ARRL 160 Meter Contest 2012 Results

by Gary Breed, K9AY

A Great Year to be in the Middle of North America!

The November 30 – December 2, 2012 running of the ARRL 160 Meter Contest was, once again, a highlight of the year for many Top Band fans. This event is great fun, bringing together competitive contesters, casual contest operators, 160 meter specialists, plus all the other hams who enjoy the adventure of operating at the low-frequency end of the spectrum. When you combine unpredictable propagation with the crowd of operators squeezed into a bit more than 100 kHz on a single band, things get interesting! Thankfully, the tradition of 160 meters as the "gentleman's band" continues to be true and all those stations manage to fill each other's logs with contacts from all ARRL and RAC sections, plus many DXCC entities.

"Oh, no! K9LA worked a dupe!" says Carl's second-op, even though Carl managed more than 300 Qs during the contest. (Photo K9LA)

What About Cycle 24?

"Not bad for a 'down year' on 160..." said N4UA on the 3830 reflector (you can read the archives of this post-contest score sharing reflector at **lists.contesting.com/_3830**). There are always complaints about poor low band propagation during the peak years of every sunspot cycle and Cycle 24 is no exception. However, as noted by N4UA above, during the first weekend of December 2012, things were not as bad as expected. Sure, DX openings were shorter, but there was still DX to be worked. Yes, cross-continent signals were heard with greater difficulty, but plenty of QSOs are in the logbooks of the 1174 hams who entered the event (50+ more logs than 2011, and just 14% fewer than the record-setting 2009 contest). As Top Band fans often point out, 160 meters at the peak of the cycle is usually much better than 10 meters at the bottom!

Winners from the Heartland

In the most popular entry class—Single-Operator, Low Power—nine of the Top Ten finishers did so from their far inland QTHs! In fact, the top scores in four of the five entry categories were achieved far away from the East Coast and it's alleged advantage of being closer to European multipliers and 5-point QSOs. In 2012, the advantage was held by stations that could run up high QSO numbers and maximize the number of section multipliers – that meant being in the center of the continent.

WB9Z ops (l-r) Jerry KE9I; Don K9NR; Val NV9L; Mike K9XZ; Carl K9CS and station owner Jerry WB9Z (not shown) racked up a score of 408,044 points with 1417 QSOs and 118 multipliers. (Photo by WB9Z)

Multioperator, High Power

Just outside the town of Rippey, in the western part of Iowa, is the QTH of NØNI, where Toni and his crew accumulated 1695 QSOs and 123 multipliers

to win the Multioperator category in convincing style. In the next state over—Illinois—Jerry, WB9Z and his fellow operators took second place, also passing the 1600-QSO mark. In third place was N8OO in the state of Louisiana. Victor and fellow operator Sergey, KF5SCL (now W5GDX) continued the pattern of high scores in more central locations. The next three finishers were all in East Coast states, but the final group in the Top Ten box is back in the middle, from Ontario and Michigan down to Texas and Oklahoma.

Multioperator, High Power

	Score		*QSOs*		*Mults*
NØNI	491,631	NØNI	1695	N3UA	127
WB9Z	408,044	WB9Z	1617	NØNI	123
N8OO	398,520	K8KS	1490	N1LN	121
N3UA	394,208	N1LN	1438	N8OO	120
N1LN	387,321	N8OO	1418	WJ9B	119
WJ9B	353,787	N3UA	1350	WB9Z	118
K8KS	343,640	W8MJ	1337	VE3TA	118
VE3TA	331,934	WJ9B	1318	K3WW	113
K5KC	303,450	NX5M	1312	KF3B	113
NX5M	301,875	VE3TA	1292	N3RR	111

