

# Results, 2003 ARRL 160 Meter Contest

*One machine can do the work of fifty ordinary men. No machine can do the work of one extraordinary man.—Elbert Hubbard*

As every avid contesteer knows, each HF band has a personality. Depending on the time of day, one band is better suited than another for any one of a number of reasons. “Topband” (aka 160 meters) has a reputation, too—a reputation rooted in tradition, folklore and pure science. Old timers call it the gentleman’s band—and for good reason. It takes a plantation sized estate to support a world class antenna. It is also very fragile. Since the whole continent is open to propagation, participants must cooperate in a gentlemanly fashion and deal with interference and noise from just about everywhere. Learning Topband traditions takes time and practice. You may likely be called a LID a time or two until you figure it all out (an Elmer really helps). Doing well in the 160 band requires skill, finesse, and yes, lots of big hardware.

Those who have come to love Topband wouldn’t miss the ARRL 160 Meter Contest. The folklore that says you need a 160 acre estate to “compete” is simply not factual. This year, 58 new “Section Records” were set. In the Regional competition, 8 new records summarily forced old records kicking and screaming into the archives. Some of these new records were set by people using considerably less than “world class” systems.

*What counts is not necessarily the size of the dog in the fight—it’s the size of the fight in the dog.—Dwight D. Eisenhower*

Although the 857 logs submitted

indicates a decline from 2002’s record shattering year with 919 logs, the trend is still up (2001 had 777 logs). K9DX landed the highest Q count of 1498, which is down from 2002’s maximum of 1592 by VY2ZM. With the sunspot doldrums lurking around the corner, you can expect a large increase in 2004’s running of the 160 Meter Contest. Higher top score records requires more Qs from more participants. As the sunspot minimum approaches, 160 meter propagation should be at a peak. Let’s hope the contest community responds to this 11 year anomaly by having more people show up to compete for top

honors. With summer here, I encourage everyone, especially the clubs, to start Elmering new ops by helping them get their 160 meter station running.

This year’s summary tables include a new twist. (s) appears next to the call sign of the op that challenged and retired a “Section” record during this year’s contest. (r) appears if the score represents a new “Region” record. The analysis goes back to and includes 1997. I am excited about this new feature. For the first time, ops in every section can examine the top scores of record for their Section or Region and challenge the previous “bests.” If you “own” a Section or Region record that is older than 1997 that tops these, let me offer my apologies. Notify the contest desk at the ARRL and your achievement will be duly noted in future presentations of this table and on the Web. The Web contains updated information on the individual Sections and Regions. You can look at your 2003 performance and compare it to the top scores of prior years. I encourage holders of older records to examine the history for your Section and claim what is rightfully yours. Just reference the appropriate *QST* date and page in your claim.

## Top Ten

While there were no Top Ten records broken in 2003, there were several spectacular performances, given this year’s somewhat unsettled propagation conditions. N8VW tops the Single Op QRP

## Top Ten

### Single Operator, QRP

N8VW (r)(s) 72,864  
N7IR (r)(s) 52,114  
N2CU (r)(s) 49,225  
W8VK 47,488  
W4TMR 46,726  
AA1ZT (s) 44,820  
W3TS 42,771  
KG9X 39,216  
N9NE 32,500  
W1BYH (s) 30,345

### Single Operator, Low Power

K2BA (r)(s) 176,874  
K1HTV (s) 164,736  
K1PX 160,905  
K7CA 155,817  
N4ZI (s) 149,760  
WB9CIF (s) 130,086  
W04O 127,374  
K4CNW 127,160  
K8FH (s) 126,768  
N9CO (s) 117,840

### Single Operator, High Power

AA1K (s) 410,688  
K9DX (r)(s) 372,960  
VY2ZM 293,962  
N4PN (s) 273,171  
K5NA 235,200  
W8MJ 219,114  
KT3Y 216,216  
WE3C 216,000  
K4OAO 215,328  
K4ZW 211,038

### Multipoperator

W2GD (s) 369,138  
NO2R (s) 351,747  
K8XXX (r)(s) 317,130  
AK9F 288,503  
K3WW (s) 251,572  
KE9I (s) 242,844  
N0NI (r)(s) 238,572  
K1LT 230,860  
W0AIH 210,028  
W0UCE (s) 203,504

(t)=top ten record; (r)=region record; (s)=section record

## Expanded Reports Available

For expanded results, participant soapbox and the complete scores in a user-searchable database, please visit [www.arrrl.org/contests/results](http://www.arrrl.org/contests/results). ARRL Members without Internet access may obtain a printout of the complete line scores by sending a self-addressed, stamped envelope to ARRL Contest Results, 225 Main St, Newington CT 06111. Please be sure to include the contest name and year.



How many ops does it take to run a world class 160 multiop station? At W2GD, it takes three. From the left: K2SG operates the “multiplier” position while W2NO and K2TW pilot the “run” position.

