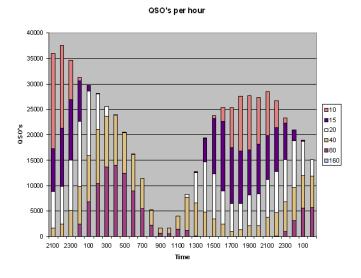


# ARRL November Phone Sweepstakes 2011 Results

by Steve London, N2IC <n2ic@arrl.net>

# "Next year finally came!"

Finally! For years, we have been telling you that the start of solar cycle 24 was imminent and sunspots would return – next year! Well, beginning just a few months before Sweepstakes our dreams came true. 'Ol Sol was back in force! 10, 15 and 20 meters were again the premier daytime bands in Phone Sweepstakes on November 12<sup>th</sup> and 13<sup>th</sup>. We could spread out in the wide-open spaces of 10 meters and when we needed some closer-in contacts there was some breathing room on 15 and 20 meters. Shortly after the Sun went down the MUF (Maximum Usable Frequency) dropped like a rock, leaving 40 and 80 meters to be the night-time workhorses.



This chart shows the number of QSOs made on the bands during each hour of the contest. Compare the terrific 10 meter totals with the band's barely visible presence last year!

For those licensed within the last 10 years, you could now start to believe the tales of the old-timers. For those with new Technician-class licenses, you could fully experience Sweepstakes for the very first time! This year, 1827 logs were submitted. Adding in those that did not submit a log but made a number of contacts, we had nearly 5000 participants. Over 635,000 QSOs were

reported in the submitted logs with almost equal numbers on 15, 20 and 40 meters (approximately 145,000) and equal totals on 10 and 80 meters (approximately 100,000).

Entries by Category								
Category # Clean Sweeps Total Entries								
Q	7	75						
Α	80	887						
В	86	307						
M	48	79						
ML	16	64						
U	136	278						
UL	30	118						
S	7	19						
Total	410	1827						

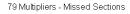
Choosing your contest meal takes on a whole new meaning in the sidebar "Sweepstakes with a Heathkit Lunchbox" by John Zitzelberger, W6GL at the end of the writeup!

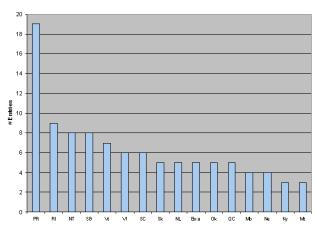
#### The Not-So-Elusive Clean Sweep

Thanks to the great conditions and favorable activity from all 80 sections, this year provided the best shot at a Clean Sweep (working at least one station in each of the 80 Sweepstakes sections) in many years. This year, 410 participants earned a Clean Sweep, an increase of 123 sweeps over 2010. 36 competitors mentioned in their comments that this was their first Clean Sweep ever. Congratulations!

Another 140 operators came really close to a sweep – missing only one section. What section was the most challenging this year? Just like last year, it was Puerto Rico (19 missed sweeps – see the chart below). In a real

surprise, Rhode Island was the next toughest with nine missed sweeps. Tied for the third most-difficult were Northwest Territories and Santa Barbara (!). For those of you still shaking your head, those four sections were well represented thanks to NP4Z, NP4A, KH2RU/KP4, WP4I, KP4DKE, W1WBB, W1XX, AB1JV, K1VSJ, KA1GEU, VE8EV, VY1EI, VE8GER, VE8NSD, WA6FGV, KI6QDH, W6RFU, N6K, W1PR, AG6AY, and W6RSP. Many thanks to those ops for making their rare sections available.





These were the sections missed by stations reporting having worked 79 sections.

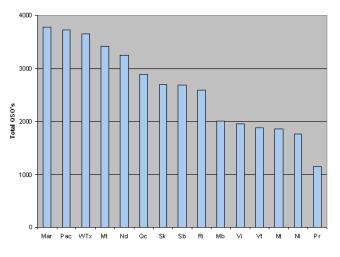
In the next tier of uncommon sections were Vermont, Virgin Islands and South Carolina. Newfoundland-Labrador, last year's 2<sup>nd</sup> place, slipped to 9<sup>th</sup> (thanks, VO1s and VO2s!).

First 2	20 Cle	an Sweeps
Station	Time	Last Section Worked
WA3A	0232	QC
K4AB	0309	SC
K4BAI	0337	SC
K1KD	0436	ND
K4EU	0534	VT
K3MM	0556	VT
K2NNY	0650	PR
N1LN	0654	PR
N3RR	0655	PR
K4OV	0656	PR
W3LL	0656	PR
W5RU	0657	PR
N3OC	0658	PR
N4PN	0700	PR
W4NF	0701	PR
KM6I	0703	SFL
N2BJ	0705	PR
W6YI	0706	PR
WBØTEV	0707	PR
N2MM	0708	PR

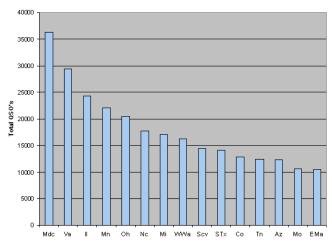
Who was the first to earn a Clean Sweep this year? That honor goes to Steve, WA3A who made the sweep in the Single-Op, High Power category at 0232Z. His last section? Quebec. There were only a few more Clean

Sweeps until the dam broke at 0650Z when Phil, NP4Z started holding court on 40 meters, making many folks happy! (A complete <u>table</u> of stations making a Clean Sweep is provided at the end of this writeup.)

#### Least-Worked Sections



#### Most-Worked Sections



The least-worked and most-worked sections in the contest.

## **Record-Setting Performances**

This year, several new categories were added to Sweepstakes. The existing Unlimited and Multioperator categories were split into Low Power and High Power Categories. The existing Unlimited records became the Unlimited, High Power (U) records and the existing Multioperator records became the Multioperator, High Power (M) records. And, of course, all of the section and division winners in the Unlimited, Low Power (UL) and Multioperator, Low Power (ML) categories established new record benchmarks. As a result, this year there were 12 new division records and 30 new section records.

