



ARRL RTTY Roundup

2012 Results

By Jay Townsend, WS7I

“Twenty years from now you will be more disappointed by the things you didn't do than by the ones you did do.” - Mark Twain

The Sun has no equal in giving radiosport a jump-start and 10 meters is back – kicking up RTTY Roundup participation with a solid ten percent increase in submitted logs this year. In fact, the 2012 RTTY Roundup set a record with 1803 logs submitted as this fast-growing contest mode continues along its upward path.

The submitted logs also show an increase of over 150,000 QSOs during the Roundup. Chris, N6WM said it best, “Always fun when the rate meter pushes 300.” I’m not sure about Chris’ rate meter but I did find a station with a solid hourly total of 198 QSOs and this station also worked 6 QSOs per minute four times during the contest.

Many started the contest on 10 meters. This may have been a tactical error. Actually, the 15 and 20 meter bands were better but the lure to operate on 10 is always so strong. The action on 10 was nearly all stateside contacts but that was a lot of fun.

Propagation conditions for most of the world were not very impressive. On Saturday in the Pacific Northwest it was very difficult to get over the pole into Europe on either 15 or 20 meters. Sunday dawned and rescued things a bit as there was a decent 20 meter opening. Reports of 40 being noisy were common while East Coast stations seemed to have very good 80 meter runs. The old A index problem kept European contacts to a minimum in the north. It was very difficult getting European multipliers and runs this year and they also reported bad conditions.

Stations reported the typical activity drop on 80 meters which always occurs as we get more 10 meter openings. The figure shows the distribution of QSOs by band from the submitted logs. Once again we had a large rate bump in QSOs well after the first hours of the contest. This year it seemed to have occurred around 0200-0400Z depending on the station’s location. Perhaps things calmed down enough so that the multiple-radio guys can

make alternating CQs on two bands. This is much harder to do at the contest start because there is so much activity making it hard to hold two frequencies.

QSO Distribution by Band

80	69,496
40	145,265
20	181,306
15	169,050
10	67,496

In the writeup, I like to highlight a station operator who is either a first-time RTTY operator or someone who has made a special achievement. This year it’s Dave, WV9E from Wisconsin. Dave is an active 6 meter operator and has a pile of radios. We’ll probably see Dave more often on RTTY now that he has tasted the fun of RTTY radiosporting.

Dave relates, “First attempt at a RTTY test. It was a blast. Ended up with about 75 Qs and a few DX entities. South Africa on 15 was the highlight of the test for me. I used my trusty (cheap in case my homebrew interface blows something) FT-897 and a dipole tuned for various bands. Be interesting to see where scores end up as there weren't a trillion stations in there...”

Radiosporting always brings out some good stories such as this one from one of RTTY’s famous competitors, Don, AA5AU.

“I was sitting there confident and ready to go with about 30 minutes until the start, listening to the three radios on 10, 15 and 20 meters when all of a sudden I get S-7 noise across all three radios. I said to myself, ‘What the heck is this?’ I turn the SteppIR to find that it's coming out of the north – the worst possible direction to have interference. I go out into the front yard to listen for any motors running but hear none. As I slowly walk out into the street, I hear a "buzz" coming from next door. I look to find my neighbor giving her son a haircut just inside the garage door using electric shears. Well, I figured she wouldn't be cutting hair for more than 30 minutes and went back inside. She cut the kid's hair for 15 minutes!

“When the noise stopped I went back outside to spy inside their garage to make sure that's where the noise was coming from. She had finished and the shears were

silent. I went back inside with 15 minutes to go and the noise starts up again! I run back outside and she's cutting her other son's hair. She finished with a minute to go before the contest. Needless to say I was a bit shaken at the start and hoping she didn't have any more kids!"

American and Canadian Highlights

Ten meters was the rage on the North American side of the contest. People enjoyed the big rise in the solar flux that occurred last fall and looked forward to it for the Roundup in January. The DX wasn't there unless you were on the East Coast but the activity on 10 meters was certainly very good.

As former coach John Wooden stated, "Hard work beats talent when talent doesn't work hard." This might be true in basketball but our radiosporting RTTY talent takes their contesting very seriously and always works hard to get the great scores. That's why we see so many familiar stations in the box scores.

Single Operator, Low Power (SOLP)



Single Operator, Low Power winner Don, AA5AU (Photo by Shay Hill)

SOLP continues to dominate, making up roughly 54 percent of this year's RTTY Roundup logs. This is quite amazing as the contest originally had only this one category and the first RTTY contest with a low-power category.