## Scores by Region

(t)=top ten record; (r)=region record; (s)=section record

Northeast Region (New England, Hudson and Atlantic Divisions; Maritime and Quebec Sections)				Southeast Region (Delta, Roanoke and Southeastern Divisions)				Central Region (Central and Great Lakes Divisions; Ontario Section)				Midwest Region (Dakota, Midwest, Rocky Mountain and West Gulf Divisions; Manitoba and Saskatchewan Sections)				West Coast Region (Pacific, Northwestern and Southwestern Divisions; Alberta, British Columbia and NWT Sections)								
N2CU (r)(s)	49,225	447	55	A	W4TMR	46,726	377	61	A	N8VW (r)(s)	72,864	522	69	A	W7FB	28,840	258	56	A	N71R (r)(s)	52,114	359	71	A
AA1ZT (s)	44,820	413	54	A	K4ORD	23,641	250	47	A	WBVK	47,488	429	56	A	WA8ZBT	20,102	218	46	A	N6WG	10,976	174	32	A
W3TS (s)	42,771	399	53	A	N4ROA	22,656	233	48	A	KG9X	39,216	342	57	A	WUJL	14,592	154	48	A	K6EI	10,585	184	29	A
W1BYH (s)	30,345	296	51	A	KW4JS (s)	14,805	162	47	A	N9NE	32,500	328	50	A	K10I	12,600	158	42	A	W6YJ	10,428	117	44	A
KB2EBL (s)	17,184	189	48	A	WA4PGM	12,870	140	45	A	VE3MGY	25,300	281	46	A	W7DRA	11,704	161	38	A	WX7G	10,045	142	35	A
K1HTV (s)	164,736	893	88	B	N4ZI (s)	149,760	959	78	B	WB9CIF (s)	130,086	798	81	B	K2BA (r)(s)	176,874	1076	82	B	KJ7WY (s)	77,610	500	78	B
K1PX	160,905	916	85	B	W0AQ	127,374	818	78	B	K8FH (s)	126,768	825	76	B	K7CA	155,817	869	87	B	NT6K (s)	76,822	541	71	B
WA1Z	99,718	650	73	B	K4CNW	127,160	695	88	B	K9WJU	108,450	716	75	B	N9CO (s)	117,840	735	80	B	N6RK	55,074	394	67	B
N1RL	69,240	577	60	B	W4NZ	101,400	671	75	B	(W9CG,op)				N0PB (s)	117,424	713	82	B	ACTA	37,118	271	67	B	
W3EF	54,932	433	62	B	WJ9B	96,480	669	72	B	K9OT	108,416	702	77	B	K7RE (s)	115,038	752	77	B	WS6X	36,351	290	63	B
										VE3CSK	101,409	648	77	B										
AA1K (s)	410,688	1384	124	C	N4PN (s)	273,171	1159	111	C	K9DX (r)(s)	372,960	1498	112	C	K5NA	235,200	1161	98	C	N6SS (r)(s)	194,670	1016	90	C
VY2ZM	293,962	1036	103	C	KT3Y	216,216	890	104	C	W8MJ	219,114	1118	94	C	N5OT (s)	197,118	1014	94	C	N6RO	135,536	715	86	C
WE3C	216,000	989	100	C	K4OAQ	215,328	1067	96	C	W8QID (s)	208,288	1105	92	C	K8FC	171,864	968	88	C	W0YK (s)	106,018	622	79	C
W2FU	180,500	754	100	C	K4ZW	211,038	911	102	C	K9AY (s)	176,088	930	92	C	N0TT	165,968	1002	82	C	AC6DD (s)	88,640	526	80	C
W1SJ	168,980	974	85	C	WD5R	207,552	1085	92	C	VE3PN	154,616	817	88	C	K0IR (s)	163,590	989	82	C	K7OX	86,424	542	78	C
W2GD (s)	369,138	1213	119	D	W0UCE	203,504	1059	92	D	K8XXX (r)(s)	317,130	1331	110	D	N0NI (r)(s)	238,572	1241	94	D	N7GP (r)(s)	194,490	1007	90	D
NO2R (s)	351,747	1194	121	D	N4DW	110,565	577	91	D	AK9F	288,503	1335	103	D	N5TW	179,602	994	89	D	W6AW (s)	59,563	447	67	D
K3WW (s)	251,572	1010	109	D	K3KO	103,976	629	82	D	KE9I (s)	242,844	1209	98	D	K5PTC	179,080	1009	88	D	W6YX (s)	44,416	344	64	D
W1QA (s)	186,337	870	97	D	AA4V	81,732	467	84	D	K1LT	230,860	1160	97	D	K0LIR (s)	173,430	953	90	D	W9NGA	38,881	289	59	D
VE2OJ (s)	148,185	807	89	D	AD4TJ	42,978	372	58	D	W0AIH	210,028	1144	91	D	W0GG	172,956	982	87	D	K8IA	27,648	211	64	D

category, leaving five record breaking scores from 1997 and 1998 intact. K2BA missed landing the all-time high score in the Single Op Low Power category, leaving W3GH's 2001 effort as the high score on record. AA1K took a commanding lead over K9DX for the #1 spot in Single Op High Power category, but left K1ZM's spectacular performances from VY2ZM in both 2001 and 2002 untarnished. And finally, W2GD took top honors in the Multiop category, leaving KC1XX's 2002 score the current top Multi score on record. It is interesting to note that two High Power Single Ops, AA1K and K9DX, both managed to edge out all the Multiop stations this year.

### Regional Competition

It is safe to conclude that the Northeast and the Central regions have slightly better propagation to population centers and DX multipliers than the rest. The Southeast and Midwest regions are roughly comparable in this regard. The West Coast is clearly handicapped. The Regional Scores table serves to illustrate the effects of regional differences by summarizing each region's five best ops for each category for seven years.

As mentioned earlier, eight Regional records were retired this year: Central and West Coast Regions had three new records, with Midwest changing two more.

Among the QRP contestants, N71R managed to retire his old West Coast record(s) by quite a margin. N8VW retires N9JF's 1997 QRP record in the Midwest Region. The only Low Power Op to land a Regional record was K2BA in the Midwest competition, effectively ending K7CA's

### Affiliated Club Competition

Unlimited Category	Score	Entries
Society of Midwest Contesters	3,179,861	52
Minnesota Wireless Assn	1,563,654	52
<b>Medium Category</b>		
Potomac Valley Radio Club	3,201,523	47
Frankford Radio Club	2,503,867	21
Mad River Radio Club	1,392,480	15
Yankee Clipper Contest Club	1,362,008	32
Tennessee Contest Group	1,208,762	21
Contest Club Ontario	854,644	18
South East Contest Club	831,965	14
Northern California Contest	770,709	27
Central Texas DX and Contest	590,321	9
Grand Mesa Contesters of CO	356,353	8
Kansas City DX Club	353,636	5
Rochester (NY) DX Assn	301,214	6
Hudson Valley Contesters and DXers	281,413	11
Southwest Ohio DX Assn	276,164	3
Central Arizona DX Assn	274,432	3
North Coast Contesters	263,032	6
Florida Contest Group	224,411	12
Carolina DX Assn	161,848	4
North Texas Contest Club	157,594	3
Kentucky Contest Group	150,167	6
Northern Arizona DX Assn	120,244	5
Southern California Contest	94,916	7
Green River Valley ARS	86,424	3
West Park Radiops	41,296	4
Western Washington DX Club	25,888	5
Bergen ARA	24,774	3
Willamette Valley DX Club	21,172	3
Mother Lode DX/Contest Club	16,300	3
<b>Local Category</b>		
Medina 2 Meter Group	205,997	3
Spokane DX Association	160,422	4
CT RI Contest Group	86,235	6

### Regional Scores

Region	Sum of Scores	% of Total
Northeast	20,448,599	25.2%
Southeast	16,960,644	20.9%
Central	19,907,347	24.5%
Midwest	15,777,295	19.4%
West Coast	8,115,539	10.0%
Total	81,209,424	100.0%


three consecutive year rally. K9DX was able to significantly improve on his 2002 SOHP top score in the Midwest Region. The Multioperators were able to land new

records in several regions. K8XXX placed a tombstone on WB9Z's 1997 Multiop record in Central. N0NI improved their now five out of seven year top score in the Midwest. N7GP has a West Coast record score for the second year running.

