3VA	"	8,360	148	8	36	12,741	23
Y34SE	"	5,488	66	27	35	I5D0Y0	"	28,152	349	11	58	UV3NB	"	6,336	70	14	30	12,741	23
Y38ZB	"	4,368	50	19	37	I5D0Y0	"					UA30BX	"	1265	39	9	14	12,741	23
Y44TN	"	4,250	34	23	27	I5D0Y0	"					UA4WF	"	988	27	8	15	12,741	23
Y24TG	"	3,850	69	13	37	I5D0Y0	"					UA4ACD	"					12,741	23
Y22WF	"	3,724	49	18	31	I5D0Y0	"					UA36BI	"					12,741	23
Y31TM	"	3,672	75	13	23	I5D0Y0	"					UA37G	"					12,741	23
Y24GG	"	2,852	55	10	21	I5D0Y0	"					UA37G	"					12,741	23
Y36SG	"	2,597	39	16	33	I5D0Y0	"					UA37G	"					12,741	23
Y73XH	"	2,576	36	16	30	I5D0Y0	"					UA37G	"					12,741	23
Y22RK	"	2,450	58	8	27	I5D0Y0	"					UA37G	"					12,741	23
Y67UG	"	2,275	47	14	21	I5D0Y0	"					UA37G	"					12,741	23
Y31ZE	"	2,106	44	11	28	I5D0Y0	"					UA37G	"					12,741	23
Y26MH/A	"	1,254	25	12	21	I5D0Y0	"					UA37G	"					12,741	23
Y57RH	"	1,121	27	9	10	I5D0Y0	"					UA37G	"					12,741	23
Y37RB	"	773	28	7	16	I5D0Y0	"					UA37G	"					12,741	23
Y24KB/A	"	500	12	9	11	I5D0Y0	"					UA37G	"					12,741	23
Y61ZF	"	462	22	6	15	I5D0Y0	"					UA37G	"					12,741	23
Y64YG	"	336	17	6	10	I5D0Y0	"					UA37G	"					12,741	23
Y21TG	"	160	16	3	7	I5D0Y0	"					UA37G	"					12,741	23
Y33VL	"	154	6	5	6	I5D0Y0	"					UA37G	"					12,741	23
Y24SG	21	37,599	192	23	60	I5D0Y0	"					UA37G	"					12,741	23
Y24LE	"	5,738	61	13	25	I5D0Y0	"					UA37G	"					12,741	23
Y22YE	"	4,459	42	18	31	I5D0Y0	"					UA37G	"					12,741	23
Y36XC	"	4,320	72	10	22	I5D0Y0	"					UA37G	"					12,741	23
Y63TI	"	3,663	37	14	23	I5D0Y0	"					UA37G	"					12,741	23
Y25JA/A	"	1,474	25	9	13	I5D0Y0	"					UA37G	"					12,741	23
Y32ZF	"	276	17	5	7	I5D0Y0	"					UA37G	"					12,741	23
Y32UC	14	199,935	733	34	101	I5D0Y0	"					UA37G	"					12,741	23
Y24YL	"	5,738	61	13	25	I5D0Y0	"					UA37G	"					12,741	23
Y22YE	"	4,459	42	18	31	I5D0Y0	"					UA37G	"					12,741	23
Y36XC	"	4,320	72	10	22	I5D0Y0	"					UA37G	"					12,741	23
Y63TI	"	3,663	37	14	23	I5D0Y0	"					UA37G	"					12,741	23
Y25JA/A	"	1,474	25	9	13	I5D0Y0	"					UA37G	"					12,741	23
Y32ZF	"	276	17	5	7	I5D0Y0	"					UA37G	"					12,741	23
Y32UC	14	199,935	733	34	101	I5D0Y0	"					UA37G	"					12,741	23
Y24YL	"	5,738	61	13	25	I5D0Y0	"					UA37G	"					12,741	23
Y22YE	"	4,459	42	18	31	I5D0Y0	"					UA37G	"					12,741	23
Y36XC	"	4,320	72	10	22	I5D0Y0	"					UA37G	"					12,741	23
Y63TI	"	3,663	37	14	23	I5D0Y0	"					UA37G	"					12,741	23
Y25JA/A	"	1,474	25	9	13	I5D0Y0	"					UA37G	"					12,741	23
Y32ZF	"	276	17	5	7	I5D0Y0	"					UA37G	"					12,741	23
Y32UC	14	199,935	733	34	101	I5D0Y0	"					UA37G	"					12,741	23
Y24YL	"	5,738	61	13	25	I5D0Y0	"					UA37G	"					12,741	23
Y22YE	"	4,459	42	18	31	I5D0Y0	"					UA37G	"					12,741	23
Y36XC	"	4,320	72	10	22	I5D0Y0	"					UA37G	"					12,741	23
Y63TI	"	3,663	37	14	23	I5D0Y0	"					UA37G	"					12,741	23
Y25JA/A	"	1,474	25	9	13	I5D0Y0	"					UA37G	"					12,741	23
Y32ZF	"	276	17	5	7	I5D0Y0	"					UA37G	"					12,741	23
Y32UC	14	199,935	733	34	101	I5D0Y0	"					UA37G	"					12,741	23
Y24YL	"	5,738	61	13	25	I5D0Y0	"					UA37G	"					12,741	23
Y22YE	"	4,459	42	18	31	I5D0Y0	"					UA37G	"					12,741	23
Y36XC	"	4,320	72	10	22	I5D0Y0	"					UA37G	"					12,741	23
Y63TI	"	3,663	37	14	23	I5D0Y0	"					UA37G	"					12,741	23
Y25JA/A	"	1,474	25	9	13	I5D0Y0	"					UA37G	"					12,741	23
Y32ZF	"	276	17	5	7	I5D0Y0	"					UA37G	"					12,741	23
Y32UC	14	199,935	733	34	101	I5D0Y0	"					UA37G	"					12,741	23
Y24YL	"	5,738	61	13	25	I5D0Y0	"					UA37G	"					12,741	23
Y22YE	"	4,459	42	18	31	I5D0Y0	"					UA37G	"					12,741	23
Y36XC	"	4,320	72	10	22	I5D0Y0	"					UA37G	"					12,741	23
Y63TI																			