Multioperator, Low Power

	Score		*QSOs*		*Mults*
K8BL	178,572	K8BL	954	K8BL	92
VE3MGY	165,968	VE3MGY	925	K4FT	90
K4FT	157,140	K4FT	860	WØDLE	90
WØDLE	138,780	WØDLE	757	VE3MGY	88
N4GG	66,975	K8UO	536	W4UAL	80
W4UAL	64,320	N4GG	442	K7XC	80
W1WBB	62,853	W1WBB	424	W2CCC	78
W2CCC	62,244	KB7Q	406	WE9R	76
K8UO	61,124	W4UAL	400	N4GG	75
KB7Q	59,570	W2CCC	389	W9TC	75

Multioperator, Low Power

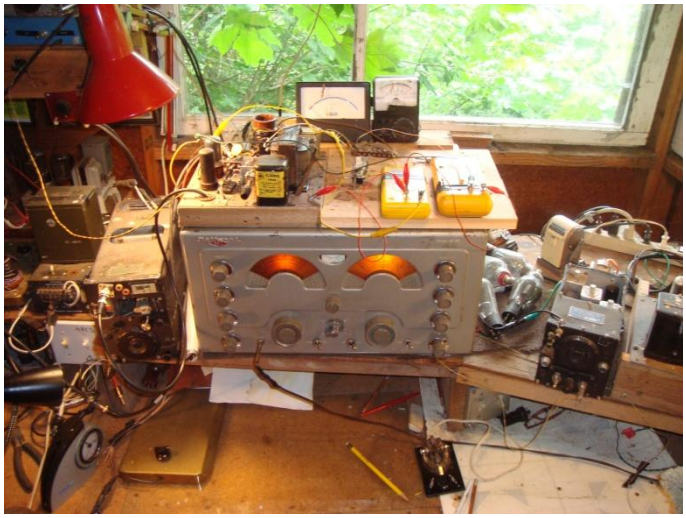
In its second year of existence this category grew to 88 entries, 7.5 percent of the total number of logs submitted. At the top of this class is K8BL from the state of Ohio. Bob operated with packet assistance which is considered multi-op in this contest. Brian, VE3MGY, another "me, myself and packet" entry, captured the second-place spot from Ontario South. The next two positions also posted strong scores in this category: K4FT in KY and WØDLE from CO, the highest finisher from the Mountain Time Zone in any class.

Single-Operator, High Power

One 160 meter station with a clear geographical advantage (and an outstanding antenna farm to maximize that advantage) is VY2ZM on Prince Edward Island. Jeff (K1ZM) led all scoring in all categories with nearly 588k points. This was achieved with a QSO total of 1547 and the highest multiplier count (136). The Briggs family pulled off a one-two finish this year, with Peter, K3ZM posting a strong second-place finish from his coastal VA QTH. Focusing on DX QSOs, Peter had only the 9th highest QSO total among high power entries, but dug out ten more multipliers than the next-best finisher, John, VE3EJ whose high QSO total (five more than VY2ZM) helped build a fine score from Ontario South. The high power category is always a Who's Who list of fine stations and operators. The next two finishers, Jon, AA1K in DE and Vic, K1LT in OH fit that description. In the Central Time Zone (Illinois), Craig, K9CT finished in sixth place from the excellent station he is building.

Single-Operator, High Power

	Score		*QSOs*		*Mults*
VY2ZM	587,928	VE3EJ	1552	VY2ZM	136
K3ZM	468,336	VY2ZM	1547	K3ZM	132
VE3EJ	406,692	WØSD	1506	K1DG	122
AA1K	395,520	NO3M	1466	AA1K	120
K1LT	372,411	K1LT	1465	KV4FZ	119
K9CT	363,634	K9CT	1462	VE3EJ	117
K1DG	362,706	AA1K	1433	K1LT	117
WØSD	350,892	WD5R	1410	VA2EW	115
NO3M	342,760	K3ZM	1404	W3BGN	114
VA2EW	331,430	K5RX	1342	K9CT	113



Mike W7DRA's vintage equipment keeps the shack warm while he waits for the band to warm up. (Photo by W7DRA)

Single-Operator, Low Power

As noted earlier, low power is the choice of entry class for more participants than any other, with 36% of all entries in 2012. Low power also had the

smallest spread of Top Ten scores in any entry category, less than 28% difference from first to tenth place. At the top of this highly competitive group stands Dan, KØTI who managed to capture that victory from Woodbury, MN near Minneapolis. 200 miles to the east, Scott, NE9U in Plover, WI took second place, just 0.7 percent behind. Scott had 3 more multipliers, but that wasn't quite enough to make up for Dan's 50 additional QSOs. Ohioans WB8JUI and K8NVR finished third and fourth, with Jim, WØUO taking the fifth spot from NTX.