### Club Competition

Almost half of this year's participants submitted a score crediting their local club. Although the 421 logs submitted by club members dropped slightly from 2002's record breaking 464, the competition for top scores was fierce. Moving to the Unlimited Category for the first time is the Minnesota Wireless Association. A three year long campaign to get people into the 160 Meter Contest appears to be working. The MWA reported 24 logs in 2001, 47 logs in 2002 and 52 logs for 2003, a steady increase. In contrast, SMC reported 77 logs for 2001, 67 logs in 2002 and 52 logs in 2003, a steady decrease. Let's hope SMC can reverse the trend.

### 2004 Contest

The "gloves" are coming off this year! A Topband *death match!* I can't wait. While the lack of speckles on the Sun is wreaking havoc on the higher bands, conditions are moving toward the peak of 160 meter propagation (sunspot minimum). The companion Web article has lots of good information about contest records. In particular, the new "Section" and "Region" history will enable participants to check their performance on the local level for the first time. I'm sure there are many stations eager to place their call high enough on the list to survive several sunspot cycles! See you the first weekend in December. 

## Scores

Scores are listed by DXCC Countries and ARRL/RAC Sections. Within each Country or Section, scores are listed in order by power categories, followed by multiplier. Line scores list call sign, score, QSOs, multipliers, power (A = QRP, B = Low Power, C = High Power, D = Multioperator).

