Results, 1991 ARRL 160-Meter Contest

The gentleman's band makes for the gentleman's contest!

By Billy Lunt, KR1R and Warren C. Stankiewicz, NF1J
Contest Manager Assistant Contest Manager

ith the sunspot peak a few years behind us, the low bands are starting to open up. Conditions during this year's contest were much better than last year's. Static and atmospheric noise were low, making it much easier to copy signals. John, W2GD, claims, "This was the best activity ever! The extremely quiet conditions enhanced the chances to work all states and lots of DX." John, KN1H, reports, "Conditions were excellent, with little noise."

With a little luck from ole Sol, maybe the 1992 contest will even be better, but topping the 1991 scores won't be an easy task. There were 34 new Division records and a new QRP overall-score record set this year. Check the boxes for the new records. Good band conditions and a low noise level make for a good contest, and this was the best 160-Meter Contest we've had for quite some time.

In many people's minds, high power and 160 meters go hand in hand. You'd even think that it's the most popular single-operator entry category—not so! The low-power category has emerged as the most popular of the three entry classes. This is only the second year we've offered low-power and QRP entry categories in the 160-Meter Contest. The lowpower category has made great headway in proving itself. We received 229 entries, as opposed to last year's 174-a 31.6% increase! The top-scoring low-power single operator, Ralph, K9ZO, finished with a higher score than about 85% of the high-power single ops. But of course, the other 15% of the highpower entries accounted for the top 30 singleop scores in the contest.

The number of entries in all categories increased this year. The high-power single-op category surged upward 10%, with 208 entries. QRP entries were also up slightly, with 29 entries this year and 23 in 1990.

In the single-operator high-power category, Jeff, K1ZM, finished with 254k points, beating his winning score from last year by 40k points for the highest score in the contest. Jeff worked an amazing 1076 W/VE and 64 DX contacts in 76 ARRL Sections and 27 DXCC countries! Although scoring 22k higher than last year, Richard, K5NA, finished in second place for the second year in a row. He worked 944 W/VE and 59 DX contacts in 74 ARRL Sections and 24 DXCC countries.

The biggest difference in the single-operator high-power category and the low-power category is the number of DX stations worked by each. The high-power stations worked far more than the low-power stations, as one would expect. On low-power, the strategy was more like grabbing a new multiplier by working one of the North or South American sta-

tions rather than running DX as the high-power guys did.

The top scoring low-power finisher, K9ZO, worked 713 W/VE and 4 DX contacts in 67 ARRL Sections and 4 DXCC countries. Louis, K9ALP, finished second, working 686 W/VE and 4 DX QSOs in 69 ARRL Sections and 4 DXCC Countries.

Dana, W3TS, beat his 1990 QRP-record score by 14k, setting the new QRP record at 45,008 points. Dana worked 383 W/VE and two DX QSOS in 56 ARRL Sections and 2 DXCC countries. Close behind was Jim, NZ8B, with 42k points. He worked 327 W/VE and 2 DX QSOS in 62 ARRL Sections and 2 DXCC countries for second place QRP.

The crew at KN8Z broke the old Great Lakes Division record and placed first among the multioperator stations, scoring 224,874 points. Of their 1170 QSOs, they managed 26 DX contacts and 18 DXCC countries and 75 ARRL Sections. Last year's first place team at K2WI finished second this year with 218k points. They worked 1053 W/VE and 39 DX QSOS in 75 ARRL Sections and 20 DXCC counties.

The breakdown of W/VE and DX QSOs and multipliers of the top finishers in each entry category should give you a better grasp on plotting your 1992 entry this December 4-6. When planning your effort, remember that 1830-1850 kHz should be used for intercontinental QSOs only, in compliance with the ARRL band plan. This year we received a few complaints. Thanks.