Single-Operator, Low Power

	Score		*QSOs*		*Mults*
KØTI	170,694	KØTI	981	KIØI	94
NE9U	169,560	NE9U	931	K9IG	91
WB8JUI	157,035	K8NVR	910	NE9U	90
K8NVR	154,392	WB8JUI	887	K9MMS	89
WØUO	148,104	W2TZ	848	WØUO	88
W2TZ	143,092	WØUO	812	KØTI	87
NØAT	137,600	NØAT	801	WB8JUI	87
K9MMS	137,060	K9MMS	765	AA5AM	87
KIØI	135,830	VE3XL	743	N9CO	87
K9IG	133,861	KØNE	737	NØAT	86

Single-Operator, QRP

Many operators consider contesting with 5 watts on 160 meter to be a little crazy! However, QRPers (88 of them this time) readily admit to their craziness, including Werner, N8BB in Michigan, who came out on top after making 628 QSOs. The next two places were earned by Rich, W8VK in OH and Glenn, WØGJ in IA. A big "shout out" to the other 85 QRPers who entered, as well, for taking on the challenge and adding to the number of available QSOs for all contest participants!

Single-Operator, QRP

	Score		*QSOs*		*Mults*
N8BB	83,951	N8BB	628	WØGJ	77
W8VK	79,380	W8VK	566	N7IR	76
WØGJ	77,000	W3TS	511	W8VK	70
K2ZR	63,516	WØGJ	508	WB4MSG	70
N2KW	62,208	N2KW	486	K5LG	68
WB4MSG	60,970	K2ZR	475	AA4XX	68
W3TS	58,140	WB4MSG	433	N8BB	67
K4CNW	57,821	K4CNW	426	K2ZR	67
W4UX	54,404	N9NE	411	K4CNW	67
N9NE	53,922	W4UX	397	W4UX	67
				WA4VMC	67

Operating portable from a cabin in Heber, Arizona at an elevation of 6,435 feet, Mike KF7ADB used a top-loaded wire vertical to work 49 states and 5 new DXCC entities. (Photo by KF7ADB)

DX Results

DX logs were down 21% compared to the best year ever (2009). This is no surprise, as weaker propagation makes it much harder to complete long distance QSOs, especially for hams without efficient transmit antennas and quiet receiving locations. Among all DX entries, Multioperator, High Power C6AUM (N4BP and K4RUM, ops) had the highest score—181,600 points. OL7M was the second place DX multiop from Europe, with JH2FXK in third place from Japan. The three top Single-Operator, High Power scores were achieved from locations south of the U.S., with PJ2T (K8ND, op) taking the top spot. Second-place finisher FM5CD squeaked past CE1/K7CA by the tiny margin of 128 points. Low power op WBØOAJ piloted VP5CW to the top DX finish in that that category.