<b>Asia</b>				<b>European Russia</b>				KM1P 2,450 49 25 B				N2ED 143,264 794 88 C			
<b>Japan</b>				RN6BN 3,808 69 28 C				N3KJCJ 2,208 48 24 B				W2OO 31,168 235 64 C			
JH4UYB 4 2 2 A								K5MA 67,640 408 76 C				W1GD 11,638 122 46 C			
JE1SPY 60 8 5 B								K1DFT 36,790 273 65 C				NO2R (+K2NG)			
JE1TSD 4 2 2 B				<b>Ukraine</b>				N1SV (+packet)				351,747 1194 121 D			
JH7XGN 432 20 12 C				UX5NQ 198 12 9 B				16,470 140 54 D				AB2DE (+KC2AVE)			
JH2FXK 140 11 7 C								WO1N (+packet)				34,544 245 68 D			
JA3YBK (JF4FUF, +packet)				<b>Latvia</b>				3,538 62 29 D				N2WM (+packet)			
1,020 31 17 D				YL2LY 986 31 17 C								9,090 98 45 D			
<b>Asiatic Russia</b>				<b>Yugoslavia</b>				<b>Maine</b>				<b>Northern New York</b>			
UA0ANW 40 5 4 C				YU1RA 24 4 4 B				W1CEK 4,830 76 35 A				NS2P 27,196 265 52 B			
				YZ7A (YU7CM, YU7KC, ops)				K1JB 8,470 122 35 B				W2IB (+N4TW, W3TB)			
				2,448 54 24 D				W1AO 48,732 374 62 C				88,200 624 70 D			
<b>Europe</b>				<b>North America</b>				K1PQS 44,712 399 54 C							
<b>Fed. Rep. of Germany</b>				<b>Saint Martin</b>				AC1O 21,165 208 51 C							
DJ3RA 780 27 15 B				FS/W2JJ (+KF2HC)				<b>New Hampshire</b>				<b>Southern New Jersey</b>			
DF8AA 216 13 9 B				11,440 153 40 D				KN1H 9,100 130 35 A				W5KI 28,242 261 54 B			
DL8DWW 60 6 6 B								WA1Z 99,718 650 73 B				W2EQ 5,082 81 33 B			
DF2PY 6,440 92 35 C								K1TR 14,040 181 39 B				N2MM 73,656 466 72 C			
DJ0MDR 3,472 65 28 C								NM1W 6,600 102 33 B				K2PS 36,400 321 56 C			
DJ8FR 810 28 15 C				<b>St. Vincent</b>				AE1D 6,300 94 35 B				W2GD (+K2TW, K2SG, N2OO, N2HM, W2CG, N4HY)			
				J8DX (K8LEE, N0FW, ops)				W1ECT 47,790 392 59 C				369,138 1213 119 D			
				67,716 528 66 D				NE1B 21,573 214 51 C				AB2E (+packet)			
<b>Spain</b>				<b>Costa Rica</b>				<b>Rhode Island</b>				65,142 508 63 D			
EA7RM 24 4 3 B				TI5A (N0KE, N0ZA, ops)				W1VET 8,496 124 36 A				K2OWE 20,069 214 47 D			
				114,900 771 75 D				N1HRA 23,976 219 54 B				<b>Western New York</b>			
<b>Ireland</b>								K2MN 15,435 170 45 B				N2CU 49,225 447 55 A			
EI4CF 390 17 13 B								W1YRC 11,840 148 40 B				W2LC 45,074 333 62 B			
EI6BT 4,148 62 34 C								WA1LAD 8,540 122 35 B				K2OS 37,020 304 60 B			
<b>France</b>								KB1JCT 7,161 116 33 B				WB2ABD 28,080 262 54 B			
F8BPN 1,064 28 19 B								W1EOF 2,392 46 26 B				K2CS 19,344 185 52 B			
F5UKL 128 8 8 B								K1G 42,514 340 58 C				KF2U 8,316 93 44 B			
F6HHR 70 7 5 B				<b>Cayman Islands</b>				WA1QXR 1,880 47 20 C				WB2DVU 6,572 106 31 B			
F5RAB 3,132 63 27 C				ZF2NT 76,860 559 70 C								W2CXM (W09S,op)			
F5IN 2,900 63 25 C				ZF2AH 46,376 389 62 C								1,520 39 20 B			
												W2FU 180,500 754 100 C			
												W2BC 105,991 603 83 C			
												K2FU 96,773 675 71 C			
												WB2HJV 25,584 243 52 C			
												N2WK (+packet)			
												24,140 169 68 D			
												K2NV (+packet)			
												18,954 165 54 D			
<b>England</b>				<b>Oceania</b>				<b>Vermont</b>				<b>3</b>			
G6M (G3UNA,op)				<b>East Kiribati</b>				K1KD 28,294 303 47 B				<b>Delaware</b>			
4 2 2 B				T32WW 44,720 349 65 C				W1SJ 168,980 974 85 C				NY3C 6,572 108 31 B			
G3LZQ 3,360 56 30 C												AA1K 410,688 1384 124 C			
M8C (G4DBL,op)				<b>New Zealand</b>				<b>Western Massachusetts</b>				<b>Eastern Pennsylvania</b>			
660 23 15 C				ZL6QH (ZL1AZE,op)				W1BYH 30,345 296 51 A				W3TS 42,771 399 53 A			
				390 15 13 C				N1RL 69,240 577 60 B				K3SWZ 33,768 303 56 B			
				ZL4AA (ZL4NR, ZL4OL, ZL4KX, ZL4KS, ZL4VM, ops)				W1TO 50,917 418 59 C				WA3IIA 15,912 207 39 B			
				330 15 11 D				K5ZD 20,845 170 55 C				AA3I 11,726 140 41 B			
<b>Hungary</b>								W1CSM 16,524 147 51 C				AB3AI 8,512 113 38 B			
HA1AV 60 6 6 B								W1QA (+NC1I)				K3EGE 7,392 115 33 B			
								186,337 870 97 D				N3AO 4,608 73 32 B			
<b>Switzerland</b>				<b>South America</b>				<b>2</b>				KB3CFV 1,600 40 20 B			
HB9CIP 1,188 36 18 C				<b>Aruba</b>				<b>Eastern New York</b>				W3KM 432 18 12 B			
HB9AAD 40 5 4 C				P40TA (K6TA,op)				W2RBA 6,634 112 31 A				WE3C 216,000 989 100 C			
				29,904 272 56 C				W2RBA 6,634 112 31 A				W3TDF 108,432 706 72 C			
								W2MU 33,466 299 58 B				NY3A 106,272 705 72 C			
								K2UF 13,489 164 41 B				W3BGN 103,411 614 77 C			
								WE2F 12,753 162 39 B				K3SV 90,885 601 73 C			
								N2LL 12,000 151 40 B				W3RJ 85,074 625 66 C			
								K2YR 7,770 106 37 B				N3NR 68,628 440 76 C			
								W2ENY 6,912 109 32 B				K3ATO 57,684 497 57 C			
								W2X 6,138 99 31 B				K3OQF 44,088 340 66 C			
								WAZMCR 5,208 92 31 B				K3QIA 22,816 248 46 C			
								KE2SD 5,104 91 29 B				W3PT 14,900 141 50 C			
								WB2PUH 928 29 16 B				WA3AAN 12,298 144 43 C			
								W1EQ 864 28 16 B				N3KN 5,952 98 31 C			
								W2XL 128,160 664 90 C				AA3TL 5,504 92 32 C			
								N1EU 75,208 434 79 C				K3WW (+packet)			
								K2SX 54,528 420 64 C				251,572 1010 109 D			
								K2KQ 34,920 200 72 C				NN3Q (+packet)			
								NA2M 25,424 219 56 C				118,244 652 82 D			
								N2BZP 5,504 99 32 C				K3NM (+packet)			
								W2RE 4,544 71 32 C				46,110 227 87 D			
								K2XA 2,760 37 30 C				K3NZ 38,280 306 60 D			
								NU1F (+packet)				W3FV (+packet)			
								6,864 108 33 D				24,598 251 49 D			
								<b>NYC-Long Island</b>				<b>Maryland-DC</b>			
								N2GA 21,758 254 43 B				WB8YYY 13,524 167 42 A			
								K2TV 7,378 121 31 B				K1HTV 164,736 893 88 B			
								WB2TPS 6,370 93 35 B							
								KA2D 5,814 72 38 B							
								WB2ART 528 22 12 B							
								<b>Northern New Jersey</b>							
								KB2EBL 17,184 189 48 A							
								K2JT 5,974 103 29 A							
								W2JEK 5,600 100 28 A							
								KR2Q 38,006 304 62 B							
								K2YLH 13,200 172 40 B							
								WA2TWS 3,906 63 31 B							
<b>Sweden</b>				<b>Eastern Massachusetts</b>											
SM7E (SM7BHM,op)				W1TW 11,868 144 43 A											
2 1 1 C				K1NTR 29,839 281 53 B											
				WG1Z 22,137 236 47 B											
				N1DM 21,804 237 46 B											
				W1VIV 21,546 260 42 B											
				W1TE 15,760 190 40 B											
				K1EP 8,544 133 32 B											
				K1IR 5,992 108 28 B											
				K1XM 5,568 89 32 B											
				KV1J 3,596 59 31 B											
<b>Poland</b>															
SP4ZO 60 6 5 B															
<b>Bosnia-Herzegovina</b>															
T91FRS 50 5 5 B															
T99W 2,208 50 23 C															