SOAPBOX

I wish I'd been able to mount a serious effort! (AI7B). I think my makeshift antenna had a radiation angle of 90° (AA7BG). I worked 48 states with QRP! (NZ8B). Conditions were fair, but I didn't hear much DX (NW3C). I had a 50% increase in QSOs compared to last year (KI6CK). I never cease to be

amazed at how many stations can be worked with only five watts (NI9C). There were lots of stations and big signals in evidence (N4YDU). I put a lot of effort into three Beverage antennas for receiving, and they performed well (AA6DT). I had fun until the inverted L shorted to a guy wire at 1 AM Sunday (K3MD). This was a real good contest! (W4XD). It was a lot of fun, even with a limited antenna (K3YDX). I made 97 QSOs the first hour with 100 watts-that's my kind of fun (WR3E). This was my first 160-Meter Contest in a long time (W8WE). Conditions must have been good, as this was the first time I've tried QRP in the 160-Meter contest. Next year, I'll try to be up for more of the sunrise and sunset propagation (K2LGJ). This was my first time in this contest and I was surprised (KFØGV). I was able to work the West Coast with an 80-meter half loop, so conditions must have been good (WA1GUV). I heard the West Coast coming in at 59+, but couldn't break through with 5 watts. I need more radials! (KN1H). I couldn't stay awake past 1 AM the second night (WA1HYN). This was my first contest with a good 160-meter antenna (K1KI). This was the first time I've been on 160-meters in 34 years (K4PIC). It's a big thrill when your call is returned and you work a station on the East Coast running QRP (WB6IMC). We used an off-the-air AM broadcast station's 150-foot towers with an acre of almost solid copper under the ground (KU4J). I had fun working with a GSRV in a tiny lot (K1JKS). This was my first 160-Meter Contest from my new -I have lots of antenna work ahead of me! (AA1K). I never would have believed that I could work California with a G5RV converted to a Marconi with a banana plug and alligator clips (NQ4K). I just couldn't stay awake past 1 AM! (N6BK). I wish I could have played the entire contest! I had a 131 hour for the best domestic rate ever on CW! Conditions were great! (WD8LLD). Activity and conditions were better than I've ever heard before in this contest. It was nice to get a break from the high A and K indices (NJ2L). I'm a newcomer to 160; despite using a dipole and running low power, I got out much farther than expected. By the middle of the second evening, we had worked almost everyone we could hear (WT1M). Conditions were much better than last year (KN1M). I could never work on a night shift! The local 50-kW AM station does well—unfortunately. it does well in the DX window (AA4NC). It was hard to believe that so many stations appeared during the contest that you seldom hear at other times (W4SNH).

Top Ten	1						
Single Operator		Single Operator		Single Operator		Multioperator	
QRP		Low Powe	er	High Power	r	Call	Score
Call W3TS NZ8B NJ9C W1OO AJ9C N9JF W8VK N5RZ NI9C KX4V	Score 45,008 42,496 35,032 33,280 32,076 29,120 26,600 26,491 26,468 25,576	Call K9ZO K9ALP WA1UJU NW3C W2CRS NOØY N9AW WB9CIF W5XJ WDØT	Score 102,666 101,470 100,300 98,770 90,724 84,023 72,624 64,086 62,012 56,442	Call K1ZM K5NA AB4RU (AA4GA,op) K8CC (AA8AV,op) W0EJ N4AR AA4NC N0TT K1KI	Score 254,616 213,934 196,560 188,659 185,074 162,278 161,280 158,178 154,473	KNBZ K2WI K3LR K7EG NX1G KU4J K1LT W2GD WØAIH N8EA	224,874 218,595 200,024 186,823 182,574 181,390 176,205 172,208 165,170 162,880
				WB1GQR (WB2JSJ,op)	154,198		





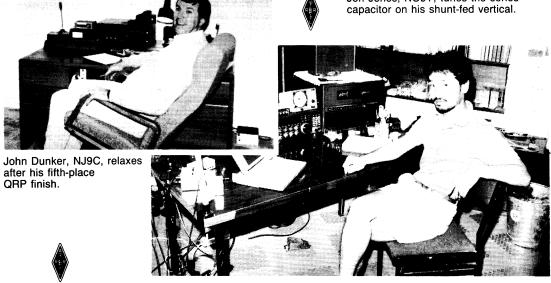
The group at NA7R used this 140-foot ground-insulated tower for transmitting and a 550-foot Beverage for receiving.