Top Ten – Multioperator - DX

	Score	*QSOs*	*Mults*	*Power*
C6AUM	181,600	1147	80	HP
OL7M	30,894	274	57	HP
JH2FXK	10,764	120	46	HP
LY5W	7,128	104	36	HP
MDØCCE	6,586	94	37	HP
LA3ANA	5,920	76	40	HP
PAØO	4,270	62	35	HP
JE1ZWT	3,776	59	32	HP
DK2OY	3,410	58	31	HP
JH3PRR	3,392	53	32	HP

Top Ten – Single –Operator - DX

	Score	*QSOs*	*Mults*	*Power*
PJ2T (K8ND, op)	131,664	857	78	HP
FM5CD	104,566	691	77	HP
CE1/K7CA	104,438	664	79	HP
ZF2AH	75,312	534	72	HP
TM6M (F1AKK, op)	56,760	434	66	HP
VP5CW (WBØOAJ, op)	52,480	423	64	LP
OM2VL	42,600	365	60	HP
M5O (G3LET, op)	35,148	313	58	HP
CO6YAC	16,632	193	44	LP
DF2PY	7,954	99	41	HP

Although the number of DX participants was down a bit from recent years, there were a good number of DX multipliers available during the contest. European sunrise provided some propagation enhancement, with several ops commenting that North American sunset had a noteworthy enhancement. Between those times, there were some of the well-known 160 meter short "spotlight" propagation episodes. Your author experienced some of these, as a DX station would occasionally call with a signal rivaling more "local" stations.

Affiliated Club Competition

Every year, I remind new 160 meter operators to check the Club Competition listing! These local and regional clubs have experienced operators who are great Elmers and happy to share their experience to help you build a better station and hone your skills. In the 2012 160 Meter Contest, the Potomac Valley Radio Club fielded 81 stations, amassing well over 6 million points to earn the Unlimited Club gavel, besting the Yankee Clipper Contest Club. The Society of Midwest Contesters had a few less entries than recent years, with their 47 logs placing them in the Medium Club category, where they came out on top. Their 3+ million points was the second-highest total score of any club regardless of category. Kudos also go to the Frankford Radio Club, Minnesota Wireless Association and Contest Club Ontario, each of whom had a large turnout among their members. In the Local Club category, the eight entries from the Central Virginia Contest Club totaled just shy of 1 million points, earning the number one position among their smaller club colleagues.

Affiliated Club Competition

	Score	*Entries*
Unlimited Category		
Potomac Valley Radio Club	6,188,037	81
Yankee Clipper Contest Club	2,947,079	58
Medium Category		
Society of Midwest Contesters	3,121,646	47
Frankford Radio Club	2,983,137	42
Minnesota Wireless Assn	2,514,547	49
Contest Club Ontario	2,297,169	29
Mad River Radio Club	1,733,887	15
North Coast Contesters	1,229,412	15
Tennessee Contest Group	1,117,758	20
Alabama Contest Group	757,141	15
Northern California Contest Club	707,837	27
Arizona Outlaws Contest Club	550,166	17
Southern California Contest Club	540,426	14
North Texas Contest Club	506,758	5
Rochester (NY) DX Assn	482,764	8
Grand Mesa Contesters of Colorado	470,194	7
Florida Contest Group	467,621	14
Contest Group Du Quebec	399,868	4
Hudson Valley Contesters and	330,744	8
Georgia Contest Group	308,663	5
Mississippi Valley DX/Contest Club	296,700	3
Utah DX Assn	288,168	6
Western New York DX Assn	259,215	7
Northern Rockies DX Association	258,936	3
South East Contest Club	253,064	7
Willamette Valley DX Club	169,827	9
Carolina DX Association	138,358	5
ORCA DX And Contest Club	118,384	3
CTRI Contest Group	110,883	4
Western Washington DX Club	102,226	10
Local Category		
Central Virginia Contest Club	968,021	8
Maritime Contest Club	830,583	10
Delara Contest Team	277,976	3
DFW Contest Group	258,711	6
Spokane DX Association	257,072	5
Bristol (TN) ARC	204,190	6
Mother Lode DX/Contest Club	158,180	5
Low Country Contest Club	99,890	3
West Park Radiops	77,228	5
Metro DX Club	57,846	4
Bergen ARA	35,785	3
South Texas DX and Contest Club	33,859	3

According to Milt, N5IA (operating at N7GP), nothing is better than running JAs on 160 meters while viewing a beautiful sunrise over Arizona's Whitlock Mountains. (Photo by N7GP)

A Little Post-Contest Analysis

Overall, the 2012 160 Meter Contest was a great success, with high activity and some strong competition. There was a clear continuation of the overall trend toward more 160 meter activity in recent years. Band conditions were good enough to make the event fun. Much of North America had low noise levels, which partially compensated for higher absorption and weaker signals. Also, many stations (including the author) noted that conditions were above average to the Far East, resulting in a good number of JA stations in the log.