W3EF	54,932	433	62	B	<b>Northern Florida</b>	N4TB	53,394	395	66	C	KU6T	2,850	57	25	B
N3UM	42,893	354	59	B	K4UTE	45,942	279	78	B	ND6P	2,662	59	22	B	
K2PLF	28,861	298	49	B	KN4Y	18,277	191	49	B	N5BF	552	26	12	B	
W9GE	28,242	265	54	B	N4EK	14,536	156	46	B	AD6PC	140	11	7	B	
K3DSP	17,020	186	46	B	K4JAF	9,552	96	48	B	K6ZCL	112	9	7	B	
K4MUT	14,674	157	46	B	W1XO	6,916	92	38	B	K6SE	57,477	379	69	C	
W3DQ	13,020	155	42	B	AD4E	6,031	77	37	B	WA6BOB	5,760	93	32	C	
W2GG	9,360	120	39	B	W8IM	1,826	40	22	B	W6AQ	2,688	65	21	C	
WA3KYY	9,144	128	36	B	K4DD	290	14	10	B	W6YRA (WA6AYI, K6LDO, K6OIX, KU6T)	16,740	192	45	D	
NS3T	1,280	41	16	B	N4PN	273,171	1159	111	C	<b>Orange</b>					
NH7C	160	10	8	B	NU4Y	63,261	433	71	C	W6YJ	10,428	117	44	A	
AC3P	96	13	8	B	WS4Y	58,520	367	77	C	K6UIZ	806	31	13	A	
N3ND	95,534	631	74	C	KK4SI	33,465	235	69	C	K6LG	9,042	137	33	B	
K3ZO	76,674	433	78	C	W3TMZ	9,982	97	46	C	AD6WL	6,006	75	39	B	
K3TW	50,655	456	55	C	K1UM	3,638	54	34	C	W6RTW	4,710	79	30	B	
WX3B	42,904	338	62	C	<b>South Carolina</b>					AD6FR	640	33	10	B	
N3AM	30,264	287	52	C	K3QO	7,140	111	34	A	W6ZL	440	20	11	B	
W3EKT	24,304	188	62	C	K4CNW	127,160	695	88	B	KN6N	98	9	7	B	
K3DI (+packet)	92,345	616	73	D	W4BUW	19,432	174	56	B	W6HG	35,728	302	58	C	
W3HVQ (+packet)	44,943	303	71	D	K4DLJ	173,052	807	99	C	KB7V	16,764	191	44	C	
					N2FY	36,917	262	67	C	<b>Pacific</b>					
					AA4V (+packet)	81,732	467	84	D	KH6ZM	31,270	214	59	C	
<b>Western Pennsylvania</b>					<b>Southern Florida</b>					N6KB	23,069	194	59	C	
WW3S	43,094	365	58	B	K4MM	25,308	212	57	B	<b>Santa Barbara</b>					
AD8J	21,844	256	43	B	K4PB	5,355	76	35	B	W6GL	2	1	1	A	
N3LL	21,244	227	47	B	AJ2U (@K4FAU)	1,463	31	19	B	W6VM	1,330	35	19	B	
W3GH	164,835	773	99	C	K9VV	2	1	1	B	AC6DD	88,640	526	80	C	
W3SO (W3YOZ,op)	106,190	605	82	C	<b>Tennessee</b>					WA5VGI	48,251	373	61	C	
<b>4</b>					KW4JS	14,805	162	47	A	W7CB	29,380	229	65	C	
<b>Alabama</b>					N4ZI	149,760	959	78	B	<b>Santa Clara Valley</b>					
KA9EKJ	67,536	527	67	B	WO4O	127,374	818	78	B	K6EI	10,585	184	29	A	
K4IQJ	63,825	453	69	B	W4NZ	101,400	671	75	B	N6NF	32,096	261	59	B	
K4ZGB	49,962	393	66	B	N4TN	50,622	379	66	B	K6MO	10,530	132	39	B	
K4VU	46,400	360	64	B	W4DAN	50,176	447	56	B	W7SW	10,137	162	31	B	
K4WI	26,924	247	53	B	N4MQ	47,152	423	56	B	K6XM	6,468	99	33	B	
K4HAL	23,874	259	46	B	W9WI	42,303	355	59	B	N6EM	4,290	98	22	B	
N4AX	21,889	202	53	B	K0EJ	40,176	368	54	B	W6PRI	2,070	69	15	B	
KA1DWX	56,028	320	84	C	K4AMC	40,080	334	60	B	K6ENT	1,980	46	22	B	
W4NTI	34,045	304	55	C	AC4JI	12,240	140	45	B	K6VVA	1,230	42	15	B	
<b>Georgia</b>					K4BEV	10,080	120	42	B	W0YK	106,018	622	79	C	
K4MJ	7,992	105	37	A	KE4OAR	8,487	102	41	B	K6XX	41,974	324	62	C	
WB6BWZ	3,500	73	25	A	WB3JKQ	7,828	109	38	B	K6RB	14,555	178	41	C	
KU8E	67,158	422	78	B	NQ4U	7,380	91	41	B	K16CK	10,064	142	37	C	
K4SB	39,488	310	64	B	N7DLS	7,252	99	37	B	W6YX (N7MH+packet)	44,416	344	64	D	
WY4Y (N4EIL,op)	38,430	314	61	B	W4BCG	6,930	102	35	B	<b>San Diego</b>					
W4ATL	17,992	169	52	B	WN4M	6,264	85	36	B	WN6K	12,806	168	38	B	
K4GA	14,792	175	43	B	K4BP	5,994	80	37	B	AA6EE	10,804	143	37	B	
N4HH	1,188	27	22	B	WA4GLH	3,536	54	34	B	K6NY	18,550	173	53	C	
K4EA	148,802	753	94	C	NA4K	142,641	865	81	C	K6NA	11,650	109	50	C	
K4BAI	90,860	637	70	C	N4IR	124,100	838	73	C	N6KI (+packet)	24,780	208	59	D	
WA4TT	83,174	429	91	C	N4DD	118,426	759	77	C	<b>San Francisco</b>					
N4NX	44,310	312	70	C	K4WX	31,866	341	47	C	AA6DX	7,704	108	36	B	
N4GG	41,182	341	59	C	W4OGG	2,900	50	29	C	KA6UMQ	1,710	45	19	B	
W4AN	30,952	292	53	C	N4DW (+packet)	110,565	577	91	D	N6CT	78,463	499	77	C	
<b>Kentucky</b>					N4VV (+packet)	29,677	242	59	D	K6CTA	1,560	39	20	C	
KM4CH	14,616	187	42	A	<b>Virginia</b>					<b>San Joaquin Valley</b>					
K4WW	60,450	466	65	B	K4ORD	23,641	250	47	A	K6MI	3,528	64	28	A	
K4IE	12,900	146	43	B	N4ROA	22,656	233	48	A	WS6X	36,351	290	63	B	
KM4FO	12,084	166	38	B	WA4PGM	12,870	140	45	A	N6IV	5,365	73	37	B	
NZ4L	6,708	86	39	B	AI2P	2,016	43	24	A	KO6BB	2,640	65	22	B	
N4XM	14,798	142	49	C	W4YE	56,232	421	66	B	K16PG	2,392	46	26	B	
<b>North Carolina</b>					K4EU	48,924	452	54	B	K6CSL	1,380	46	15	B	
W4TMR	46,726	377	61	A	K4RDU	24,206	249	49	B	KF6CNV	750	25	15	B	
WJ9B	96,480	669	72	B	W4AU	10,608	140	39	B	WA6YEE	43,282	317	67	C	
WA4FFW	87,658	523	82	B	KI3O	6,790	100	35	B	K6YK	10,668	128	42	C	
W4MY	44,464	394	56	B	KT3Y	216,216	890	104	C	<b>San Sacramento Valley</b>					
K4DJ	38,912	296	64	B	K4OAG	215,328	1067	96	C	NT6K	76,822	541	71	B	
WB4MSG	26,411	268	49	B	K4ZW	211,038	911	102	C	N6RK	55,074	394	67	B	
N4YDU	19,248	198	48	B	W3BP	174,924	959	86	C	N6CWM	14,214	158	46	B	
AA4NO	8,296	123	34	B	WF3J	65,906	523	62	C	W6OFM (WA6HZT,op)	8,192	135	32	B	
WA4WPD	4,110	68	30	B	N3JB	58,233	488	59	C	K6KYJ	4,988	87	29	B	
N4HXI	1,560	43	20	B	N6ZO	49,436	340	68	C	W6RFF	4,368	79	28	B	
N4NTO	1,122	34	17	B	N4MM	41,688	270	72	C	K6DVG	2,736	73	19	B	
N4XD	169,632	846	96	C	W2YE	22,949	207	53	C	W6IXP	46,144	366	64	C	
NY4A	93,450	595	75	C	N4DJ	19,893	168	57	C	W6EU	23,922	219	54	C	
K4SV	72,927	476	73	C	W4HJ	10,920	129	42	C	WT6G	16,836	184	46	C	
K4MA	34,935	336	51	C	AD4TJ (+packet)	42,978	372	58	D	K6LRN	15,400	173	44	C	
NX9T	27,730	232	59	C	<b>Virgin Islands</b>					KI6T	4,403	59	37	C	
N4UH	25,300	222	55	C	KV4FZ	76,718	408	89	C	W6AW (+WB6RVR, WB6RUU, K6LQ, K6PW, NA6DF)	59,563	447	67	D	
NT4D	10,793	124	43	C	<b>West Central Florida</b>										
N4TL	8,692	104	41	C	WK2G	27,795	276	51	B						
W0UCE (+N4CW, NA4G)	203,504	1059	92	D	K4GKD	26,768	234	56	B						
K3KO (+packet)	103,976	629	82	D	WD4AHZ	11,152	134	41	B						
W3GQ (+packet)	15,904	136	56	D											