Division Leaders

		LOW	Hign	
Division	QRP	Power	Power	Multioperate
Atlantic	*W3TS	*NW3C	W8UM	K2WI
Central	NJ9C	*K9ZO	*KE9I	WØAIH
Dakota	_	*WDØT	WØHW	_
Delta	_	N5GW	N8UM	WA5NYG
Great Lakes	*NZ8B	*K9ALP	K8CC (AA8AV,op)	*KN8Z
Hudson	AA2U	*WA2VYA	K1ZM`	*W2GD
Midwest	*WØGWT	*NOØY	*WØEJ	*NCØP
New England	*W100	*WW1C	K1KI	*NX1G
Northwestern	_	*N6NR	*K7QQ	NK7U
Pacific		*AJ6T	W6GO	*KG7D
Rocky Mountain	_	*W2CRS	AA6TT	NA7R
Roanoke	*KX4V	N4YDU	AA4NC	W4XD
Southeastern	*K4MJ	K4IQJ	*AB4RU	*KU4J
Southwestern	*WB6IMC	*N6BK	*N6SS	AA6DT
West Gulf	*N5RZ	*W5XJ	*KC5DX	AA5BL
Canada	*VE3DO	*VE3OSZ	VE3KP	VE7ZZZ
*Division record				



Jon Jones, NOØY, tunes the series



Well-known contester Yoshiyuki Matsuda, JH4NMT, was able to participate from Niger as 5U7M.

Scores

Scores are listed by DXCC Countries and ARRL/RAC Sections. Within each country or Section, single-operator scores area listed first, then multioperator scores. Each line score lists call sign, final score, total QSOs, total multipliers and power (A = QRP, B = low power, C = high power, D = multioperator).