(Complete tables of Division Winners and Regional Leaders can be found at the <u>end</u> of the writeup.)

New Section and Division Records								
Call	Score	Category	Section					
K1BX	233,760	Α	NH	New England	*			
KH6LC (NH6V op)	255,360	Α	Pac	Pacific	*			
W4LT	194,720	Α	WCF	Southeastern				
KL7RA (N6TR op)	337,440	В	Ak	Northwestern				
W2ID	252,000	В	Epa	Atlantic				
VY2ZM (K1ZM op)	358,240	В	Mar	Canada	*			
VE4EAR	253,760	В	Mb	Canada				
K8PO	270,192	В	Me	New England				
N9RV	367,200	В	Mt	Northwestern	*			
AB3CX	214,080	В	NNY	Atlantic				
VE8EV	266,080	В	NT	Canada				
NC1I (K9PW op)	279,520	В	Wma	New England				
KØDU	297,280	M	Со	Rocky Mountain				
K4OV	288,000	М	NC	Roanoke	*			
NW2K	93,120	Q	WNY	Atlantic	*			
W4UAL	159,360	S	Ga	Southeastern	*			
W1AF	125,768	S	Ema	New England				
KØHC	254,560	S	Ks	Midwest	*			
W6YX	256,480	S	SCV	Pacific	*			
W5UH	43,520	S	STx	West Gulf				
NØXR	271,200	U	la	Midwest	*			
K1KD	264,480	U	Mn	Dakota	*			
K2FF	160,480	U	Ms	Delta				
WA5ZUP	249,120	U	NM	Rocky Mountain				
VE3RZ	144,160	U	On	Canada				
N6HC	226,400	U	Org	Southwestern				
NS4SC	87,200	U	SC	Roanoke				
W6PZ (K6SRZ op)	261,760	U	SF	Pacific				
W4AS	97,012	U	SFI	Southeastern				
WB1GQR (W1SJ op)	310,560	U	Vt	New England	*			

#### **Close Races**

Every year there are a number of very close section races. Some of these are completely accidental – the two participants didn't even know they were competing in the same category, while others were clearly rivalries extending back many years.

Close Races								
Winner	Runner-Ups	Section	Category	Margin of Victory (#QSOs)				
AA1JM	W2JU	Ct	Α	1				
KB3OK	WA3KYY, K8GU	MDC	Α	2,29				
KA1C	KD1O	Me	Α	7				
NØLIA	KBØQH	Ne	Α	7				
VE2JM	VE2HIT	Qc	Α	8				
W7WEC	WR5J	WWa	Α	6				
K9CT	K9BGL	II	В	40				
AF1T	KK1KW	Nh	В	18				
W1WBB	AB1JV	Ri	UL	19				
W5WW	WBØTEV	NTx	U	29				
K9YC	K6MM	SCV	U	7				
N3OC	WA3EKL,WR3Z	MDC	М	35,52				
W4MYA	K4VV	Va	М	31				

This year, the most exciting close race was in the Single-Op, Low Power category in Connecticut. David, AA1JM won over Alec, W2JU by just one QSO! Neither David nor Alec operated for the full 24 hours so there was an opportunity for either of them to win. In the New

Hampshire Single-Op, High Power category only 18 contacts separated AF1T and KK1KW out of a total of 1300 contacts.

These close races emphasize the importance of accuracy in copying and logging – one of the reasons for having contests. <u>Tables</u> for the Accuracy Honor Roll and Error Rates by Category follow the writeup.

2011 Phone Sw	eepstake	es - Top Ten by Ca	ategory			
Call	Score	Call	Score			
Single Operator, High	Power	Single Operator Unlimited, Low Power				
N9RV	367,200	KØTI	111,680			
VY2ZM (K1ZM, op)	358,240	KK6MC	98,720			
KH7X (KH6ND, op)	352,000	KØAD	96,800			
W7WA	343,360	KØTG	96,000			
KL7RA (N6TR, op)	337,440	N3TD	92,000			
K7RL	327,040	WU9B	90,168			
NR5M	313,280	N4RA	89,600			
N2IC (NØQO, op)	300,000	KØMPH	85,920			
NN3W	296,000	W1WBB	81,600			
K5WA	285,920	AB1JV	78,560			
Single Operator, Low I	Power:	Multioperator, High Pov	ver			
VA7RR	256,160	W6YI	372,160			
KH6LC (NH6V, op)	255,360	W5RU	310,880			
K1BX	233,760	K7IR	303,040			
W4AAA (KK9A, op)	223,200	KØDU	297,280			
N4PN	222,880	WØNO	289,920			
K9ZO	217,120	NP2B	288,960			
W7YAQ	212,000	K4OV	288,000			
NØKK	207,360	WY7SS	264,480			
KF6T	198,880	K1KP	242,720			
W4LT	194,720	VE6AO (VE6TC, op)	235,736			
Single Operator, QRP		Multioperator, Low Pow	er			
NN7SS (K6UFO, op)	108,160	K2NNY	198,720			
VA7AAA (VE7SZ, op)	99,200	N5DO	180,000			
W1MR	96,800	K7VU	157,440			
NW2K	93,120	N8HR	153,920			
KØKE	92,320	VE3MGY	130,560			
N3UR	87,848	N6KI	100,640			
KØRH	85,162	KØORB	95,326			
NDØC	81,844	KC8IMB	95,040			
KDØS (WDØT, op)	79,716	KKØSD	87,828			
W4SVO	77,616	W8VI	86,240			
Single Operator Unlim High Power	ited,	School Club				
WB1GQR (W1SJ, op)	310,560	W6YX	256,480			
K6LL	282,560	KØHC	254,560			
W7RN (WX5S, op)	276,320	W4UAL	159,360			
K3MM	274,080	W1AF	125,768			
NØXR	271,200	WØEEE	93,760			
N4ZZ	269,120	W1YK	89,076			
K1KD	264,480	W8SH	60,480			
W6PZ (K6SRZ, op)	261,760	K2CC	59,250			
W4MR (AA4NC, op)	250,560	KØVVY	56,736			
WA5ZUP	249,120	W6RFU (KB3RPN, op)	49,800			