KI6IV (+packet)	11,492	174	34	D	<b>8</b>	W9SE	14,388	160	44	B	K7VT (K0UK,op)								
W6RKC (+packet)	9,540	106	45	D	<b>Michigan</b>	N9MSG	12,986	152	43	B	W0GG (+K7TD, K9BWI)	532	19	14	C				
<b>7</b>					N8MR	50,325	408	61	B	W9JE	11,808	145	41	B	K0SX (+KJ0G)	172,956	982	87	D
<b>Arizona</b>					W8GF	40,950	316	63	B	W9YU	9,160	117	40	B					
N7IR	52,114	359	71	A	K8SIA	20,592	238	44	B	W9CEO	8,056	106	38	B					
KJ7WY	77,610	500	78	B	K8VF	19,136	208	46	B	K9UUMB	5,440	82	34	B	<b>Iowa</b>				
AC7A	37,118	271	67	B	WB8RFB	15,416	166	47	B	W9LYA	4,740	82	30	B	W0ETC	2,625	53	25	A
W7KTY	1,932	46	21	B	K8GVK	12,012	136	44	B	W09LF	1,204	46	14	B	KB0SK	52,687	457	59	B
NN7D	1,656	38	23	B	N8UZE	6,528	100	34	B	AG9A	42	7	3	B	WT0D	49,518	397	63	B
N6SS	194,670	1016	90	C	N8XD	5,508	93	34	B	K9DX	372,960	1498	112	C	N2AWE	20,919	190	57	B
W7YS	31,152	230	66	C	N8VEN	5,084	86	31	B	A19L	53,325	325	79	C	AD4OS	7,360	98	40	B
K0DR	17,820	158	55	C	W8QOI	3,016	58	26	B	KS9W	51,262	354	71	C	K0VSV	6,270	82	38	B
NF7E	3,596	65	29	C	W8ROS	2,380	41	28	B	WX9J	37,872	254	72	C	NY00	154	11	7	B
N7GP (N5IA, W7MCO, NI5L, NA5S, N2IC, ops)					W8MJ	219,114	1118	94	C	WO9S	27,183	267	51	C	K0IO	65,219	422	77	C
W9NGA (+K3RN)	194,490	1007	90	D	N8EA	145,782	764	91	C	NA9US	17,689	180	49	C	K0SRL	13,024	142	44	C
K8IA (+packet)	38,881	289	59	D	KT8X	75,075	574	65	C	K9N	11,868	121	46	C	N0NI (+NS0B, N0AC)	238,572	1241	94	D
	27,648	211	64	D	K8SIX	72,285	450	79	C	AK9F (+WB9Z, K9NR, K9FO, K9CS)	288,503	1335	103	D	KE0FT (+K9IE, KF9TL)	26,624	261	52	D
					K8IR	28,296	259	54	C	N2BJ (+packet)	58,370	450	65	D					
<b>Eastern Washington</b>					K8CC	19,453	188	49	C	N9TF (+packet)	10,584	129	42	D					
K7QBO	27,900	230	60	B	K8XXX (N8CC, K8KS, K8DD, NU8Z, ND5S, ops)	317,130	1331	110	D										
W7WKR	21,571	208	53	B	N8LJ (+packet)	26,176	198	64	D	Indiana									
K7AWB	4,872	88	29	B	K8DD (+packet)	11,528	129	44	D	AD9T	7,056	100	36	A	<b>Kansas</b>				
K7OX	86,424	542	78	C						KB9ZUV	1,440	42	18	B	W0BH	82,289	593	71	B
WA7LT	61,686	454	69	C	<b>Ohio</b>					WB9CIF	130,086	798	81	A	AA0MZ	55,407	403	69	B
W7LGG	6,897	100	33	C	N8VW	72,864	522	69	A	K9WJU (W9CG,op)	108,450	716	75	B	K0WA	25,488	239	54	B
<b>Idaho</b>					W8VK	47,488	429	56	A	W9RE	38,192	298	62	B	K0BJ	25,193	201	61	B
WX7G	10,045	142	35	A	N8XA	12,978	153	42	A	WT9U	30,184	317	49	B	KF0XV	18,564	179	51	B
K7TQ	7,440	125	30	A	N8IE	6,596	98	34	A	KJ9C	24,539	228	53	B	K0RY	7,650	117	34	B
KG7H	57,168	400	72	C	K8FH	126,768	825	76	B	K9WX	22,568	218	52	B	W0EB	6,984	99	36	B
K0TO	40,440	343	60	C	K8BL	96,064	606	76	B	K9WF	14,364	181	42	B	N0UU	1,596	39	21	B
<b>Montana</b>					WB8RTJ	52,920	494	54	B	K9MI	9,940	145	35	B	KU0KU	98	9	7	B
KK7UV	35,813	301	59	B	K8NVR	40,014	343	57	B	W9WT	2,162	47	23	B	W0NO (AB0S,op)	74,102	451	79	C
K7BG	18,512	175	52	B	W8DD	39,215	355	55	B	KU9RK	1,332	37	18	B	K0PY	65,240	467	70	C
KE7NO	17,460	202	45	B	NS0B	24,909	216	57	B	W9IU	148,008	879	84	C	W0UY	64,158	430	74	C
KB7Q	7,350	105	35	B	W8VE	21,300	215	50	B	K9WWT	83,358	638	66	C	W0RT	29,070	249	57	C
KS7T	20,808	206	51	C	K8AB	16,020	185	45	B	K9IG	70,776	485	72	C	KG0UA	28,160	253	55	C
K7ABV	11,308	124	44	C	W8IDM	15,834	203	39	B	KE9I (+AJ9C)	242,844	1209	98	D	<b>Minnesota</b>				
NW7O (+WA7MT)	5,168	76	34	D	K8KSN	14,749	149	49	B	N9RV (+packet)	141,680	723	92	D	N0UR	9,114	149	31	A