DX	Aruba	Eastern Massachusetts	Rhode Island	N2GC 10,374 130 39 B
	P40V	K5MA 104,571 605 81 C	WA1HYN 32,193 324 49 C	WB2DLA 6,090 100 30 B
Portugal	(Al6V,op) 55,744 416 67 C	W1PL 57,013 358 71 C	K2MN 15.752 179 44 B	K2OVS 456 19 12 B
CT1AOZ 2,200 50 22 B		K1JKS 45,136 391 56 C	W10P (N1s AKO, JDA, W1s EYH, GS,	W2CWW (K2LUQ,KA2s DMQ,YDW,
_	Mexico	K1ST 42,151 335 61 C	WN1A,ops) 33,124 317 52 D	KB2GBK,NA2V,NT2X,ops)
Germany	XE2/W9DHK (+WB9AJZ)	N1DM 22,446 261 43 B		59.328 456 64 D
DK2BL 192 12 8 B	7,072 104 34 D	AK1P 19.872 213 46 B	Vermont	00,020 400 04 8
	M	K8PO 19,516 235 41 A	WB1GQR (WB2JSJ.op)	Northern New Jersey
Dominican Republic	Venezuela	W1MK 15,390 201 38 B	154,198 844 86 C	WA2SRQ 151,032 829 87 C
HI160M (HI8A,op)	YV1OB 25,960 220 59 C	W1AX 11,280 138 40 C	WW1C 35,868 366 49 B	
10,062 117 43 C		KQ1V 10,296 143 36 B	WA1GUV 29,088 300 48 B	
_	Niger	W1FJ 6,336 96 33 B	N4DW 9,468 130 36 B	WA2VYA 50,944 395 64 B
Panama	5U7M (JH4NMT,op)	W1FDR 5,610 81 34 C		WB2VVV 40,040 361 55 C
HP1AC 870 29 15 B	2 1 1 C	N1AU 3,360 51 32 C	Western Massachusetts	K2WK 30,900 250 60 B
	MA	K1NTR 2,990 65 23 B	W1BYH 35,448 306 56 C	W2HCA 10,064 136 37 B
Japan	West Malaysia	KB1KM 2,438 53 23 B	KA1GWQ 19,950 195 50 B	AA2U 7,296 114 32 A
JE1SPY 2,400 50 24 C	9M2AX 2 1 1 B	NR1J 1,848 42 22 B	KZ1M 12,600 175 36 B	N2KJM 4,466 77 29 B
JJ1NNJ 1,938 51 19 C		K1TWF (+ NET)	N1JAC 3,250 65 25 B	KB2BXH 2,990 65 23 B
JH1HGC 1,512 42 18 C	1	27,600 286 48 D	N1TZ (+NET)	KA2SSX 2,200 50 22 B
JI1NJC 980 35 14 C	0	WT1M (+K1MBO)	54,362 338 77 D	W2JEK 48 6 4 A
JA7NI 400 20 10 C	Connecticut	18,901 229 41 D		W2GD (+NET)
JF2ONG 18 3 3 B	K1KI 154,473 745 93 C	Maine	2	172,208 862 94 D
JH3CYZ 8 2 2 A	NJ2L 47,790 396 59 C		-	,200 002 01 0
JHØZHQ (JA1LTR,JE1s QMV,SCJ,	K1TO 38,016 279 66 C	KN1M 68,931 486 69 C	Eastern New York	Southern New Jersey
JH1s BBT,GNU,KLA,TXG,JK1GKG,	W1WEF 35,739 306 57 C	W1OO 33,280 305 52 A	K1ZM 254.616 1140 103 C	W2EA 14.560 182 40 B
JR1IJV, JAØVSH)	WØMHK 33,696 306 54 B	KA1FHD 11,736 163 36 C	K5NA 213,934 1003 98 C	
3,792 79 24 D	NY1V 23,136 238 48 B	W1DEO (+K1TEV)	K2DW 30,096 339 44 B	
JA3YKC (+ ops) 208 13 8 D	WD5T 16,950 165 50 C	23,232 167 66 D	KF2O 18,042 138 62 C	K2PS 10,878 128 42 C
Czechoslovakia	K1YRP 10,302 150 34 B	New Hampshire	KN2Q 17,885 181 49 C	K2TD 8,626 112 38 B
	K1TN 10,076 113 44 C		N2CJJ 11,248 152 37 B	K2MK 784 28 14 B
OK1JDX 396 18 11 C	N8RA 10,062 114 43 C	N1HFE 32,625 361 45 B	WB2PUH 2,444 47 26 B	K2WI (+ N2NU,WW2Y)
Database.	N4XR 8,272 94 44 C	AK1L 25,192 265 47 C	WA2YEI 1,024 32 16 A	218,595 1092 95 D
Belgium	N1FQK 6,368 98 32 B	WS1E 18,384 190 48 B	WAZUKP (+WAZJQK)	K2SB (+NET)
ON4WW 40 5 4 B	AB1U 6,270 103 30 B	W1PH 17,114 196 43 C	8.968 118 38 D	11,178 120 46 D
B	W1QV 6,076 98 31 C	KN1H 10,234 149 34 A	,	
Denmark	KB1H (+ NET)	W1ARE 4,536 81 28 B	NYC-Long Island	Western New York
OZ5PA 8 2 2 B	28,275 210 65 D	NX1G (+ NET) 182.574 831 98 D	W2WW 11,562 120 47 C	WF2W 127,510 761 82 C
		182,574 831 98 D	,552 125 47 6	K2KIR 91,650 602 75 C
				KU2A 51,849 404 63 C