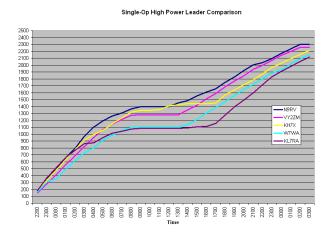
#### Single-Op, High Power (B)

Every year there is a pack of Big Dogs going after the Single-Op, High Power title. The names change slightly from year-to-year but not the level of intensity. This year, Pat, N9RV worked hard to get his Montana antenna farm in shape for the competition and was well-rewarded. Pat took the lead after 5 hours, and held it to the end, relying primarily on 10 meters in the daytime, and 40 meters at night. While Pat has a very capable SO2R (single-op, two radio) station, his SS operation was done entirely with one radio. Last year's winner, Jeff, K1ZM operating

from his VY2ZM Prince Edward Island QTH placed 2<sup>nd</sup>, 56 contacts behind N9RV. Jeff tried to use 20 meters to his advantage during the daytime but much of the activity had moved to 10 and 15 meters where Jeff's 10 and 15 meter signal skipped over some of the high-population areas.

Moving to the other side of the ARRL domain, 3<sup>rd</sup> place was captured by Mike, KH6ND operating from KH7X. Mike got off to a great start but once 20 meters closed at 0330Z, he struggled on the low bands until 1700Z. Dan, W7WA took 4<sup>th</sup> place from Western Washington. It was tough sledding for Dan on the low bands Saturday night, falling more than 250 QSOs behind N9RV – a margin that stayed nearly constant throughout the day on Sunday.

Larry ("Tree"), N6TR travelled to KL7RA to take 5<sup>th</sup> place. Tree got off to a great start – 186 QSOs in the first hour followed by 180 QSOs in the next hour. That may very well be a Sweepstakes rate record. Unfortunately, the curse of the north came with nightfall and Tree quickly fell behind. However, despite high winds, antenna damage, and power outages just before the contest, Tree handily set a new Alaskan record.



This chart of Single-Op, High Power leader scores shows the hour-by-hour comparison for these five iron men of contesting.

Rich, NN3W, was the only East Coast US station to break into the Top Ten for Single-Op, High Power, taking 9<sup>th</sup> place.

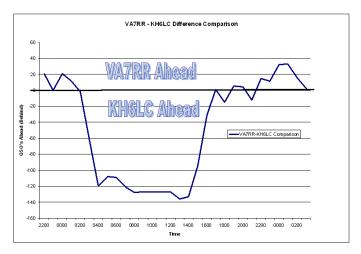
# Single-Op, Low Power (A)

Single-Op, Low Power continues to be the most popular category for SS participants with 887 submitted logs and a Top Ten distributed across all parts of North America. This year, the spread between the winner and second place was virtually a tie. Before taking into account scoring penalties, a mere two QSOs separated the winner and runner-up. Congratulations to both Gary Caldwell,

VA7RR the victor, and Rob Van Geen, NH6V operating from KH6LC!

It was a see-saw battle between these two competitors as shown in the chart below. Gary got off to a great start, 21 QSOs ahead of Rob after the first hour but Rob made up that gap in the second hour. The margin between them was no more than 21 QSOs until 0200Z. At that point Gary lost 20 meter propagation while Rob continued to have two more great hours on 20 meters thanks to his Hawaii "Big Island" QTH. By 0400Z Rob had a 120-QSO lead over Gary.

This margin stayed essentially constant through the nighttime hours. Both competitors began their off-time around 0830Z, biding their time until sunrise brought the high bands back to life. With Gary's British Columbia sunrise being two hours before Hawaiian sunrise, Gary made up a 136-QSO deficit to take a 1-QSO lead at 1700Z. From there the lead shifted back-and-forth with no clear advantage for either competitor. When the dust settled and the logs were adjudicated VA7RR won by five QSOs (including scoring penalties).



Art, K1BX led all East Coast challengers, placing 3<sup>rd</sup> and setting a new section and division record. Perennial Top Ten finisher John, KK9A operating from W4AAA took 4<sup>th</sup> place without benefit of a 10 meter antenna. Paul, N4PN placed fifth.

#### Single-Op, QRP (Q)

This year 75 brave souls entered in the QRP category. Congratulations to the winner, Mark, K6UFO operating from NN7SS near Seattle. Despite running only 5 watts, Mark sustained some nice runs on 10 meters with 676 QSOs and a Clean Sweep.

Chris, W1MR (ex-KA1LMR) took 2<sup>nd</sup> place, moving up from 6th place in 2010 with 177 more QSOs and a Clean Sweep. In 3<sup>rd</sup> place is Dean, NW2K. This appears to have been Dean's first serious QRP SS effort and he set a new

section and division record as well as turning in a Golden (perfect) Log! Dean had good success running on 40 meters during the daytime. Phil, NØKE moved up to  $4^{th}$  place this year and Bob, N3UR moved up from  $15^{th}$  to  $5^{th}$  place.



Dale Slater got off to a fast start in contesting at the KL2R Two Rivers Multioperator station, assisted by Carl WL7BDO. (Photo by Larry KL7/N1TX)

#### Unlimited, High Power (U) Category

The Unlimited, High Power category was very popular this year with 278 entries. Congratulations to Mitch, W1SJ operating from WB1GQR in Vermont on his second consecutive victory in the Unlimited category and a new division record. Mitch ran away from the pack of competitors with 212 more contacts this year, relying primarily on 80 meters at night and 10 and 20 meters during the day with only a few QSOs on 15 meters.