Top Ten QSOs

QRP		*Low Power*		*High Power*		*Multiop High Power*		*Multiop Low Power*	
N8BB	628	KØTI	981	VE3EJ	1552	NØNI	1695	K8BL	954
W8VK	566	NE9U	931	VY2ZM	1547	WB9Z	1617	VE3MGY	925
W3TS	511	K8NVR	910	WØSD	1506	K8KS	1490	K4FT	860
WØGJ	508	WB8JUI	887	NO3M	1466	N1LN	1438	WØDLE	757
N2KW	486	W2TZ	848	K1LT	1465	N8OO	1418	K8UO	536
K2ZR	475	WØUO	812	K9CT	1462	N3UA	1350	N4GG	442
WB4MSG	433	NØAT	801	AA1K	1433	W8MJ	1337	W1WBB	424
K4CNW	426	K9MMS	765	WD5R	1410	WJ9B	1318	KB7Q	406
N9NE	411	VE3XL	743	K3ZM	1404	NX5M	1312	W4UAL	400
W4UX	397	KØNE	737	K5RX	1342	VE3TA	1292	W2CCC	389

Top Ten Mults

QRP		*Low Power*		*High Power*		*Multiop High Power*		*Multiop Low Power*	
WØGJ	77	KIØI	94	VY2ZM	136	N3UA	127	K8BL	92
N7IR	76	K9IG	91	K3ZM	132	NØNI	123	K4FT	90
W8VK	70	NE9U	90	K1DG	122	N1LN	121	WØDLE	90
WB4MSG	70	K9MMS	89	AA1K	120	N8OO	120	VE3MGY	88
K5LG	68	WØUO	88	KV4FZ	119	WJ9B	119	W4UAL	80
AA4XX	68	KØTI	87	VE3EJ	117	WB9Z	118	K7XC	80
N8BB	67	WB8JUI	87	K1LT	117	VE3TA	118	W2CCC	78
K2ZR	67	AA5AM	87	VA2EW	115	K3WW	113	WE9R	76
K4CNW	67	N9CO	87	W3BGN	114	KF3B	113	N4GG	75
W4UX	67	NØAT	86	K9CT	113	N3RR	111	W9TC	75
WA4VMC	67								

Since the next few years are likely to challenge 160 meter operators' skill, the expanded Top Ten table format gives a quick comparison of one aspect of contest strategy: quantity (QSOs) or quality (multipliers) illustrated by showing the Top Ten results in three forms: Score, QSOs and Multipliers. The Top Ten QSOs and Multipliers are summarized in the table on this page, as well.

Of course, you'll notice that there are some significant differences in the three listings for each entry category. The biggest difference is in multipliers, where only two top scorers also had the most multipliers. Some of the difference can be attributed to part-time operators chasing multipliers instead of running stations at the highest possible rate. Also, geography and station size have an effect on the ability to work more distant stations (DX multipliers).

You don't need a statistical analysis graph to see that the difference between the top score list and the number of QSOs is relatively small. In only one category (SOHP) did the top scorer not have the most QSOs (a very close #2 in that case). For this contest, the winning strategy is to make as many QSOs as possible. Don't forget the multipliers, of course! While ARRL and CRRL section multipliers will probably accumulate while you are running, DX and some of the distant (from your QTH) or rare sections will require you to search the band to find them.

Final Thoughts

160 meters is a growing part of the amateur radio spectrum! With new ham bands being developed (or already in place) at even lower frequencies — 63 kHz, 136 kHz, 500 kHz — learning about Medium Wave behavior on 160 meters is an excellent way to prepare for these future challenges. In those parts of the world where these new bands are already in

place, they are providing hams with interesting experiences.