N2WK 38,555 349 55 B K2ZR 32,050 319 50 B	Puerto Rico WP4IIW 490 16 14 C	WB6JMS 12,496 133 44 B N6PE 7,308 100 36 C	KC7YE 252 14 9 B W7AWA (+ AA7FT,WAØRJY)	0
KW2J 29,340 326 45 C KD2YP 23,705 211 55 C	South Carolina	WA6WPG 1,364 31 22 B KI6X 528 24 11 B	82,080 480 76 D WA7UQV (+AA7IE)	Colorado AA6TT 102,858 615 79 C
WB2ABD 12,726 150 42 B WJ2O 12,138 143 42 C	K4YYL 63,232 491 64 C	Pacific	62,678 395 77 D	W2CRS 90,724 604 74 B
W2FR 7,344 108 34 B	Southern Florida	KH6DD 1,748 38 23 B	Wyoming	WØPSY 39,050 269 71 C W7ZQ 33,792 258 64 C
W2FB 4,536 81 28 A KB2NU 4,524 78 29 B	WA4SVO 29,000 244 58 C WD4AHZ 14,706 168 43 B	Santa Barbara	WC7S 76,923 495 77 C NA7R (+ KB7YP,WB7DBS)	KØFRP 31,494 270 58 B KØRZ 22,010 173 62 B
K2LGJ 840 28 15 A	K4CXX 6,188 91 34 B	WA6FGV 32,422 275 58 C W7CB 8,184 93 44 B	85,960 611 70 D	KU7U 16,646 142 58 B
3	N4RU 5,112 68 36 B KR4U 4,030 65 31 B	W6BKY 6,510 104 30 B	8	NR5K 15,444 140 54 B K9MWM 1,920 40 24 C
Delaware	Tennessee	N6VR 2,940 51 28 B W6JEO 1,064 35 14 B	Michigan .	lowa
AA1K 49,898 403 61 C W3NX 25,048 202 62 C	N8UM 114,268 733 77 C	AA6DT (+W6JU,WB6YPR,W6/YT3NC) 21,504 189 56 D	K8CC (AA8AV,op) 188,659 1123 83 C	WØEJ 185,074 1115 82 C KFØH 51,267 370 69 C
WJ3Y 1,035 33 15 A	KK4CA 34,998 304 57 C K4XG 18,375 183 49 B	Santa Clara Valley	W8UVZ 92,118 583 78 C	NØBB 31,200 260 60 B
Eastern Pennsylvania	Virginia	AA6KX 50,112 363 64 C	KF8QE 38,465 391 49 B	KØRW 21,392 191 56 C KØSRL 12,768 133 48 B
W3UM 144,670 806 85 C K3WW 82,656 650 63 C	KG4W 46,865 356 65 C KA4RRU 35,828 338 53 B	AG6D 45,632 337 64 C AJ6T 27,940 239 55 B	K8CV 26,416 254 52 B WA8OJR 21,600 225 48 B	NCØP (+ K9WA,NN9K,WOØV) 143,520 888 80 D
W3OV 82,440 559 72 C NN3Q 55,448 466 58 C	WD4JHY 35,241 341 51 B	NS6V 23,400 222 52 C KG6I 15,732 168 46 C	W8LUX 21,266 217 49 B AC8W 14,805 163 45 C	KBØSK (+KBØCRG)
W3TS 45,008 385 58 A WB3FAA 40,188 391 51 C	KX4V 25,576 275 46 A W4SNH 24,462 225 54 B	N6NF 15,456 165 46 B	NE8O 10.878 147 37 B	14,076 153 46 D Kansas
WF3M 38,319 360 53 C	W4VC 11,320 140 40 B WY7U/4 8,750 125 35 B	KI6CK 12,450 123 50 B KB6FPW 3,339 78 21 B	N8CQA 9,280 116 40 A K8OT 7,770 105 37 B	NOØY 84,023 571 73 B
W3EHZ 24,576 253 48 B KU3X 20,436 195 52 C	K4BAM 8,382 127 33 B NQ4K 7,511 100 37 C	W6PLJ 2,440 61 20 B N6RZ (+ WB6SHD)	W8ROS 6,474 83 39 B W8WVU 5,456 88 31 B	WØUY 47,396 344 68 B NJ8M 33,728 269 62 C
W3TDF 16,560 207 40 C N3HHE 14,444 154 46 B	W3FTG 1,260 30 21 B	54,166 335 73 D AA6OZ (+AA6PZ,KA6ASV)	K8DD 5,032 74 34 B W8YL 216 12 9 B	WØRT 20,832 183 56 B