# RF TRANSISTORS

**FRESH STOCK - NOT SURPLUS  
TESTED — FULLY GUARANTEED**

<b>NEW ZEALAND</b>												
ZL2AH	A	51,324	210	42	49	ZP5LOB	14	46,547	198	29	60	
ZL1IM	"	35,646	181	32	45	ZP7CO	7	2,581	30	11	18	
ZL1ANJ	21	278,460	1490	23	40	<b>PERU</b>						
ZL1AAS	7	105,705	420	31	56	DA4AJG	A	91,494	342	45	57	
ZL1BIL	3.7	142,560	559	28	62	DA4AGR	"	6,237	83	14	13	
<b>OGASAWARA</b>												
JH7EAY	JD1	21	7,056	259	10	14	DA4BCP	14	10,036	95	21	31
<b>PHILIPPINES</b>												
K4YT/	D9	A	2,411,190	2283	132	235	DA4OS	7	217,035	710	30	87
<b>SOUTH AMERICA</b>												
<b>ARGENTINA</b>												
LU1BR	A	2,107,668	2507	101	202	CX1FU	A	37,291	169	34	55	
L2X	"	427,512	830	68	120	CX8CG	"	28,836	164	27	54	
LU4LAV	"	289,050	672	48	102	CX2ND	"	4,158	46	19	23	
LU2HLN	"	13,098	94	33	41	CX5AO	28	498,386	1747	22	75	
LU4MEE	"	12,544	91	26	30	CX4HS	"	326,616	1189	24	69	
LU6QI	"	2,720	28	16	24	<b>TRINIDAD</b>						
LU6QAF	"	897	13	10	13	9Y4AT	21	697,125	1900	27	98	
LU2FDR	28	589,572	2078	25	83	9Y4VU	7	700,488	1718	28	110	
LU1IE	"	573,138	2141	24	78	<b>URUGUAY</b>						
LU3MDO	"	261,250	1454	25	69	<b>VENEZUELA</b>						
LU1VK	"	211,660	767	24	71	YV5TK	A	6,107,744	4175	136	360	
LU6FDK	"	190,876	930	22	46	(Opn. N16L)						
LU8FEU	21	254,043	879	26	71	YV7QP	28	76,104	473	20	36	
LU2FFD	3.7	28,461	202	20	33	YV5JE	21	435,237	1343	24	85	
LU1HGN	1.8	143	17	4	7	YV6BTF	"	106,200	607	19	40	
<b>BRAZIL</b>												
PP2ZDD	A	3,131,280	1660	88	182	YV3AUH	"	88,550	564	15	40	
PP1NEZ	"	644,436	1028	68	153	YV5EF	"	1848	28	17		
PT7ZZ	"	533,356	1071	76	166	YV3ALK	14	648,448	1628	30	106	
PY4OD	"	190,722	568	41	73	YV3EDD	"	15,620	87	18	53	
PY2JF	"	91,520	390	30	50	YM5BI	7	65,448	344	25	47	
PP5PCJ	"	77,292	350	31	45	YV3AZC	3.7	351,324	1238	26	82	
PY2RE/4	"	59,640	202	40	65	YV2IF	1.8	18,291	172	14	25	
ZY5NF	"	51,830	380	47	YV3AGT	1.8	13,188	111	15	27		
PR8ET	"	25,296	174	23	28	<b>QRPp</b>						
PT2TF	"	19,092	88	33	53	UP2BIM	A	348,440	747	77	233	
PY1OL	"	17,372	84	41	60	4X6IF	"	220,159	549	38	99	
PY2FND	"	4,324	46	19	28	K7SS	"	209,132	394	70	126	
PY1PL	"	3,510	44	15	15	K3WS	"	193,800	348	60	144	
PY21S	"	3,408	25	20	28	YU2OB	"	182,608	456	56	170	
PY1TIA	"	2,565	34	22	23	AH6EK	"	168,198	583	42	55	
PY2CLK	"	1,800	32	10	15	K7BTB	"	134,505	266	71	112	
PY6KR	28	72	7	4	4	K7UR	"	115,868	257	66	100	
PY2FZ	21	374,100	1275	27	73	OK3IA	"	104,095	350	51	140	
PY5AA	"	112,880	466	26	57	Y02AB	"	54,769	386	32	111	
PY2GNS	"	52,992	260	28	41	K9A	"	54,240	170	57	63	