Every year, many hams use the ARRL 160 Meter Contest as their reason to start learning about the unique propagation and antenna challenges of this band. Then they say, "Wait 'til next year!" in their Soapbox comments and start planning their station improvements. Make your own plans for the 2013 contest. Talk to your friends and get on 160 meters in other contests (and between contests). Use the warm weather of summer and fall to work on antenna projects. 2200 UTC on December 6, 2013 will be here faster than you think!

Contributed Comments

Here are a few contest observations which did not appear in the 3830 reflector posts or ARRL website Soapboxes (www.arrl.org/soapbox).

From Oli, K1AKK—*"I was SO as TM6M (F6KHM). First night was terrible with around 160 QSOs in the log, about all stations were coming in very weak as EME! I asked myself if I'll stop or not, but finally decided to play the second night (160 meter is magic and propagation in a day is very changing), which was much better as I did >280 more QSOs with signals up and down. Hope to be tuned in next year."*

Mike, KF7ADB—*"This was my first entry in the ARRL 160 Meter Contest. With as much fun as I had, it won't be my last! I operated portable from a friend's cabin in Heber, AZ (elevation 6,435 feet). The antenna was a top-loaded wire vertical (DJØIP design) using an 18 meter Spiderbeam fiberglass pole (see Figure 2). Conditions were very good. I managed to work every state but ND and picked up five new DXCC entities. Highlights included being called by KH6LC (thanks Lloyd!) and a short JA run just before my sunrise on Sunday."*

Anthony, AB9YC sent in this note—*"I'm a rookie contester and a first time top bander. I was not sure if I could even operate on 160 meter with only my 40M dipole and 100 watts. I warmed up the tuner and gave it a go. My range was limited and my signal was weak, requiring fills, but I pulled in 131 contacts from more than 20 sections. I now have some modifications to think about for next year. I'll be back!"*

Like many hams do for this contest, Gene, N9TF lashed up a makeshift antenna. After describing his *"crude but effective"* setup his final comments were, *"I just missed setting a personal best this year, it was great to hear and work so many familiar calls and new calls as well! I'll do whatever it takes to get on the air for this contest. It is one of my all time favorites!"*

Mike, W7DRA has fun with his vintage equipment shown in Figure 3—*"Here is the rig I used in the latest ARRL 160 contest. This year was much more difficult because of conditions. When I could hardly hear KH6LC I know the band is bad. Usually all I have to do is walk into my back yard and shout and he hears me. Logging is getting to be more of a hassle, this email logging stuff, requiring paper-to-computer, is a real pain. Maybe I am getting too old for contesting any more. Good Luck to all."*

Carl, K9LA provided the photo in Figure 4 of his "second op" (still a single-op entry, this is definitely not assistance)—*"I've always enjoyed the ARRL 160 Meter Contest. Although it's pretty much a domestic contest for me, I still enjoy working fellow Ws and VEs on CW (and an occasional Caribbean station). I ended up with over 300 Qs in the log. That's not a lot compared to other scores, but I had fun and enjoyed my time on Top Band."*

Finally, Figure 5 is a great antenna photo from Milt N5IA (at N7GP)—*"(It) was taken Saturday morning shortly before sunup here in AZ. I was slow-running JAs when I noticed a red glow through the slots between the pull down shades in my operating bus. I stepped to the door and was greeted by this view. My TX antenna is visible to the left. The mountain range in the distance is the Whitlock Mountains, about 25 miles away. It doesn't get much better than this; running JAs on 160 Meters and viewing a southwest US sunrise!"*

Regional Leaders

SOQRP = Single-Op, QRP; SOLP = Single-Op, Low Power; SOHP = Single-Op, High Power; UH/UL = Single-Op Unlimited, High/Low Power; MH/ML = Multioperator High/Low-Power; S = School Club