WA3YON 13,188 154 42 A K3VW 11,000 136 40 C	W4XD (+ AB4RI,WB4PJW) 132,000 865 75 D	3,380 59 26 D	N8EA (+K8LX) 162,880 1009 80 D	NØIZE 13,200 132 50 B
K3TEJ 9,900 150 33 B N3FTI 8,704 128 34 B	5	San Diego	Ohio	WAØYXK 10,350 115 45 B
K3OX 1,518 33 22 B	Arkansas	K6NA 22,620 171 58 C NN6I 10,293 108 47 B	K9ALP 101,470 689 73 B	Minnesota WØHW 118,712 775 76 C
KS3F (+NET) 50,400 341 72 D	W5KL 15,484 158 49 C	K6NY 8,100 111 36 C AA6EE 1,408 32 22 B	N8AA 91,686 615 74 C WB8PHI 87,360 618 70 C	KJØB 105,228 657 79 C
K3NZ (+ ops) 17,376 181 48 D	Louisiana	San Francisco	WD8LLD 56,161 382 71 C	WA2MNO 48,444 367 66 B NØAT 43,958 353 62 B
Maryland-DC	N5WA 72,489 492 73 C NT5K 16,907 158 53 B	W6BIP 21,892 206 52 B	NZ8B 42,496 329 64 A	WØRXL 39,780 303 65 C KBØZQ 32,825 251 65 B
K3ZO 137,088 798 84 C KZ3H 112,560 649 84 C	KB5GON 14,147 149 47 B	WB6EGE (AI6LP,KA6OPN,N6s MQ, QC,WB6WPO,ops)	WD9INF 37,449 327 57 C WA8TMK 31,864 283 56 B	KFØGV 6,880 86 40 C WØUC 5,112 71 36 C
K3EI 40,260 327 61 C W3AZ 17,250 186 46 C	N8RR 12,374 133 46 B Mississippi	12,549 132 47 D	W8VK 26,600 266 50 A AA8BV 17,526 189 46 B	Missouri
WK3I 13,818 147 47 B W3CPB 10,222 133 38 B	N5GW 50,304 390 64 B	San Joaquin Valley	W8PBX 15,457 187 41 B	NØTT 158,178 951 82 C
K3YDX 2,688 56 24 B NF3X 1,656 36 23 B	WA5NYG (+ WA5OSO) 12,427 143 43 D	K6MO 37,604 251 68 C K6XK 12,364 121 44 C	NBJQX 14,391 174 41 B	WAØOUI 50,331 440 57 B K4VX/0 40,062 293 66 C
WR3E (+ NET)	New Mexico	Sacramento Valley	K8ES 14,194 151 47 B WABJBG 10,707 123 43 B	KØJPL 19,186 181 53 B AAØFN 7,992 108 37 B
44,164 356 61 D	KB5UL 91,091 581 77 C	W6GO 64,275 415 75 C WA6AUE 39,865 290 67 C	W8FDN 9,360 130 36 B KW8M 8,772 102 43 B	WØGWT 6,300 90 35 A WBØQLU 4,030 65 31 B
Western Pennsylvania W3GH (W9XR,op)	AA5ZQ 58,968 402 72 C W7LHO 19,656 174 56 B	W1FEA 29,698 232 62 C	NG8D 7,800 100 39 B N8AXA 6,256 92 34 A	KØLIR (AAØA, KEØYO, NØS ANV. IS.
131,901 849 77 C K3BSY 99,856 620 79 C	N7KA 17,752 154 56 B KB5OTU 11,088 123 44 C	N6DM 21,952 167 64 B N6JM 9,009 114 39 B	K8KR 3,024 54 28 B	KFE,LIK,PKX,WDØCHW,ops) 51,940 527 49 D
NW3C 98,770 698 70 B	North Texas	7	KN8Z (+ N8JEC, NZ8O, WA8s OSE,	NXØI (+ KDØFW) 22,736 194 56 D
K3TUP 85,816 625 68 C KZ5D/3 68,154 450 74 C	KC5DX 148,149 895 81 C	Alaska	YVR,WX8T,WM9M) 224,874 1170 93 D	Nebraska
K3UA 51,348 386 66 B K3MD 42,421 355 59 C	K5GW 126,800 779 80 C W5XJ 62,012 410 74 B	KL7Y 27,324 213 44 C AL7CQ 900 25 18 C	K7EG (NZ4K,KC8MK,KU8E,ops) 186,823 998 91 D	AJØI 44,488 332 67 B