PY2WR	"	14,958	94	13	41	W6YVK	"	52,128	198	43	53	
PY2ET	"	25,296	174	23	28	SM5CCT	"	39,675	271	29	86	
PT2TF	"	19,092	88	33	53	SM1CNS	"	36,654	215	36	87	
PY6KR	28	72	7	4	4	G4MTC	"	33,108	266	28	65	
PY2FZ	21	374,100	1275	27	73	JE8CIS	"	29,681	153	27	40	
PY5AA	"	112,880	466	26	57	K9A	"	26,829	121	35	64	
PY2GNS	"	52,992	260	28	41	J3LCU	"	24,20	124	34	38	
PY2WR	"	14,958	94	13	41	J3BFG	"	21,183	116	29	40	
PY3BC	"	2,997	36	15	22	Y22CC	"	15,308	161	17	32	
PP5JD	7	38,570	221	22	48	EA3DNC	"	12,780	159	17	54	
<b>CHILE</b>												
CE3DNP	A	2,956,080	2969	105	234	CK3TEI	"	11,700	119	12	53	
CE5CNT	"	520,234	848	74	140	UC2ACT	"	7,700	98	16	54	
CE3BVL	"	265,558	511	69	124	W3TB/TF	"	5,772	85	9	28	
CE3AEZ	"	5,632	22	16	16	Y2ZEEY	"	3,587	79	12	38	
CE6EZ	28	859,165	2530	27	88	YU3CD	"	2,501	25	20	21	
CE3ZI	"	81,928	530	19	37	SP2UUU	"	1,428	34	11	23	
CE4NV	"	26,884	203	17	29	NP4KA	28	11,799	496	12	11	
EA4LH/	"	643,710	1800	26	103	E4ACN	"	9,853	102	18	41	
CE3	21	1,056	21	10	14	EA7DZI	"	7,192	72	16	42	
CE6DAQ	"	510,304	271	26	44	UA6APU	"	2,175	63	8	21	
CE3BFZ	14	700,416	1854	32	96	EA3ERT	"	1,113	56	4	17	
CE1BSV	"	51,030	271	26	44	RA3DQ	"	630	18	8	10	
CE3FIP	7	163,184	615	28	66	RA3DAD	"	540	25	7	12	
CE1ANF	"	12,980	119	22	33	OK3CPY	"	351	22	4	9	
CE6DFY	3.7	13,464	147	15	19	ZS6PT	21	69,286	287	28	73	
CE8ABF	1.8	1,872	32	10	14	W5VX	"	14,400	108	17	33	
<b>COLOMBIA</b>												
HK5BCZ	A	517,849	2202	81	178	EASDIT	"	8,949	71	19	38	
HK1GAD	"	48,180	254	31	35	HG9TL	"	135	15	3	6	
HK4GAW	21	415,090	1425	25	78	L2ZEW	14	48,224	349	22	56	
<b>CURACAO</b>												
PJ2FR	A	8,420,220	5667	134	359	UB5MX	"	46,056	302	28	73	
P44A	A	7,814,839	5939	128	371	JA2KVD	"	45,899	194	29	54	
<b>EASTER ISLAND</b>												
CE0ZIJ	A	451,440	1300	43	77	CT1AWD	"	33,600	236	22	62	
CE0AE	"	251,370	699	51	75	OK8ACW	"	28,002	183	25	53	
<b>ECUADOR</b>												
HC1OT	21	1,112,620	2859	29	103	W6CN	"	22,570	136	21	31	
<b>GUYANA</b>												
KBGU/	8R1	14	1,251,095	2547	37	131	UB5MLV	"	3,326	134	10	36
T32AW	A	93,852	358	41	58	JA1BN	"	8,216	56	21	31	
T32AF	7	677,844	2045	34	80	JA2DN	"	5,880	55	20	20	
<b>KIRIBATI</b>												
ZP5JCY	A	2,873,404	2619	120	262	EA2BTO	"	3,267	80	7	26	
<b>PARAGUAY</b>												
<b>QUANTITY DISCOUNTS AVAILABLE</b>												
<b>WE SHIP SAME DAY C.O.D./VISA/MC</b>												
<b>INFORMATION AND CALIF. ORDERS: (619) 744-0728</b>												
<b>OUTSIDE CALIF. ORDER DESK: 800-854-1927</b>												