<b>Nevada</b>					WC8VOA	10,120	132	40	B	K9GX (+N4GN)	35,319	279	61	D	WB0TRA	240	15	8	A
NU7T	2,440	61	20	A	W8PN	9,000	125	36	B	<b>Wisconsin</b>					N0FP	102,168	711	72	B
AE7I	1,008	37	14	A	K8KTY	7,062	107	33	B	N9NE	32,500	328	50	A	N0IM	91,512	634	72	B
N7ON	15,281	206	37	B	W1PDI	1,892	43	22	B	K90T	108,416	702	77	B	KE0UI	52,948	439	61	B
WA7CWM30,408					AF8C	442	18	13	B	N90U	55,283	468	59	B	AC0W	50,570	390	65	B
W7RN (K5RC,op)	24,804	233	53	C	W8QID	208,288	1105	92	C	KA9RF	14,364	181	42	B	KS0T (@KR0B,op)	42,579	378	57	B
W6SA (+packet)	6,965	99	35	D	W8CAR	62,880	520	60	C	K90J	108,416	702	77	B	N0UR	9,114	149	31	A
<b>Oregon</b>					N8XP	26,052	274	52	C	WA1UJU	55,283	468	59	B	WB0SEI	31,584	285	56	B
N7OU	10,150	147	35	B	WA8TNO	25,550	259	50	C	K0PJ	43,365	374	59	B	KI0F	29,203	280	53	B
W7YAQ	8,400	105	40	B	ND8DX	20,292	169	57	C	W9LO	38,304	338	57	B	W0UC	25,864	245	53	B
AA7IH	2,904	67	22	B	N9RC	20,087	190	53	C	W9LU	14,306	162	46	B	WA0MHJ	23,544	214	54	B
KI7Y	2,622	69	19	B	K8MR	13,248	146	46	C	K9UW	14,306	162	46	B	K0PC	23,232	265	44	B
K7RAT (N6TR,op)	18,840	154	60	C	W8GG	10,535	123	43	C	W19W	14,268	175	41	B	W0RK	21,412	202	53	B
K0JJ	15,555	154	51	C	K1LT (+NZ8R)	230,860	1160	97	D	W9HR	8,624	98	44	B	K0AD	18,988	204	47	B
<b>Utah</b>					AD8P (+packet)	194,486	1000	94	D	N19C	5,920	80	37	B	K0QC	18,837	148	63	B
W7FB	28,840	258	56	A	N8TR (+packet)	28,795	208	65	D	KA9RPR	4,092	74	31	B	W0ZQ	15,480	182	43	B
K7CA	155,817	869	87	B	N8PW (+packet)	17,850	175	50	D	W9ERW	4,050	75	27	B	K0SQ	12,084	160	38	B
K7OA	25,974	245	54	B	W8EH (+packet)	17,114	199	43	D	KB9S	3,696	78	24	B	KM0O	11,704	155	38	B
W7HS	20,650	172	59	B	AC8E (+packet)	16,665	145	55	D	K9OS	1,598	48	17	B	W0GM	11,324	150	38	B
NS7K	7,412	112	34	C	<b>West Virginia</b>					N9TTX	888	37	12	B	WA2MNO	11,154	144	39	B
<b>Western Washington</b>					K8OWL	10,296	143	36	A	AF9T	24	6	2	B	W0YQ (K8GU,op)	10,080	144	36	B
KX7L	160	10	8	A	K2UOP	151,126	899	82	C	K9AY	176,088	930	92	C	NA0N	7,070	101	35	B
N7LOX	17,028	192	44	B	N8I	129,724	772	82	C	WT9Q	112,425	748	75	C	W0AMT	5,890	99	31	B
WA7VNI	7,020	133	27	B	K8OQL	66,898	532	62	C	WA9TZE	94,830	527	87	C	KC0LBT	5,220	93	30	B
KB7N	2,982	72	21	B	W8ZA	21,369	206	51	C	WE9V	84,206	587	71	C	K0MPH	5,152	94	28	B
N0AX	1,825	35	25	B	N4ZR	11,026	149	37	C	WA9IRV	80,278	478	82	C	N0EO (AA0AW,op)	5,040	85	30	B
W7QN	1,456	54	14	B	<b>9</b>				K9BZ	57,211	363	77	C	K0CAT (K9WIE,op)	2,376	55	22	B	
W7GTO	224	17	7	B	<b>Illinois</b>				N9FH	40,774	348	58	C	KA0DAQ	1,634	45	19	B	
K7QQ	39,715	299	65	C	KG9X	39,216	342	57	A	N9CK	28,938	268	53	C	N0OA	1,292	39	19	B
W7NNN	25,286	277	47	C	K9JU	2,600	54	25	A	W0AIIH (+N0AT, K0TG)	210,028	1144	91	D	N0KK	1,200	40	15	B
K7UIR	20,385	233	45	C	K9COE	1,280	40	16	A	N9AW (+NK9G, W9NJY, W9XU)	116,000	729	80	D	K0TK	700	25	14	B
W9PL	20,216	182	56	C	WB9MII	40	5	4	A	NE9U (+packet)	25,272	236	54	D	K0OB	660	35	10	B
KF7PG	17,434	185	46	C	K9MMS	86,663	543	79	B	<b>0</b>					N0VO	418	19	11	B
<b>Wyoming</b>					KF9D	73,968	550	67	B	<b>Colorado</b>					K0VG	378	22	9	B
WC7S	1,008	30	18	A	K9BG	44,928	342	64	B	WU0L	14,592	154	48	A	KB0NES	306	19	9	B
K07X	6,882	94	37	B	K9YC	31,467	314	51	B	KI0I	12,600	158	42	A	K0IR	163,590	989	82	C
W7SE	124,412	822	76	C	KN9N	30,492	237	63	B	N0TK	306	17	9	A	KT0R	84,150	559	75	C
					W3HDH	29,309	275	53	B	N9CO	117,840	735	80	B	W0HHW	81,760	559	73	C
					K9OZ	27,936	293	48	B	W0ETT	21,4								