What has changed from the early years of the contest is that Don, AA5AU who had a few more than 500 QSOs in 1989 has continued to dominate but cranked up the Q total to 2,169 this year to win the NM7M Memorial Plaque.

Once again we had a nice geographic distribution in the Top Ten finishers with stations scoring well from the eastern shores to the western shores and from Montana to Arizona. Even the Midwest's black hole was represented by two Minnesota stations.

When the top four or five scores in SOLP are reviewed it's all about pure rate during the first six to eight hours determining the eventual winner. As was once said, RTTY Roundup is a rate contest with the nasty trick of an unknown number of multipliers.

AA5AU worked 1,330 unique calls during Roundup. His best 60-minute rate was from 0145Z to 0246Z with 121/hour. His best 30-minute rate was 146/hour from 1817Z to 1846Z. Don runs SO3R (single-op, three radios) and started his contest on 10, 15, and 20 meters. He actually worked 5 stations in a single minute once and 4 stations per minute 61 times during the contest. Don made 1,243 band changes during the contest and over 32 percent were probably second or third-radio contacts, making him a rate master.

QSO Rate Summary for AA5AU

Hour	160	80	40	20	15	10	Rate	Total	Pct
1800	0	0	0	34	50	33	117	117	5.3
1900	0	0	0	39	29	18	86	203	9.2
2000	0	0	0	58	38	7	103	306	13.9
2100	0	0	0	73	33	0	106	412	18.7
2200	0	0	0	70	34	0	104	516	23.5
2300	0	0	59	43	0	0	102	618	28.1
0000	0	3	59	38	0	0	100	718	32.6
0100	0	32	67	2	0	0	101	819	37.2
0200	0	44	73	0	0	0	117	936	42.5

Mark, N2QT operated SO2R and finished in second place. Pete, K2PS gave out DC on 10 meters where he always likes to operate. I'm glad 10 was open so we could work him.

Top Ten – W/VE Single Operator, Low Power

AA5AU	274,944
N2QT	204,078
KØTI	182,684
NØAT	153,700
KC4HW	152,915
KB7Q	142,596
WØBR	141,480
NTØF	135,035
W3LL	129,413
W7ZR	128,968

Single Operator, High Power (SOHP)

Unlike the low-power group, winners in SOHP were determined by the multipliers they snagged. The SOHP station with the most QSOs didn't win but rather the station with the highest number of mults. Balancing rate and multipliers is always a tough call – strategy, propagation, and station location create a moving target in the RTTY Roundup.

Winning the Rush Drake W7RM Memorial Plaque was Rick, KI1G. As the table shows, Mike, K4GMH was the overall QSO leader in SOHP but he was off the pace on mults. KI1G was 4th in QSOs but nailed the highest number of mults with a contest-leading 141. Both

Nevada's W7RN operated by Jeff, WK6I and Lee, VE7CC on the Northwest Coast just couldn't get enough multipliers with poor over-the-pole conditions. VE7CC actually did a better job than W7RN working multipliers. This is interesting as Vancouver, BC is 1,350 kilometers north of Nevada but the rate for W7RN made the difference.

Top Ten - WVE Single Operator, High Power

K11G	317,814
AA3B	310,863
K4GMH	303,530
W7RN (WK6I, op)	284,548
N2WK	278,256
W1UE	271,416
VE7CC	271,084
WØLSD	244,156
K4RO	230,736
K6LL	225,810

Single Operator, High Power Rates

K11G

Hour	80	40	20	15	10	Rate
1800	0	0	63	0	52	115
1900	0	0	14	106	8	128
2000	0	37	0	64	13	114
2100	0	58	13	27	4	102
2200	0	29	33	32	0	94
2300	0	18	62	9	0	89
0000	0	70	35	0	0	105
0100	33	54	1	0	0	88
0200	54	36	2	0	0	92
0300	45	63	0	0	0	108

AA3B

Hour	80	40	20	15	10	Rate
1800	0	0	76	48	0	124
1900	0	0	63	53	0	116
2000	0	0	38	47	19	104
2100	0	11	7	23	35	76
2200	0	72	65	0	0	137
2300	0	65	58	0	0	123
0000	0	47	47	0	0	94
0100	42	43	6	0	0	91
0200	55	44	0	0	0	99
0300	34	69	0	0	0	103