**TMOS FET**

MRF134*	5W	2-200	\$10.50	—
MRF137*	30W	2-200	22.50	—
MRF138**	30W	1.5-150	35.00	—
MRF150**	150W	1.5-150	80.00	—
MRF172*	80	2-200	65.00	—

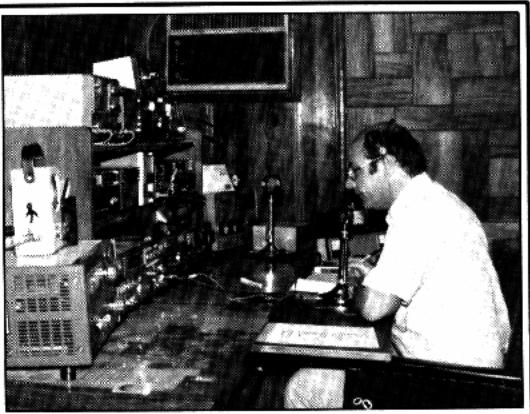
Selected, matched finals for Kenwood, Yaesu, Icom, Atlas, etc. Technical assistance and cross-reference information on CD, PT, RF, SRF, SD P/Ns.

**QUANTITY DISCOUNTS AVAILABLE**

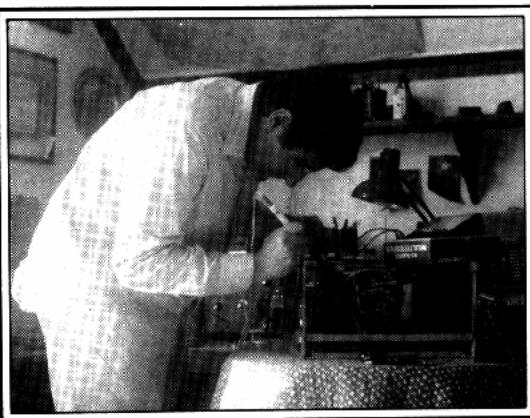
**WE SHIP SAME DAY C.O.D./VISA/MC**

**INFORMATION AND CALIF. ORDERS: (619) 744-0728**

**OUTSIDE CALIF. ORDER DESK: 800-854-1927**



K4YT/DU9, Karl.