N3EQF 27,664 244 56 C WI3U 8,892 114 39 B	W5FIX 60,200 415 70 C K5RX 55,648 370 74 C	AL7CQ 900 25 18 C KL7FAP 2 1 1 B	K1LT (+ K8ND) 176,205 1017 85 D	KØSW 5,292 72 36 B South Dakota
K3LVO 2,340 45 26 A K3LR (+ WR3G)	K5WXZ 39,830 280 70 C K5NW 35,136 276 61 C	Arizona	WIST (+N8LVO,WX8G)	WDØT 56,442 409 69 B
200,024 1105 88 D	W5IWE 24,095 193 61 B	N6SS 139,760 794 80 C NN7F (NG7S,op)	14,085 155 45 D West Virginia	KDØEE 30,720 237 64 C KØHP 21,594 183 59 B
4	K5LP 22,388 190 58 C AA6EW 12,600 140 45 B	94,458 586 78 C K7OX 85,254 530 78 C	K8OQL 103,050 681 75 C	VE 2,,554 105 55 B
Alabama	WK5K 8,658 111 39 B N4CD 6,956 94 37 B	K6LL 53,676 363 71 C	W8TN 55,522 385 71 C W8WEJ 34,430 310 55 C	Quebec
K4IQJ 44,892 384 58 B AA4UF 9,288 129 36 B	Oklahoma	WA2DFI 18,150 180 50 C AC7A 15,400 151 50 B	KV8S 18,148 173 52 C	VE2AWR 8,995 127 35 B
KU4J (+ KB4HZ,W4BRE,WA4DPU,	WM4Z (+ K5CM,N5KW) 112,708 731 76 D	N7HID 5,160 86 30 B	W8VVE 16,652 181 46 B KD8YY 9,555 132 35 C	VE2QO 5,046 87 29 B VE2BLX 3,150 63 25 B
KUØC) 181,390 1049 85 D	South Texas	Eastern Washington W1TR 26,901 212 63 C	9	VE2OJ (VE2FLD, VE3s NJ, WCP, ops) 22,850 224 50 D
Georgia AB4RU (AA4GA,op)	W5XD (W2IE op)	K7BFL 2,530 55 23 B	Illinois	Ontario
195,104 1039 91 C K3JT 54,351 441 61 C	65,450 463 70 C K5EWJ 60,344 385 76 C	idaho	W9AZ 110,803 712 77 C K9ZO 102,666 717 71 B	VE3KP 102,534 740 69 C
K4MJ 20,784 215 48 A	K5DX 51,750 327 75 C WA5POK 45,333 321 69 C	KA7T 19,027 178 53 C K6RN 17,690 148 58 C	KF9D 96,596 628 76 C	VE3MSN 68,112 461 72 C VE3CUI 67,332 540 62 C
K2UFT 9,331 107 43 B	WN5TEN 34,272 269 63 B	N7EIJ 11,200 109 50 B W7IWU 506 23 11 B	WX9U 53,040 439 60 B KF9FU 52,536 350 66 C	VE3DSZ 26,418 250 51 B VE3ST 16,238 175 46 C
KC4GR 6,868 101 34 B K4PIC 2,912 56 26 B	AA5NK 24,800 185 62 C KB5OG 16,800 141 56 B	Montana	K9IFO 40,870 299 67 C K9AB 35,721 279 63 C	VE3OAT 10,492 122 43 B VE3IR 10,368 105 48 B
K4UEE 2,900 50 29 C W4AQL (N9HZQ,KØDI,ops)	AA5BT 16,377 150 53 B NA4M 10,074 108 46 B	W7LR 43,452 303 71 C	W9EBY 31,293 273 57 B N9JF 29,120 260 56 A	VE3NBE 7,714 100 38 B
130,034 811 79 D	KG5YA 8,405 101 41 B W5AHC 6,536 86 38 B	AA7BG 4,278 69 31 B	W9DCN 25,850 235 55 B KS9W 17,052 174 49 C	VE3WZ 6,402 97 33 B VE3AWE 6120 90 34 C
Kentucky	KI3L 6,200 100 31 C K5WA 3,100 50 31 C	Nevada W6WTT 6,660 111 30 B	K9PPW 12,374 133 46 C	VE3EJ 5,874 89 33 B VE3DO 5,704 92 31 A
N4AR 162,278 976 82 C K4FU 138,852 813 84 C	N5AFV 2,256 47 24 C AA5BL (+ N5OLS)	KG7D (+K7CA,WI7D) 116,640 690 80 D	W9ACK 7,548 102 37 C	VE3DBG 3,190 55 29 B VE3OMU 1,950 39 25 B