K4GMH

Hour	80	40	20	15	10	Rate
1800	0	0	86	30	0	116
1900	0	0	57	44	0	101
2000	0	12	26	35	0	73
2100	0	85	47	0	0	132
2200	0	75	55	0	0	130
2300	0	72	59	0	0	131
0000	44	41	2	0	0	87
0100	55	49	0	0	0	104
0200	72	43	0	0	0	115
0300	66	71	0	0	0	137

W7RN

Hour	80	40	20	15	10	Rate
1800	0	0	4	69	81	154
1900	0	0	0	75	80	155
2000	0	0	0	94	73	167
2100	0	0	16	74	27	117
2200	0	0	64	70	0	134
2300	0	0	10	58	25	93
0000	0	0	83	35	0	118
0100	0	4	62	40	0	106
0200	0	81	17	0	0	98
0300	19	52	0	0	0	71

Multioperator, Low Power (MOLP)

Big changes in MOLP occurred in 2012 as scores were up considerably from last year and there were many new calls in the Top Ten. In fact, the only repeating station was W1SLF. Getting "in the box" now takes nearly twice the score of previous years.

In MOLP we now see many teams of two to four operators as compared to previous years in which the norm was a single operator using the spotting network. Earl, N5ZM and his partner Glenn, N5RN were once again leaders into the clubhouse and won the category. Jerry, KØDU who has a prime location and usually runs high power had some amplifier problems and tried MOLP this year. Jerry found out that pileup busting and finding a frequency was very tough if not virtually impossible. He was a bit stressed but will be back with his Alpha 9500 next year.

Top Ten - WVE Multioperator, Low Power

N5ZM	177,580
K9OM	148,302
KØDU	144,368
WW4LL	125,388
K9NR	122,148
AA4NC	113,407
W1SLF	102,144
W4GAC	99,216
KU1YL	96,530
N9LAH	96,096

Multioperator, High Power (MOHP)

Big aluminum farms dominate this class and a large number of records were set. Another impressive finish for the NØNI team secured the victory. It was a very tight race for second and third by the WØSD and NR5M teams, respectively. WØSD claimed 53 more QSOs but three fewer multipliers. Log checking didn't change that a bit and the experienced hands at WØSD nailed second place. As in MOLP, teams seem to be made up of two to three operators but also single operators such as WA5ZUP, W4UH, and NR4M who either elect to use the spotting networks or just want to use one radio.

It was a bad year for the crew at K7OX where I operated – we just didn't do a good job this year. In the Northwest Division those NK7U boys have too much aluminum as do the W7IV team. Joe, KØBX was taking it easy in his 35th year of RTTY and used the spotting networks to make some QSOs.



Randy K7TQ operating at K7OX (Photo by K7OX)

Top Ten - W/VE Multioperator, High Power

NØNI	283,276
WØSD	252,830
NR5M	251,235
K1SFA	221,128
WA5ZUP	208,940
NK7U	206,700
W4UH	205,692
NR4M	199,101
VA2UP	183,662
W4RM	178,486

W/VE Records

With all the activity it was a record-setting year and very few early records remain. Three new W/VE all-time records were set this year. The first was set by SOLP winner and long-time holder of the world Single Operator, Low Power record Don, AA5AU. Two other records were established in the high power arena. A new record in Single Operator, High Power was set by Rick, KI1G and the NØNI team from Iowa set a world record in Multioperator, High Power.

Canadians set new records from both ends of their country. Lee, VE7CC of British Columbia set one for Single Operator, High Power and Fabi, VA2UP established a new record in Single Operator, Low Power from Quebec.

Over 34 new division records set and 80 new section records were set! Usually we list new records in a table but this year there were too many changes! See the ARRL website (www.arrl.org/contests) for a complete list of records.

Affiliated Club Competition

Club action makes for a lot of fun on the bands as you work more California and Minnesota stations than you figured existed. The Northern California Contest Club (NCCC) got the message with a nearly 50% increase in logs over 2011. This resulted in a win for the NCCC in the Unlimited Club class and a major milestone as the three-million point mark was passed and they nearly got to the four-million milepost. The Minnesota Wireless Association (MWA) moved down a spot into second place. If only the Cal stations would turn those 10 meter beams to the north once in a while for us guys and gals in northern seven-land!