Northeast Region			Southeast Region			Central Region			Great Plains 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		
Call	**Score**	**Cat**	**Call**	**Score**	**Cat**	**Call**	**Score**	**Cat**	**Call**	**Score**	**Cat**	**Call**	**Score**	**Cat**
K2ZR	63,516	SOQRP	WB4MSG	60,970	SOQRP	N8BB	83,951	SOQRP	WØGJ	77,000	SOQRP	N7IR	51,680	SOQRP
N2KW	62,208	SOQRP	K4CNW	57,821	SOQRP	W8VK	79,380	SOQRP	NØUR	36,960	SOQRP	VE7VV	19,950	SOQRP
W3TS	58,140	SOQRP	W4UX	54,404	SOQRP	N9NE	53,922	SOQRP	WTØA (KE5RX, op)	27,720	SOQRP	K9YC	9,288	SOQRP
AA1CA	29,187	SOQRP	K5LG	51,000	SOQRP	N8HP	35,459	SOQRP	KEØG	24,360	SOQRP	N6CMF	8,405	SOQRP
KN1H	16,873	SOQRP	AA4XX	49,640	SOQRP	K8MR	34,221	SOQRP	WØMRZ	20,808	SOQRP	N9ADG	4,896	SOQRP
W2TZ	143,092	SOLP	N4ZI	86,616	SOLP	NE9U	169,560	SOLP	KØTI	170,694	SOLP	KØPP	102,564	SOLP
NW2K	107,700	SOLP	NN3W	84,480	SOLP	WB8JUI	157,035	SOLP	WØUO	148,104	SOLP	W7YAQ	54,720	SOLP
N3QE	107,596	SOLP	K1DC	78,720	SOLP	K8NVR	154,392	SOLP	NØAT	137,600	SOLP	AI7H	46,008	SOLP
N1UR	101,166	SOLP	K4LTA	75,966	SOLP	K9MMS	137,060	SOLP	KIØI	135,830	SOLP	AC7A	44,968	SOLP
W1UE	99,072	SOLP	K4ORD	75,880	SOLP	K9IG	133,861	SOLP	KØTT	120,615	SOLP	K2PO	42,432	SOLP
VY2ZM	587,928	SOHP	K3ZM	468,336	SOHP	VE3EJ	406,692	SOHP	WØSD (WØDB, op)	350,892	SOHP	N7GP (N5IA, op)	258,588	SOHP
AA1K	395,520	SOHP	WD5R (N5ECT, op)	321,048	SOHP	K1LT	372,411	SOHP	K5RX	327,348	SOHP	N9RV	191,282	SOHP
K1DG	362,706	SOHP	N4UA	251,748	SOHP	K9CT	363,634	SOHP	NØTT	315,700	SOHP	KG7H	162,864	SOHP
NO3M	342,760	SOHP	KV4FZ	227,290	SOHP	K9AY	301,821	SOHP	WD5COV	210,235	SOHP	VE7CC	152,152	SOHP
VA2EW	331,430	SOHP	N4XD	219,336	SOHP	AA9A	249,200	SOHP	K9DU	203,596	SOHP	WA7LT	133,578	SOHP
K3WW	295,495	MH	N8OO	398,520	MH	WB9Z	408,044	MH	NØNI	491,631	MH	N7XU	170,443	MH
VE2OJ	277,128	MH	N3UA	394,208	MH	K8KS	343,640	MH	K5KC	303,450	MH	N6KI	99,876	MH
KF3B	259,787	MH	N1LN	387,321	MH	VE3TA	331,934	MH	NX5M	301,875	MH	K7OX	92,086	MH
N3RR	256,965	MH	WJ9B	353,787	MH	W8MJ	291,182	MH	K5NA	294,630	MH	N3QQ	85,125	MH
N9NC	236,250	MH	W4PM	248,724	MH	W9IU	196,084	MH	K7NJ	227,136	MH	W7YS	84,807	MH
W1WBB	62,853	ML	N4GG	66,975	ML	K8BL	178,572	ML	WØDLE	138,780	ML	KB7Q	59,570	ML
W2CCC	62,244	ML	W4UAL	64,320	ML	VE3MGY	165,968	ML	NØIM	52,185	ML	K7XC	55,280	ML
W3KB	31,416	ML	WU4G	36,639	ML	K4FT	157,140	ML	WØAD	34,707	ML	VE7CA	37,184	ML
K1DM	31,034	ML	W4CWA	30,351	ML	K8UO	61,124	ML	NØHJZ	29,260	ML	W8KA	35,190	ML
K2ZC	28,826	ML	K4FTO	29,568	ML	WE9R	56,088	ML	NS7B	19,836	ML	N6KZ	15,312	ML