NV4H 48,132 379 63 C KA4IQD 26,845 226 59 B	123,172 712 83 D	Oregon	W9TD 7,128 99 36 B W9CA 6,696 93 36 B	VE3EKY 1,224 36 17 C VE3DC (VE3s ANB,NYX,OCY,
W4KY 20,094 197 51 B KM4FO 18,180 202 45 B	KC5ZT (+WR5Q) 50,820 385 66 D	AI7B 53,025 334 75 C	W9LYA 5,940 99 30 B K9MDO 3,000 50 30 B	VFR,ops) 26,884 286 47 D
N4XM (+ KD4U,KK4Q) 115,140 750 76 D	KB7MKX/5 (+ KA5VOZ) 5,376 84 32 D	W7ZR 6,360 106 30 C W7IMP 4,192 64 32 C	K9BLY (+N5XR) 22,684 214 53 D	Manitoba
North Carolina	West Texas	WB9HZT/7 2,806 61 23 B KI7Y 868 31 14 B		VE4JB 60,371 412 73 C VE4VV 5,066 73 34 B
AA4NC 161,280 945 84 C	WF5E 28,080 207 65 C	NK7U (+NI7T)	Indiana KE9I 146,484 930 78 C	Saskatchewan
AA4S 138,013 863 79 C	N5RZ 26,491 223 59 A W5VGX 8,060 130 31 B	84,892 542 76 D W7KYC (AA7IH,K7s RUN,LJ,KG7MI,	W9RE 100,100 641 77 C WB9CIF 64,086 481 66 B	VE5SF 546 21 13 B
K4PB 49,096 352 68 C KI6MS 40,474 337 59 C N4YDU 37,365 351 53 B	NZ5M 2,700 54 25 B	NO7V,WA7VTD,WW7F,AL7W, WA8DIM,ops) 26,892 237 54 D	NJ9C 35,032 299 58 A	Alberta
AA4VV 31,304 278 56 B WJ9B 20,880 216 48 B	6	Utah	WA6MBP 32,768 253 64 B AJ9C 32,076 294 54 A	VE6SF 24,000 180 64 B VE6JY (+ VE6XH)
KS4S 18,585 205 45 B	East Bay K6XV 30,683 229 61 C	K7OA 22,032 201 54 B AD7V 18,954 351 54 B	WB9PXR 21,717 189 57 B	53,436 360 73 D
N4BNO 15,604 163 47 C N4UH 13,500 135 50 C	W6FSJ 18,306 165 54 C	W7MR (+WE7B,WK7V)	Wisconsin WA1UJU 100,300 736 68 B	British Columbia VE7FPT 36,036 237 66 C
KA2CDJ/4 10,922 124 43 B N4VQJ 9,165 116 39 B	N6RO 17,755 163 53 C	59,280 456 65 D Western Washington	N9AW 72,624 531 68 B	VE7FJE 5,012 85 28 B
N4ELM 5,858 101 29 A WN4BBJ 560 20 14 B	Los Angeles N6LL (WA6CDR, op)	K7QQ 116,640 621 81 C	N9AU 36,888 312 58 C	VE7IN 2,068 47 22 B VE7ZZZ (VE7s AV,EME.RBL,ops)
Northern Florida	102,410 587 77 C WA7ZTN/6 33,594 244 66 C	KT7G 35,644 263 67 C KR7G 27,456 207 64 C	NI9C 26,468 253 52 A WG9U 22,654 241 47 A	67,744 458 73 D
NC1R 53,950 406 65 C	KA6SAR 8,360 100 40 C	W7TSQ 15,120 156 45 C N6NR 14,696 167 44 B	W9XU 22,246 227 49 B WT9Q 18,847 199 47 B	Checklogs
KN4YB 30,264 291 52 B W4ROM 25,480 226 56 B	N6AA 5,372 79 34 B	K7XX 7,098 91 39 C	KØAM 10,164 121 42 B W9GIL 8,200 100 41 B	JE1CTM, OK3CQR, W6MUV.
KJ4UW 3,690 60 30 B	KI6VY 8 2 2 B	W7BYK 12,690 132 47 C K7XX 7,098 91 39 C	WW1M 6,384 84 38 B	057
	Orange N6BK 50,820 354 70 B	N7LOX 6,960 87 40 B W7MCU 6,426 72 42 C	WD9IAB 4,650 75 31 B W9HE 4,608 72 32 B	
	N4EA/6 33,217 277 59 C	K7WA 4,617 84 27 B	WØAIH (KØs FVF,KX,SF,ops) 165,170 977 83 D	