Unlimited Club

<i>Club Name</i>	<i>Logs</i>	<i>Total Score</i>
Northern California Contest Club	73	3,715,609
Minnesota Wireless Assn	59	2,389,349

The Potomac Valley Radio Club (PVRC) took top billing among Medium Clubs with a very nice score of 2.5 million. Not enough members turned in logs to move the PVRC into Unlimited. A tight race ended with the Florida Contest Group (FCG) edging out the Arizona Outlaws Contest Club (AOCC) for second and third.

Medium Club

<i>Club Name</i>	<i>Logs</i>	<i>Total Score</i>
Potomac Valley Radio Club	49	2,500,870
Florida Contest Group	17	1,230,065
Arizona Outlaws Contest Club	24	1,205,840
Society of Midwest Contesters	23	1,193,563
Yankee Clipper Contest Club	30	1,183,320
Willamette Valley DX Club	15	907,438
Tennessee Contest Group	17	841,847
Frankford Radio Club	10	836,306
CTRI Contest Group	9	727,796
Alabama Contest Group	13	705,458
Grand Mesa Contesters of Colorado	8	634,243
Contest Club Ontario	17	599,454
Western Washington DX Club	7	432,763
Hudson Valley Contesters and DXers	7	378,939
Central Texas DX and Contest Club	4	376,193
Louisiana Contest Club	6	375,065
Contest Group Du Quebec	4	328,387
Southern California Contest Club	11	297,448
South East Contest Club	7	168,559
Rochester (NY) DX Assn	4	139,591
Carolina DX Association	5	124,257
Saskatchewan Contest Club	3	122,575
Kentucky Contest Group	3	108,200
Allegheny Valley Radio Association	3	96,460
Order of Boiled Owls of New York	3	95,524
North Coast Contesters	4	65,471
Western New York DX Assn	3	59,829
Mad River Radio Club	3	23,594

In the Local Club class the Orleans ARC again won the gavel with a total score nearly 50% higher than the Spokane DX Association (SDXA) which moved into second place this year. Last year's Local winner, the Dominion DX Group, was in third place this time out.

Local Club		
Club Name	Logs	Total Score
Orleans County Amateur Radio Club	10	936,547
Spokane DX Association	8	641,772
Dominion DX Group	7	635,799
ORCA DX And Contest Club	7	388,698
Lone Star DX Assn	5	286,524
Boeing Employees ARS - St. Louis	4	281,927
Midland ARC	3	255,440
Metro DX Club	4	218,379
Bergen ARA	4	203,967
Bristol (TN) ARC	7	144,283
Black Diamond Amateur Radio Club	3	76,371
Sterling Park ARC	5	43,468
Nanaimo Amateur Radio Association	3	36,991
Gloucester Co ARC	3	30,798

Next year, club total scores may reach four million in Unlimited and nearly three in the Medium classes. The Local Club total is approaching one million points. The bar has been set high for clubs to achieve glory in all classes.

DX Highlights

One world record and nine continental records were set this year by DX stations. Sixty-nine countries around the world saw new records established. Several stations changed power levels to set a different record in their country.

Most of the happenings in the DX Single Operator, Low Power category were from the Caribbean and South America. They had propagation into North America and could reach out and work Africa and Europe for the multipliers. The first six scores in the Top Ten box are all from those areas.

DX—Single Operator, Low Power	
VP9/WW3S	181,475
P4ØYL (AI6YL, op)	177,480
HI3TEJ	158,704
ZX2B (PY2MNL, op)	151,293
HI8PLE/7	129,472
J39BS	115,024
EO3Q (UR3QCW, op)	107,055
UA6CE	97,818
F5BEG	82,500
OQ6A (ON5MF, op)	78,540

It was a pretty tight race between Jamie, VP9/WW3S in Bermuda and Sue, P4ØYL in Aruba. No doubt that Sue was hurt a bit having P49X running power on the island but she now owns a new South American all-time record. The top score out of Europe was Ruslan, EO3Q from the Ukraine who did set a new country record. Another new

record was set by Julio, NP3CW who “came back to RTTY contesting after [having] been distant for many years”. Steve, ZC4LI set a new Asia continental record this year, too.