Division Winners

Single-Operator, QRP

Atlantic	K2ZR	63,516
Central	N9NE	53,922
Dakota	NØUR	36,960
Delta	K5LG	51,000
Great Lakes	N8BB	83,951
Hudson	W2DPT	11,266
Midwest	WØGJ	77,000
New England	N2KW	62,208
Northwestern	N9ADG	4,896
Pacific	K9YC	9,288
Roanoke	WB4MSG	60,970
Rocky Mountain	KIØII	13,488
Southeastern	W5NZ	10,040
Southwestern	N7IR	51,680
West Gulf	W5ESE	5,643
Canada	VE3CV	23,409

Single-Operator, LP

Atlantic	W2TZ	143,092
Central	NE9U	169,560
Dakota	KØTI	170,694
Delta	N4ZI	86,616
Great Lakes	WB8JUI	157,035
Hudson	K2UF	64,870
Midwest	KIØI	135,830
New England	N1UR	101,166
Northwestern	KØPP	102,564
Pacific	N6RK	42,408
Roanoke	NN3W	84,480
Rocky Mountain	NN7A	52,219
Southeastern	K1DC	78,720
Southwestern	AC7A	44,968
West Gulf	WØUO	148,104
Canada	VE3XL	114,807

Single-Operator, HP

Atlantic	AA1K	395,520
Central	K9CT	363,634
Dakota	WØSD (WØDB, op)	350,892
Delta	WD5R (N5ECT, op)	321,048
Great Lakes	K1LT	372,411
Hudson	NX2X	136,986
Midwest	NØTT	315,700
New England	K1DG	362,706
Northwestern	N9RV	191,282
Pacific	N6RO	98,370
Roanoke	K3ZM	468,336
Rocky Mountain	WD5COV	210,235
Southeastern	KV4FZ	227,290
Southwestern	N7GP (N5IA, op)	258,588
West Gulf	K5RX	327,348
Canada	VY2ZM	587,928

Multioperator, HP

Atlantic	K3WW	295,495
Central	WB9Z	408,044
Dakota	WØMR	94,858
Delta	N8OO	398,520
Great Lakes	K8KS	343,640
Hudson	K2TTT	170,688
Midwest	NØNI	491,631
New England	N9NC	236,250
Northwestern	N7XU	170,443
Pacific	W6DR	65,676
Roanoke	N3UA	394,208
Rocky Mountain	K7NJ	227,136
Southeastern	WJ9B	353,787
Southwestern	N6KI	99,876
West Gulf	K5KC	303,450
Canada	VE3TA	331,934

Multioperator, LP

Atlantic	W2CCC	62,244
Central	WE9R	56,088
Dakota	NØIM	52,185
Delta	WF7T	27,054
Great Lakes	K8BL	178,572
Hudson	K2ZC	28,826
New England	W1WBB	62,853
Northwestern	KB7Q	59,570
Pacific	K7XC	55,280
Roanoke	WU4G	36,639
Rocky Mountain	WØDLE	138,780
Southeastern	N4GG	66,975
Southwestern	W8KA	35,190
West Gulf	NS7B	19,836
Canada	VE3MGY	165,968