Second place went to Dave, K6LL operating from his postage-stamp sized QTH in Arizona. While racking up big numbers on 40 through 10 meters, Dave made but 1 QSO on 80 meters! Matt, WX5S operating from W7RN in Nevada placed 3<sup>rd</sup>, only 39 QSOs behind Dave. Just 14 QSOs back, Tyler, K3MM led the Potomac Valley Radio Club crew with his 4<sup>th</sup>-place finish. Tyler made only 3 QSOs on 10 meters, relying almost entirely on 20 meters for his daytime operating. Dean, NØXR moved up from 10<sup>th</sup> to 5<sup>th</sup> place this year, setting a new division record.

#### Unlimited, Low Power (UL)

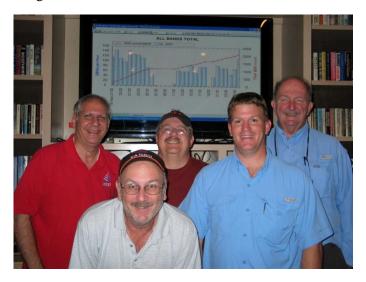
118 participants tried this new category this year. Leading the pack was Dan, KØTI operating from Minnesota. Dan made 698 QSOs and a Clean Sweep in a part-time effort. In 2<sup>nd</sup> place from New Mexico was Duffey, KK6MC. Duffey did it all with inverted-vees

and lots of persistence. The next two places were also from Minnesota. Congratulations to Al, KØAD and John, KØTG. Only five QSOs separated these competitors. Placing fifth was Eric, N3TD – his first Sweepstakes using his own station.

In almost all ARRL sections, scores in the Unlimited, Low Power category were generally much lower than in the Single-Op, Low Power category leaving lots of opportunities for new records to be set in 2012 and beyond!

#### **Multioperator**, **High-Power** (M)

This year the Multioperator category was split into separate High Power and Low Power categories. 79 entries were received for the High Power category. The W6YI team of Jim,W6YI, John K6AM, Dan N6MJ and Dennis, N6KI, claimed the #1 spot for the fifth consecutive year! The San Diego dynasty continued with 2327 QSOs! The W5RU Louisiana team moved up in the rankings from 6th place in 2010 to 2<sup>nd</sup> place in 2011. Congratulations to the W5RU team!



The W5RU Team, #2 in the Multiop, High Power Category, (I-r) Ted, KN5O; Steve, KG5VK; Mark, K5ER; Scott, W5WZ; and Dallas, K1DW. (Photo by Steve, KG5VK)

Another big jump in placement came from the K7IR team in Eastern Washington. Congratulations to K7IR, K7XH, K7XS, K7EDX, N9ADG, and WA7IR, jumping from 10<sup>th</sup> place to 3<sup>rd</sup> place! In 4<sup>th</sup> place was the Colorado team of KØDU and KØCL operating from KØDU's QTH.

The next three slots were incredibly close – with only 12 QSOs separating 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> places. Congratulations to team WØNO in Kansas, team NP2B in the Virgin Islands, and team K4OV in North Carolina.

#### **Multioperator**, **Low-Power** (ML)

In the first year of the Multioperator, Low-Power category, 64 entries were received. The top three slots went to teams operating from rarer sections – Northern New York, West Texas and Wyoming.

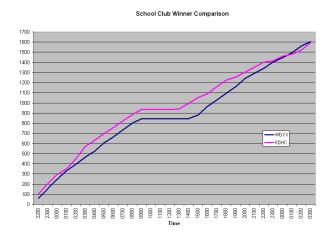
Moving from the High-Power to the Low-Power category was this year's winner, K2NNY operated by K2DB, K2CS, N2TWI, AF2K, K2QZR, and KC2QLJ. The team made 1242 QSOs with over half of their contacts on 80 meters. The team clearly struggled on the other bands.

Second place went to the N5DO team of N5DO and KE5OG. They made good use of 40 meters at night and all three high bands during the daytime despite being handicapped by a low, non-rotating antenna. K7VU and K7RDC operating from K7VU came in third, making good use of 15 and 10 meters. Neither the second or third-place teams made many QSOs on 80 meters – a tough band with low power from the thinly populated flyover zone!

The Ohio team at N8HR made 962 QSOs and a Clean Sweep for the #4 spot. 40 and 80 meters were good to them but the high bands were not! A similar case can be made for the 5<sup>th</sup>-place husband-wife team at VE3MGY making only 5 QSOs on 15 meters and no QSOs on 10 meters.

#### School Club (S)

19 schools competed in the School Club Category in 2012. Last year's battle between Stanford University, W6YX and Hesston College, KØHC continued unabated as shown in the following chart. Last year W6YX won by seven QSOs. This year, it by was 12 QSOs! Unlike last year Stanford got off to a slow start, down 43 QSOs in the first hour and 105 QSOs at 0300Z.



The earlier sunrise in Kansas gave the Hesston crew an advantage in the early morning, ahead by as much as 172 QSOs. Team Hesston may have been pretty confident at this point but then things started to unravel. Team Stanford took advantage of great daytime conditions on 10 and 15 meters to crawl back into contention. 63 QSOs behind at 2000Z, 12 QSOs behind at 2300Z, finally pulling ahead at 0030Z for victory at the 0300Z bell!

The University of Alabama club, W4UAL placed third. Harvard University, W1AF moved up from 7<sup>th</sup> to 4<sup>th</sup> place. The Missouri University of Science and Technology, WØEEE jumped from the 10<sup>th</sup> to the 5<sup>th</sup> slot this year by almost doubling their number of QSOs.

Other schools making the Top Ten were Worcester Polytechnic Institute, W1YK; Michigan State University, W8SH; Clarkson College, K2CC; South Dakota School of Mines, KØVVY; and University of California-Santa Barbara, W6RFU.