DX—Single Operator, High Power

P49X	420,250
EO4M (UR5MW, op)	206,844
OL8M (OK4RQ, op)	188,160
SN7Q	181,760
9A5W	170,434
UW8I (UT2IZ, op)	169,645
YV5KG	167,388
KH6ZM	163,822
DL4MCF	160,644
PZ5RA	145,092

P49X (operator WØYK) led the Single Operator, High Power group once again. Ed set a world record – perhaps the first for a station running two radios with four VFOs – SO4V. It's not clear how much the four-VFO setup assisted him. Ed's mults were down this year and as he added radios his rate increased but it took a lot more work to find the multipliers.

As in previous years, the Europeans took the next five spots. This is quite a switch from the SOLP category. From Volcano, Hawaii Max, KH6ZM set a new Oceania all-time record as more hours on the high bands seemed to have helped him. Norman, 5B4AIF was in with a new Asia all-time record giving out the appreciated Cyprus multiplier.

Top Ten - DX Multioperator, Low Power

XE2K	163,215
EA1DR	129,840
HG7T	105,534
LZ9R	81,848
OH8KTN	72,080
UT8EL	60,970
DF9ZP	59,300
XE2FGC	59,285
US4LPY	59,136
IW1QN	51,393

Hector, XE2K moved into SOLP after last year's victory in Multioperator, High Power and took home the honors. The rest of the Top Ten were all from Europe as KP2D was missing this year. Oscar, EA1DR set a new Spanish record and placed second.

Top Ten - DX Multioperator, High Power

PJ2N	279,554
LS1D	186,690
S53M	171,703
EI7M	171,520
S5ØXX	162,274
IQ1RY	155,610
UW4I	143,262
EA5CEF	117,058
OH1F	102,358
EA1AKS	100,800

South America struck this year as PJ2N set a new South American MOHP record and was just a little off the pace from the NØNI team for the world record. LS1D was in second with all the Europeans filling in the rest of the box. Conditions just weren't quite good enough for the European stations and the Japanese stations were not coming in nearly as well as we usually hear them on the West Coast. With nearly no openings to Europe on 10 it made things much more difficult.

Technology and RTTY Radiosporting

In RTTY a participant can use a lot more equipment than in other modes. This does come at a bit of a sacrifice as the error rates are rather high. P49X used a set of dual-VFO radios for a total of four receive windows. Ed used two computers with Writelog's "last one wins" feature controlling the two transmitters and with the call stacking it lets him really maximize rate.

Don, AA5AU does it a little differently with three separate radios and two computers so he is SO3R as I don't believe he has the VFOs to do it differently. He did relate having a triplexer on part of his antenna system.

When I hear about lockouts failing and being excluded it reminds me of the old days when Hal, WA7EGA and I had to add a hardware lockout – software lockouts were not enough protection against having two signals on the air, even briefly. We used multiple 4049 CMOS NAND gates with each rig keyed through the gate, requiring the other rig to be OFF in order to change states. There are several folks building these hardware devices – look for a lot of other stations to be adding them soon.



Operating at W6YX are (left to right) N6DB, ND2T and K6UFO/W6YX (Photo by KG6NUB)

Talking about technology, would you believe three Multioperator, Single Transmitter operations from the same station? Of course it was the Stanford University Radio Club W6YX. They had three teams: W6YX ran 1.5 kW, ND2T hovered around 1 kW, and N6DB worked the event at 500 W. Three sets of equipment let them compete within the rules. They did have to share the antenna farm and work out all of the interactions. What an effort to boost the NCCC score and share in the fun!

Once dominated by the WF1B program, logging software for RTTY has changed once again. Writelog was the program of choice for many years but has now given way to N1MM with a large edge in the number of users in this contest – at least 44% of the entries used N1MM and 15% used Writelog. MixW generated nearly 12% of the logs. Other programs used were N3FJP, Wintest, and a couple from Japan along with others like RCKRTTY.

Looking ahead to Next Year

Next year will be the 25th running of the RTTY Roundup. It's hard to believe that so much time has passed in RTTY radiosporting. Don, AA5AU wrote, "I tell you, RTTY contesting has come a long way. The quality of operators today is outstanding which makes everything so much more enjoyable because you can make more contacts and people are just getting it right!"

As the sport changes so must those of us operating in the event. Norman, 5B4AIF stated it best, "I wish those replying would not send such long replies."

Will the 4,000-QSO barrier be challenged in 2012? Will 10 meters still be a factor? Will we once again get some serious openings around the world? What other technology and software changes will emerge? Will some other decoder replace the MMTTY plug-in that most use with their soundcards? Use the rest of this year to plan your strategy for the next Roundup on January 5-6 in 2013.