N0HJZ (+logger)					WT0A	8,514	106	43	B	VE3FAL	342	19	9	A	<b>Manitoba</b>				
16,168	190	43	D							VE3CSK	101,409	648	77	B	VC4X	2,184	53	21	B
<b>Missouri</b>					<b>South Dakota</b>					VE3OSZ	73,623	524	69	B	VE4XT	252	14	9	B
N0PB	117,424	713	82	B	K7RE	115,038	752	77	B	VE3KP	63,800	584	55	B					
K0JPL	99,777	625	79	B	KD0S	5,976	84	36	C	VA3DX	41,139	321	63	B	<b>Saskatchewan</b>				
W0VD	44,488	329	67	B	K0HW	3,456	64	27	C	VE3SPW	31,824	312	51	B	VE5UF	8,520	109	40	B
W0YZZ	14,080	176	40	B						VE3BW	15,502	162	46	B	VE5ZX	8,320	105	40	B
WB0QLU	7,416	103	36	B	<b>Canada</b>					VE3RCN	13,202	162	41	B	VE5SF	1,064	28	19	B
N0OCT	6,204	94	33	B	<b>Maritime-Newfoundland</b>					VE3GLO	13,200	154	44	B					
N0TT	165,968	1002	82	C	VY2ZM	293,962	1036	103	C	VE3AGC	13,062	161	42	B	<b>Alberta</b>				
AE9B	102,505	609	83	C						VE3CR	11,868	139	43	B	VE6EX	10,296	146	36	B
WA0IYY	2,448	51	24	C	<b>Newfoundland-Labrador</b>					VE3RZ	10,998	141	39	B	VE6TN	2,928	61	24	B
K0LIR (WA0IYY, N0IS, W0SLW, KI9A, W0RL, WA0CNS, AB0TO, ops)	173,430	953	90	D	VO1TA	20,776	167	56	C	VE3UZ	7,812	109	36	B	VA6DXD	6,336	97	33	C
					VO1AU	7,503	82	41	C	VE3XD	7,004	111	34	B	VE6SF	2,448	51	24	C
					VO1HP	5,846	75	37	C	VA3XRZ	6,996	107	33	B	VE6AO (VE6TC, VE6KC, VE6RCI, N0NR, ops)	18,054	173	51	D
										VE3XAT	6,144	98	32	B					
<b>North Dakota</b>					<b>Quebec</b>					VE3WZ	5,016	77	33	B	<b>British Columbia</b>				
AG0T	616	24	14	A	VE2AWR	1,520	40	19	B	VA3IX	736	23	16	B	VE7CA	5,346	100	27	B
N7IV	16,176	173	48	B	VE2OWL	768	25	16	B	VE3PN	154,616	817	88	C	VA7MM	1,700	50	17	B
N0UD (WB0OAJ, op)	7,000	100	35	B	VE2OJ (VE3OP, VE3ZY, VE3NJ, VE3IAY, ops)	148,185	807	89	D	VE3KZ	119,556	729	81	C	VE7NS	870	31	15	B
K0VX	520	20	13	B						VE3EJ	80,700	513	75	C	VA7DX	27,092	258	52	C
					<b>Ontario</b>					VE3QAA	76,400	451	80	C	VE7JKZ	14,292	197	36	C
<b>Nebraska</b>					VE3MGY	25,300	281	46	A	VE3NE (CY0MM, op)	31,747	296	53	C	VE7WU (+VE7SQ)	24,100	251	50	D
W7DRA	11,704	161	38	A	VE3DZ	7,722	117	33	A	VE3RER	6,696	96	36	C					