**EA4LH/CE3** repairing CE3BFZ's linear three hours before contest.

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Explains Ingrid:

"I guess we're just very easy to get to know..."

## GROVE

Write to Dept. A (or phone 704-837-9200) for a free catalog and sample issue of Monitoring Times.



140 Dog Branch Road, Brasstown, N.C. 28902

CIRCLE 61 ON READER SERVICE CARD

UP1BZR	888,636	1720	68	230
UP1BWG	544,986	1107	70	235
UP1BZD	506,884	1152	67	234
UP1BYK	140,686	631	44	138
UP1BZQ	121,422	546	46	131

9,213	218	14	23
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UC40WR	9,213	218	14	23
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MOLDAVIA	9,213	218	14	23
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UKRAINE	9,213	218	14	23
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UB4IXB	1,548,368	2087	113	351
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UB4MF	1,518,475	1792	105	332
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UB4IZA	862,730	1122	82	259
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UB4MWA	347,355	767	75	204
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UB4MZ	312,936	895	62	174
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UB4EWB	282,940	833	59	176
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UB4LXA	132,404	648	42	116
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UB4MXR	129,308	559	40	112
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UB4IQ	103,452	603	28	120
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UB4MWU	46,020	270	29	89
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UB4TWL	43,264	274	32	96
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UT4UWE	40,944	479	21	70
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UB4EXZ	8,358	165	15	27
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UB4VWA	5,524	79	16	24
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UB4UWC	4,747	96	13	34
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UB4LZJ	4,301	69	9	17
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UT4UWL	2,390	41	11	17
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2,390	41	11	17
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### MULTI-OPERATOR MULTI-TRANSMITTER NORTH AMERICA

#### USA

N2AA	7,418,328	3752	165	547
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W3LPL	6,402,844	3322	157	537
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W4DR	6,270,523	3318	157	526
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N5AU	5,173,860	3068	162	474
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N6RZ	4,003,272	2855	147	357
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K8RF	3,576,748	2325	146	410
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K3ZZ	2,299,590	1641	130	380
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W3GM	2,131,920	1433	137	403
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AD8P	1,868,500	1359	130	370
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K5LZ	1,850,331	1684	143	354
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K1NG	1,765,632	1291	128	356
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N2RM	1,745,550	1447	107	324
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A4AS	1,396,831	1027	137	366
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N8DLR	992,192	833	136	283
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W8NGO	557,034	577	103	250
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#### ALASKA

KL7Y	3,349,000	3970	119	216
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KL7RA	2,951,144	3990	104	198
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#### ANTIGUA

V2ARS	8,762,040	8081	126	378
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#### BERMUDA

VP9AD	16,794,200	11004	155	500
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#### BRITISH VIRGIN ISLANDS

VP2VCW	17,842,862	12432	150	484
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#### CANADA

VE7ZZ	2,390,553	3699	100	197
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VE2USA	1,890,472	3454	81	187
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2,390,553	3699	100	197
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1,890,472	3454	81	187
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#### COSTA RICA

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TI1C	22,157,695	1348	167	518
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#### MEXICO

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XE2SI	9,984,236	8952	143	650
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#### ASIA

#### JAPAN

JA9YBA	3,843,017	2818	139	340
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JA3YKC	2,740,904	2065	144	328
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JA7YFB	2,203,278	1888	138	280
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JA7YRR	1,975,500	1841	134	241
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JA7YFH	1,581,822	1849	108	189
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JH1YT	86,516	187	57	115
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#### EUROPE

#### ENGLAND

GB4ANT	4,737,051	4597	104	427
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#### FEDERAL REP. OF GERMANY

DF8DX	5,866,732	4886	146	497
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#### NETHERLANDS

PA6WW	2,252,432	4732	117	359
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PI4DEC	842,400	1158	75	250
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#### POLAND

SP9KAO	78,312	382	42	114
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#### SPAIN

EA1MH	593,952	1083	77	192
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#### YUGOSLAVIA

YT7W	7,196,000	5448	152	548
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YU4EYC	62,828	357	37	101
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#### OCEANIA