Mike, AB1OD summed things up nicely, "Man this RTTY stuff is addictive!"

Acknowledgments

Sean, KX9X is the ARRL Contest Branch Manager who gets me the data and tables from the log checker and he always does a great job. Ward, NØAX is the editor who makes my stuff read so much better. It was nice to see Ward in the contest this year. He is working on his hand-ear tuning. I guess we need to tell him about scopes! [Hey! – Ed.] As always, my initial editor is Betsy, WV7Y – my bride of many years. Ken, WM5R does the records for the Roundup and is always improving them.

Sponsored Plaque Winners

Plaque Category	Plaque Sponsor	Winner
W/VE Single Operator High Power - W7RM Award	Spokane DX Association	KI1G
W/VE Single Operator Low Power - NM7M Memorial	Jim Reisert, AD1C	AA5AU
W/VE Multioperator High Power	John Lockhart, WØDC	NØNI
DX Single Operator High Power	The NN6NN RTTY Team	P49X (WØYK, op)
DX Multioperator High Power	Paolo Cortese, I2UIY Memorial by WØYK	PJ2N
Delta Division Single Operator High Power	Roland Guidry, NA5Q	K4RO
Pacific Division Single Operator High Power	Northern California Contest Club	W7RN (WK6I, op)
Roanoke Division Single Operator High Power	Mark Sihlanick, N2QT	K4GMH
Central Division Single Operator Low Power	Society of Midwest Contesters	KD9MS
Midwest Division Single Operator Low Power	In Memoriam of Larry Lindblom, WØETC by Bob Ruvolo, KI6DY	NTØF
New England Division Single Operator Low Power	CTRI Contest Group	K1RO
Southeastern Division Single Operator Low Power	Alabama Contest Group	KC4HW
Atlantic Division Multioperator High Power	In Memory of Tony Furfari, K3IEX, by K3FH	K3MJW
Roanoke Division Multioperator Low Power	Dominion DX Group, K4VAC	AA4NC

Regional Leaders by Category

Northeast Region			Southeast Region			Central Region			Midwest Region			West Coast Region		
New England, Hudson and Atlantic Divisions; Maritime and Quebec Sections			Delta, Roanoke and Southeastern Divisions			Central and Great Lakes Divisions; Ontario Section			Dakota, Midwest, Rocky Mountain and West Gulf Divisions; Manitoba and Saskatchewan Sections			Pacific, Northwestern and Southwestern Divisions; Alberta, British Columbia and NWT Sections		
WØBR	141,480	SOLP	AA5AU	274,944	SOLP	K8SM	86,025	SOLP	KØTI	182,684	SOLP	KB7Q	142,596	SOLP
W3LL	129,413	SOLP	N2QT	204,078	SOLP	KD9MS	84,552	SOLP	NØAT	153,700	SOLP	W7ZR	128,968	SOLP
K2EN	121,101	SOLP	KC4HW	152,915	SOLP	K9WX	78,476	SOLP	NTØF	135,035	SOLP	W7YAQ	114,750	SOLP
K1RO	85,042	SOLP	K4CC	112,221	SOLP	W4LC	70,112	SOLP	KØAD	124,733	SOLP	VE6WQ	98,600	SOLP
AB1J	81,800	SOLP	WM5DX	82,812	SOLP	N9CK	66,738	SOLP	KE5OG	123,375	SOLP	W1ZD	59,470	SOLP
KI1G	317,814	SOHP	K4GMH	303,530	SOHP	AI9T	210,304	SOHP	WØLSD	244,156	SOHP	W7RN (WK6I, op)	284,548	SOHP
AA3B	310,863	SOHP	K4RO	230,736	SOHP	N8NR	153,258	SOHP	ABØRX	204,048	SOHP	VE7CC	271,084	SOHP
N2WK	278,256	SOHP	W4DXX	176,080	SOHP	N8BJQ	148,584	SOHP	W5AP	167,852	SOHP	K6LL	225,810	SOHP
W1UE	271,416	SOHP	AB4GG	171,054	SOHP	W8JWN	130,480	SOHP	KF5HHD	136,350	SOHP	KR7X	182,516	SOHP
W1TR	126,468	SOHP	K4FJ	148,869	SOHP	N8RU	86,616	SOHP	KØIR	123,510	SOHP	KF6T	173,264	SOHP
W1SLF	102,144	MOLP	N5ZM	177,580	MOLP	K9NR	122,148	MOLP	KØDU	144,368	MOLP	N6MA	81,654	MOLP
N3XLS	83,055	MOLP	K9OM	148,302	MOLP	N9LAH	96,096	MOLP	KU1YL	96,530	MOLP	WØPC/7	28,956	MOLP
WN1E	66,458	MOLP	WW4LL	125,388	MOLP	N8LRG	90,871	MOLP	NØHJZ	81,144	MOLP	KI6QDH	21,560	MOLP
N3QE	56,252	MOLP	AA4NC	113,407	MOLP	WZ8P	84,645	MOLP	WB5TUF	75,840	MOLP	VE7OGO	21,300	MOLP
W3/NH7C	55,968	MOLP	W4GAC	99,216	MOLP	N8DC	43,279	MOLP	KFØUR	70,224	MOLP	N6GEO	19,968	MOLP
K1SFA	221,128	MOHP	W4UH	205,692	MOHP	K9CT	153,140	MOHP	NØNI	283,276	MOHP	NK7U	206,700	MOHP
VA2UP	183,662	MOHP	NR4M	199,101	MOHP	NØIJ	135,488	MOHP	WØSD	252,830	MOHP	W7IV	176,814	MOHP
K3MJW	154,750	MOHP	W4RM	178,486	MOHP	N2BJ	134,760	MOHP	NR5M	251,235	MOHP	K8IA	168,448	MOHP
WA2TMC	152,643	MOHP	K4PUF	174,291	MOHP	VE3FJB	114,342	MOHP	WA5ZUP	208,940	MOHP	W6YX	163,215	MOHP
K3MD	103,292	MOHP	KU1T	167,440	MOHP	K8UT	75,790	MOHP	WY7SS	120,156	MOHP	K7OX	156,170	MOHP