The School Club category's 7<sup>th</sup>-place entry, Michigan State University Team W8SH, (front-to-rear) Hanna, KD8OKM; Scott, KB8VWM; Mike, KB8ZGL; and Andrew, KE7ESD. (Photo by Gregg, WB8LZQ)

## **Club Competition**

Thanks to the many clubs who rallied their troops into getting on the air for Sweepstakes. For many club members Sweepstakes and Field Day are their major onthe-air efforts of the year. We can't thank the clubs, and of course, their members for their commitment, dedication and understanding families. This year, 1522 participants submitted their CW and Phone SS scores towards their club aggregate scores.

In the Unlimited Club category, the Potomac Valley Radio Club ran away from the other mega-clubs with 291 entries for 22.9 million points. This is a 6% increase in

entries and total score over 2010! In second place was the Northern California Contest Club with 189 entries totaling 14.8 million points. The Society of Midwest Contesters again took third place with 137 entries and 8.1 million points.

In the Medium Club category, the Southern California Contest Club emerged victorious with 47 entries and 4.5 million points. That's an impressive 96,000+ points per entry! The Central Texas DX and Contest Club moved up to second place with their 37 entries for 3.8 million points. There was a close race between the 3<sup>rd</sup>-place Frankford Radio Club, and 4th-place Arizona Outlaws Contest Club. Just one more high scoring entry from the Outlaws would have propelled them ahead. 5<sup>th</sup> and 6<sup>th</sup> place were even closer, with only 20,496 points separating the Tennessee Contest Group from the Western Washington DX Club. To put that difference in perspective, it's only a single 150-QSO entry.

In the Local Club Category, the Albuquerque-based New Mexico Big River Contesters took 1st place with 9 entries, averaging 95,821 points per entry. Well done! The Iowa DX and Contest Club took 2<sup>nd</sup> place and the Kansas City DX Club took 3<sup>rd</sup> place. Only 10,000+ points separated the 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup>-place clubs – the Delara Contest Team, Spokane DX Association, and Bristol (TN) Amateur Radio Club.

Score Entries

#### **Affiliated Club Competition**

	Score	∟ntries
Unlimited Category		
Potomac Valley Radio Club	22,897,542	291
Northern California Contest Club	14,750,346	189
Society of Midwest Contesters	8,096,720	137
Minnesota Wireless Assn	7,224,936	121
Yankee Clipper Contest Club	6,797,492	95
Florida Contest Group	4,743,018	62
Medium Category		
Southern California Contest Club	4,525,364	47
Central Texas DX and Contest Club	3,811,970	37
Frankford Radio Club	3,371,364	49
Arizona Outlaws Contest Club	3,203,376	50
Tennessee Contest Group	3,050,026	47
Western Washington DX Club	3,029,530	34
Grand Mesa Contesters of Colorado	2,432,252	24
Mad River Radio Club	2,320,848	34
North Texas Contest Club	2,062,560	22
Alabama Contest Group	1,925,290	29
Contest Club Ontario	1,709,964	28
South East Contest Club	1,643,462	22
Hudson Valley Contesters and DXers	1,562,366	22
Willamette Valley DX Club	1,473,726	24
Rochester (NY) DX Assn	1,094,804	22
CTRI Contest Group	810,768	9
ORCA DX and Contest Club	793,326	11
Saskatchewan Contest Club	786,144	9
Northern Rockies DX Association	725,514	5
Maritime Contest Club	689,632	13
Kentucky Contest Group	688,252	10
Allegheny Valley Radio Association	663,686	10
North Coast Contesters	657,494	8
Order of Boiled Owls of New York	635,456	9
Contoocook Valley Radio Club	634,712	6

Alberta Clippers Louisiana Contest Club Utah DX Assn Contest Group Du Quebec BC DX Club East Coast Canada Contest Club Motor City Radio Club Carolina DX Association Western New York DX Assn	572,560 546,740 494,794 490,462 400,962 308,160 257,224 254,272 230,524	4 5 9 11 4 4 10 9
Local Category New Mexico Big River Contesters Iowa DX and Contest Club Kansas City DX Club Delara Contest Team Spokane DX Association Bristol (TN) ARC 599 DX Association Oakland County Amateur Radio Society Hazel Park ARC Lincoln ARC Trojan ARC West Park Radiops Stoned Monkey VHF ARC Portage County Amateur Radio All Amateur Radio Club Sterling Park ARC COTTek Radio Association Badger Contesters Pueblo West Amateur Radio Club Southern Berkshire ARC Mississippi Valley DX/Contest Club South Jersey Radio Assn Meriden ARC Arrow Communications Assn OH-KY-IN ARS Great South Bay ARC Saginaw Valley ARA West Allis RAC Boeing Employees ARS - St. Louis Bergen ARA Metro DX Club Central Michigan ARC Granite State ARA Alexandria Radio Club St. Charles Amateur Radio Club South Texas DX and Contest Club	862,386 671,378 644,412 444,098 439,658 434,646 359,698 314,184 262,342 236,518 193,498 163,656 149,034 148,032 126,320 125,320 116,444 115,058 106,852 104,074 100,272 88,204 86,522 82,542 82,542 82,280 63,792 63,754 60,184 55,712 55,634 50,508 46,250 37,834	9 5 5 8 8 8 9 9 9 3 3 4 4 4 6 6 4 4 4 3 3 3 7 7 3 3 3 3 3 4 4 3 3 3 3 4 4 3
Rowan ARS Nanaimo Amateur Radio Hays-Caldwell ARC	33,596 25,410 10,020	3 3 3

#### **Acknowledgments**

Many thanks to "Tree" N6TR for his hard work checking the logs and to George, K5TR for logistical and infrastructure support. In addition, K5OT, K9ZM, K9JK, KB9OWD, N6TV, and K9DUR painstakingly typed in handwritten logs so that they could be properly adjudicated.