#### HAWAII

KH6JDU	492,660	1199	76	62
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#### PHILIPPINES

DU1DBT	2,098,572	2886	90	159
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#### SOUTH COOK ISLANDS

ZK1XC	1,768,704	3246	73	115
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#### SOUTH AMERICA

#### ARGENTINA

L8H	3,749,280	3112	104	261
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#### BRAZIL

ZY5EG	13,342,416	7773	148	443
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#### CHILE

CE3AA	2,302,902	2785	93	201
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#### CHECK LOGS

We gratefully acknowledge receipt of the following check logs: CE1CQZ, DJ3VC, EA1BDH, EA1CXA, EA1AUS, EA-BVE, EA4CVP, EA5CEO, EA7EMR, EA7DNX, EA7FLZ, EC1BPS, HA5FA, HA6NY, JA2MMF, KB8PYD, KA7QZK/VY1, KB8BAC, KA9OPV, LA1ODA, LA2JX, LA3TO, LA3JT, LA4TG, LA4RQ, LA5OK, LA6PBA, LA8C, LA8WY, LA9ML, LJ8DPM, LZ1UH, LZ1KKZ, LZ1OT, OH1BV, OH1XX, OH2FQ, OH2H, OH4YC, OH5SV, OH6GZ, OK1AD, OK3CSQ, OZ1HAS, OZ1FLV, OZ4RT, OZ4ZT, OZ6PP, OZ8AE, PA2NPN, PA3CLD, PA3CNY, PA3CPV, PA3BUT, PA4TV, PY1YN, RA1TA, RA3EA, RA3R0, RA3VM, RA3VR, RA3VV, RB5IX, RB5MC, RB5WA, RF0FWW, RL7GE, RV9UV, RW30Q, SK20W, SM2LWU, SM5BDV, SM5CVG, SM5L, SM6AVM, SM6JY, SM6KMD, SM6NKJ, SM7ASN, SM7IDF, SM7IWN, SM7TPY, SM9BFJ, SP2GUJ/V2, SP3XR, SP4AS, SP4WE, SP4LVG, SP5BPK, SP5TP, SP6BSL, SP6CDK, SP6CYV, SP9PPP, UA2FF, UA3ACJ, UA3AGW, UA3AJHA, UA3AMV, UA3DPD, UA3DVF, UA3ID, UA3P, UA3TAM, UA4CGP, UA4HNP, UA4LCH, UA4YZ, UA6AB, UA6HKN, UA6HNZ, UA6HO, UA6FF, UA6KAB, UA6WZA, US5HAF, UB5IMD, UB5KW, UB5PS, UB5UCH, UB5UFC, UB5UFQ, UB5VEG, UB5L2B, UF7WMA, UM9MWV, UC2GT, UR2RCU, UT4UC, UT4UH, UT4UW, UT4UX, UZ1TWW, UZ1ZZZ, UZ2FWQ, UZ3MWD, UZ3SWW, UZ4SWM, UZ6HWW, UZ9AXT, UZ9CZI, UZ9CWM, UZ9SWT, UZ9LWN, UZ8AWH, UZ8SWM, VE3OSF, VE3XB, VE3XB, WLUG, XN3IPR, Y21IC, Y21UD, Y21YJ, Y22VJ, Y23DG, Y23EE, Y23F, Y23LD, Y23UA, Y23YE, Y24CE, Y24DF, Y24DN, Y24HJ, Y24JA, Y24LA, Y24W/A, Y24XD, Y24ZH, Y25MO/A, Y250N/A, Y25SE, Y25ZN/A, Y26EN, Y26EO, Y26MO/A, Y26LD/A, Y26VN, Y26Y, Y27GL/A, Y27MN/A, Y27VH, Y32IN, Y32OC, Y34XF, Y41WM, Y46MF, Y46TH, Y51YJ, Y51YJ, Y53VL, Y53ZL, Y53XU, Y57ZL, Y68WG, Y75YL, Y78WN, Y55ZA, Y8-87CO/N62, Y8-ZCZ, Y02ARV, Y02DFA, Y02CM, YU7AJD, YV3BOS, ZC4CZ, ZL3GQ.

Disqualified: ZF2IB/X4 unverifiable contacts and duplicates.