Division Winners					
Single Operator			Multioperator		
Low Power			Low Power		
Pacific	KO6LU	43,924	Pacific	WØPC/7	28,956
Atlantic	WØBR	141,480	Atlantic	N3XLS	83,055
Southwestern	KB7Q	142,596	Southwestern	N6MA	81,654
Southeastern	KC4HW	152,915	Southeastern	K9OM	148,302
Roanoke	N2QT	204,078	Roanoke	AA4NC	113,407
West Gulf	KE5OG	123,375	West Gulf	WB5TUF	75,840
Northwestern	W7YAQ	114,750	Northwestern	N6PZ	5,130
New England	K1RO	85,042	New England	W1SLF	102,144
Midwest	NTØF	135,035	Midwest	KU1YL	96,530
Hudson	WA2LXE	58,740	Hudson	WA2IID	6,240
Great Lakes	K8SM	86,025	Great Lakes	N8LRG	90,871
Delta	AA5AU	274,944	Delta	N5ZM	177,580
Dakota	KØTI	182,684	Dakota	NØHJZ	81,144
Central	KD9MS	84,552	Central	K9NR	122,148
Canada	VE6WQ	98,600	Canada	VE3IAE	37,496
Rocky Mountain	KTØDX	73,038	Rocky Mountain	KØDU	144,368
High Power			High Power		
Midwest	ABØRX	204,048	New England	K1SFA	221,128
Southeastern	W4DXX	176,080	Southwestern	K8IA	168,448
Rocky Mountain	WØLSD	244,156	Southeastern	W4UH	205,692
Roanoke	K4GMH	303,530	Rocky Mountain	WA5ZUP	208,940
Pacific	W7RN (WK6I, op)	284,548	Roanoke	NR4M	199,101
Northwestern	KR7X	182,516	Pacific	W6YX	163,215
New England	KI1G	317,814	Northwestern	NK7U	206,700
Hudson	N2FF	53,664	Midwest	NØNI	283,276
Great Lakes	N8NR	153,258	Hudson	NO2T	102,520
Delta	K4RO	230,736	Great Lakes	K8UT	75,790
Dakota	KØIR	123,510	Delta	KG5VK	22,557
Central	AI9T	210,304	Dakota	WØSD	252,830
Southwestern	K6LL	225,810	Central	K9CT	153,140
Atlantic	AA3B	310,863	Atlantic	K3MJW	154,750
West Gulf	W5AP	167,852	West Gulf	NR5M	251,235
Canada	VE7CC	271,084	Canada	VA2UP	183,662