# **Accuracy Honor Roll**

Stations with more than 500 QSOs and Error Rate below 1%

Call	# QSOs	Category	Error Rate (%)
NW2K	582	Q	0.0
K3AN	669	Α	0.3
K5TA	803	Α	0.3
N2QT	627	U	0.3
W7YAQ	1336	Α	0.4
WQ5L	525	Α	0.4
NN7SS	684	Q	0.4
K6TU	851	U	0.5
N6YEU	651	Α	0.6
W1WBB	513	UL	0.6
NDØC	521	Q	0.6
WA3A	1578	В	0.6
WDØECO	538	U	0.6
K4B	1461	M	0.7
ND8L	672		0.7
W8TM	710	Α	0.7
KC5R	815	Α	0.7
VE9AA	568	В	0.7
K1BX	1478	Α	0.8
K4EU	725	В	0.8
K2KR	801	М	0.8
K6MM	1275	U	0.8
K6GT	629	U	0.8
KC8IMB	602	ML	0.8
KD4D	1456	В	0.8
N2UT	782	В	0.9
N9SJ	1158	M	0.9
W2ID	1595	В	0.9
W3SO	940	В	0.9
W6SR	638	U	0.9
K4EDI	643	В	0.9
KD5LNO	585	Α	0.9
VE2AWR	542	Α	0.9
W7ZRC	878	Α	0.9

# **Error Rates by Category**

Stations Making Over 100 QSOs           Category         Average         Best         Worst           High-Power         4.3         0.0         26.8           (Top Ten only)         2.2         1.6         3.5           Low-Power         4.5         0.0         67.0           (Top Ten only)         1.7         0.4         3.8           QRP         3.2         0.0         9.7           (Top Ten only)         2.0         0.0         4.1			
Category	Average	Best	Worst
	4.3	0.0	26.8
(Top Ten only)	2.2	1.6	3.5
Low-Power	4.5	0.0	67.0
(Top Ten only)	1.7	0.4	3.8
QRP	3.2	0.0	9.7
(Top Ten only)	2.0	0.0	4.1
Unlimited – High Power	3.3	0.3	34.2
(Top Ten only)	2.2	1.3	3.4
Unlimited – Low Power	3.9	0.0	19.4
(Top Ten only)	2.9	0.6	4.7
Multi-Operator – High Power	4.2	0.4	14.4
(Top Ten only)	3.9	2.5	6.7
Multi-Operator – Low Power	5.8	0.3	26.6
(Top Ten only)	3.5	0.8	8.9
School	5.5	1.2	15.1
(Top Ten only)	4.1	1.2	9.5

# **Clean Sweep Winners**

Olouli C	moop .	•			
AA1JM	K5IID	KN4KL	N9AUG	W2CDO	WA5OYU
AA4HV	K5KG	KO7X	N9AX	W2GPS	WA5ZUP
AA6K	K5MV	KQØC	N9CK	W2ID	WA6FGV
AA6PW	K5NA	KR2E	N9GH	W2LV	WA6KEK
AA6YX	K5QXR	KS2G	N9IO	W2PV	WA6KHK
AB1JV	K5RQ	KS6A	N9LYE	W2VQ	WA7DX
AB2E	K5TA	KTØR	N9OK	W2YR	WBØLJK
AB2ZY	K5TR	KT6VV	N9REP	W3CB	WBØRUR
AB3CX	K5VIP	KUØG	N9RV	W3IDT	WBØSOK
AB4SF	K5WA	KU1T	N9SJ	W3KX	WBØTEV
			N9TF	W3LL	
AB5GG	K5ZD	KU4BP			WB1GQR
AB7R	K6GT	KV2M	N9WEW	W3PP	WB4JFS
ACØXR	K6JJ	KV3B	N9WKW	W3TZ	WB4OMM
AC7JM	K6LA	KZ2I	NA4K	W3UL	WC4J
AD1DX	K6LL	NØBK	NC1I	W3WN	WC5B
AD5XD	K6MMM	NØHJZ	ND8L	W3YY	WC6H
AE1P	K6MM	NØKK	NG2P	W3ZGD	WDØECO
AE5BR	K600	NØMA	NK6A	W4AAA	WD8S
AF1T	K6TU	NØXR	NK7J	W4EE	WE6Z
AF6GL	K6XX	N1CC	NM6E	W4FT	WF4U
AF7Z	K6ZH	N1EU	NN2L	W4GAC	WL7E
AIØQ	K7HP	N1KWF	NN3W	W4JAM	WM3O
AJ4A	K7IR	N1LN	NN5T	W4LT	WM7D
AL1G	K7KU	N1QM	NN6CH	W4ML	WQ5L
AL9A	K7NV	N1WR	NN7SS	W4MR	WR3Z
KØAD	K7RL	N2BJ	NO2X	W4MYA	WS7V
KØBJ	K7VU	N2IC	NP2B	W4NF	WV1M
KØCN	K7XC	N2MM	NR5M	W4PK	WW4M
KØDEQ	K8EO	N2NC	NS4SC	W4UAL	WW9R
KØDU	K8GU	N2PKP	NT6X	W4UT	WXØU
KØHC	K8SCH	N2QT	NT8V	W5ASP	WX6V
KØKE	K8SSB	N2SQW	NUØQ	W5GN	WX7P
KØMPH	K9BGL	N3AFT	NW2K	W5IV	WY7SS
KØOU	K9CT	N3AM	NW3H	W5JJ	WZ6Z
KØRC	K9IR	N3OC	NW3R	W5RQ	WZ8T
KØTG	K9JM	N3RR	NX1P	W5RU	W201
KØTI	K9WZB	N3TD	VA2WA	W5UH	
K1BX	K9YC	N3UM	VA3BD	W5WW	
K1BZM	K9ZM	N3WD	VA3PC	W5YM	
K1DQV	K9ZO	N3YIM	VA7AAA	W6AFA	
K1KD	KA1IOR	N4EEB	VA7RR	W6ATV	
K1KNQ	KA9MOM	N4GU	VA7ST	W6FB	
K1KP	KBØHH	N4HXI	VE2AWR	W6KC	
K10U	KBØYH	N4HAI N4JF	VE2AWK VE3MGY	W6NF	
K100	KB7QOS	N4KH	VE3RZ	W6OAT	
K2DSL	KB7QOS KB8TXZ		VE3TW		
-		N4MM		W6PZ	
K2FF	KB8UUZ	N4NW	VE4EAR	W6XU	
K2KR	KB9OWD	N4PN	VE5MX	W6YI	
K2NNY	KB9UWU	N4QQ	VE5SF	W6YX	
K2OAK	KC1ME	N4RA	VE5ZX	W6ZL	
K2OWR	KC1SQ	N4TB	VE6EX	W7FYW	
K2UF	KC8IMB	N4UA	VE7BC	W7IY	
K3AN	KD3FG	N4ZR	VE7CC	W7KNX	
K3BZ	KD4D	N4ZZ	VE7IO	W7LKG	
K3DNE	KD5J	N5DO	VE8EV	W7PP	
K3MIM	KD5LNO	N6AN	VE9AA	W7RN	
K3MM	KE3X	N6AR	VE9HF	W7TVC	
K3STX	KE8FO	N6DZR	VO1MP	W7WA	
K3TN	KF4ZZ	N6EE	VO1TA	W7WW	
K3TW	KF6T	N6FS	VY2ZM	W7YAQ	
K3WW	KF7P	N6HC	WØCEM	W7ZRC	
K3YDX	KG4W	N6KI	WØEEE	W8HP	
K3ZQ	KH6LC	N6MW	WØGM	W8SH	
K4AB	KH7X	N6NZ	WØNO	W8TM	
K4BAI	KIØY	N6RO	WØSD	W8VI	
K4B	KI6QDH	N6YEU	WØYV	W9FZ	
K4EU	KI7Y	N7KA	W1MAW	W9IU	
K4GMH		NIZTT	W1MR	W900	
K4MCK	KJ5T	N7TT	V V I IVII X	*****	
	KJ5T KJ9C	N711 N8AA	W1NG	W9QL	
K4OV					
	KJ9C	N8AA	W1NG	W9QL	
K4OV	KJ9C KK6MC	N8AA N8HR	W1NG W1QK	W9QL W9YK	
K4OV K4PV	KJ9C KK6MC KK7AC	N8AA N8HR N8HTG	W1NG W1QK W1TO	W9QL W9YK WAØBJR	
K4OV K4PV K4QPL	KJ9C KK6MC KK7AC KL2R	N8AA N8HR N8HTG N8II	W1NG W1QK W1TO W1UJ	W9QL W9YK WAØBJR WAØN	
K4OV K4PV K4QPL K4SSU	KJ9C KK6MC KK7AC KL2R KL7RA	N8AA N8HR N8HTG N8II N8IVE	W1NG W1QK W1TO W1UJ W1WBB	W9QL W9YK WAØBJR WAØN WA2JQK	

#### **Sweepstakes with a Heathkit Lunchbox**

by John Zitzelberger, W6GL

Although this log submission consists of but one contact, it represents a most satisfying and challenging Phone Sweepstakes possible for me. Since 1970 I have operated the SS in all shapes and forms. The first time was as a Novice, later teaming with local teen friends who otherwise would have blown each other off the air due to close proximity. This led to many multi-op efforts over the next decade.

Later I became interested in QRP, with quite a few years undertaking both CW and Phone efforts under this class; even making a Clean Sweep a few times. Looking again for a different experience, a "Zack Lau trick" was played two years prior in the form of waiting for the CW SS to begin, then sitting down to start building from scratch a superhet two-band half-watt transceiver from the ground up. Breaking the 100-QSO target for this contest using that haywire setup was quite a thrill.

This year, recovering from a recent surgery, there just wasn't the physical energy within to use my voice for the contest. Being a bit down on not being able to operate, an idea hit the evening before the contest. With the high bands being nicely open could a contact be made - even just a single Phone SS exchange - using an old Heathkit Tener stored somewhere out in the shop? The Tener is one of the "Lunchbox" series of crystal controlled AM transceivers offered by Heath in the early 60's. It puts out just about a half-watt of unmodulated carrier when carefully peaked. To add to its "conveniences", the Lunchbox employs a regenerative receiver that has a small tuning knob. One where one-half turn of the dial covers the entire 10 meter band from 28.0 through 29.7 MHz! The Tener's dial comes out to almost 4 megahertz per turn. Yet the regen is surprisingly sensitive and even adequately selective for AM service.

But what about in a contest like the Sweepstakes? So getting out to the shack around 2100 as the Sweepstakes began, the rig was luckily located. With a 50-watt slug in place the Bird wattmeter needle barely deflected past one-half of the first minor division. Swathing the tuning control over its half-turn of revolution revealed a crazy mix of strange sounding signals present. CW stations chasing DX caused blocking sounds on the band's low end, which gave way to the quacking of what sounded like hundreds of ducks calling "CQ Sweepstakes" in another language, while tuning still further and higher revealed many quiet carriers with beautiful sounding AM decoded voices.

All the AM stations heard were having ragchews; talking about their transmitters, receivers, antennas, the weather. No one was calling "CQ Sweepstakes" up here. I was bit nervous knowing that most of the people were on AM up there to get away from the contest and enjoy a good old fashioned QSO despite it. Yet the Sweepstakes has been going on way before SSB became popular. It made me wonder how the bands would have sounded on an HRO or Hammarlund or Hallicrafters receiver during a Phone SS during the 50's?



John, W6GL piloting his Heathkit Tener.

Taking time to confirm that 29.001 was in the clear I began a series of "CQ Sweepstakes" calls on 10 Meter AM Phone, explaining that I was running the half-watt from a Lunchbox. It took several such tries over 20 minutes before a very nice sounding signal quieted the Tener's rushbox receiver. "W6GL this is KØCDJ" blasted back.

Being thrown into a state of shock and surprise, I answered providing name QTH and signal report, then adding that I was looking to make an AM Phone Sweepstakes contact. Bill was licensed in 1955 and it became clear he had lots of experience operating the SS in the AM days, as upon returning he immediately exclaimed "now for the goodies", and like a pro provided the Number, Precedence, Call, Check, and Section.

After confirming my exchange we continued through a few rounds of talking about the rigs, antennas, weather, the Lunchbox, until it became apparent that my little signal was becoming harder to copy on his end as more stations came up to open the 10 meter AM segment. KØCDJ made my day and operating year as well, as it was as much of a thrill working him using QRP AM, as starting to build an entire transceiver from scratch for the SS those few years earlier. I'll be remembering Bill and this exciting QSO for a long, long time!

QSO: 28000 PH 2011-11-19 2214 W6GL 1 Q 69 SB K0CDJ 001 B 55 M

### **Regional Leaders**

Q = Single-Op QRP, A = Single-Op, Low Power, B = Single-Op High Power, U/UL = Single-Op Unlimited/Low-Power, M/ML = Multioperator/Low-Power

Northeast F	Region	on Southeast Region Central Region Great Plains Region			West Coast Region									
New England, Hudson and Maritime and Queb	d Atlantic Divisions	sions	Delta, Roanoke and South	neastern Divi	isions	Central and Great L Ontario Se		ons;	Dakota, Midwest, Ro West Gulf Division: Saskatchewa	s; Manitoba a		Pacific, Northwestern a Divisions; Alberta, Briti NWT Sect	ish Columbia	
Call	Score		Call	Score		Call	Score	Cat		Score	Cat		Score	Cat
VY2ZM (K1ZM, op)	358,240	В	NN3W	296,000	В	K9CT	240,640	В	NR5M	313,280	В	N9RV	367,200	В
NC1I (K9PW, op)	279,520	В	N8II	276,640	В	K9BGL	234,240	В	N2IC (NØQO, op)	300,000	В	KH7X (KH6ND, op)	352,000	В
K8PO	270,192	В	K4SSU (NA4BW, op)	276,000	В	K8AO	199,870	В	K5WA	285,920	В	W7WA	343,360	В
W2ID	252,000	В	K4AB	266,720	В	KB9UWU	192,160	В	K5NA (WM5R, op)	271,520	В	KL7RA (N6TR, op)	337,440	В
WA3A	249,920	В	N8OO	237,276	В	NØIJ	154,050	В	VE4EAR	253,760	В	K7RL	327,040	В
K1BX	233,760	Α	W4AAA (KK9A, op)	223,200	Α	K9ZO	217,120	Α	NØKK	207,360	Α	VA7RR	256,160	Α
N1DD	127,764	Α	N4PN	222,880	Α	KB9OWD	187,360	Α	VE5SF	169,920	Α	KH6LC (NH6V, op)	255,360	Α
K2UF	125,120	Α	W4LT	194,720	Α	W5MX	141,492	Α	KUØG	155,200	Α	W7YAQ	212,000	Α
KS2G	116,960	Α	NA4K	182,080	Α	K1OU	130,400	Α	N7MZW	139,986	Α	KF6T	198,880	Α
W3PAW	107,184	Α	K1KNQ	128,480	Α	W8TM	112,640	Α	KØCN	131,680	Α	K9WZB	188,480	Α
W1MR	96,800	Q	W4SVO	77,616	Q	VA3DF	65,570	Q	KØKE	92,320	Q	NN7SS (K6UFO, op)	108,160	Q
NW2K	93,120	Q	N4JF	74,560	Q	KT8K	55,380	Q	KØRH	85,162	Q	VA7AAA (VE7SZ, op)	99,200	Q
N3UR	87,848	Q	NØHT (K4MTI, op)	58,656	Q	N8IE	46,768	Q	NDØC	81,844	Q	K600	77,440	Q
W3YA (NK8Q, op)	51034	Q	K4WY	32,232	Q	KQ8RP	38766	Q	KDØS (WDØT, op)	79,716	Q	WA7PVE	51,128	Q
AA2VK	44,660	Q	KI4SVM	21,710	Q	VE3XTI	32,480	Q	KØZL	64,526	Q	W6AQ	45,732	Q
WB1GQR (W1SJ, op)	310560	U	N4ZZ	269,120	U	N2BJ	234,880	U	NØXR	271,200	U	K6LL	282,560	U
КЗММ	274,080	U	W4MR (AA4NC, op)	250,560	U	N8SNM	206400	U	K1KD	264,480	U	W7RN (WX5S, op)	276,320	U
N2MM	228,000	U	W4NF	223,520	U	W9IU	176,320	U	WA5ZUP	249,120	U	W6PZ (K6SRZ, op)	261760	U
NW3R	191,360	U	N1LN	202240	U	VE3RZ	144,160	U	KJ5T	232,320	U	N6HC	226,400	U
K3DNE	188,800	U	WA5OYU	202,240	U	WW9R	107,040	U	KQØC	217120	U	N6NZ	207,200	U
N3TD	92000	UL	N4RA	89,600	UL	K9IR	78,080	UL	KØTI	111,680	UL	WU9B	90,168	UL
W1WBB	81,600	UL	AB4SF	63,840	UL	W9QL	68320	UL	KK6MC	98,720	UL	N6RK	62,568	UL
AB1JV	78560	UL	N4VA	61,620	UL	N9TF	62,720	UL	KØAD	96,800	UL	N6DZR	52960	UL
W4EE	64,960	UL	WBØRUR	57920	UL	WS6K	55,932	UL	KØTG	96,000	UL	KK7X	42,256	UL
VA2WA (VA2WDQ, op)	64,000	UL	N4HXI	57,120	UL	N9WEW	50,560	UL	KØMPH	85920	UL	K6OK	41,040	UL
K1KP	242,720	М	W5RU	310,880	М	N9SJ	183,040	М	KØDU	297,280	М	W6YI	372,160	М
N3OC	229,920	M	NP2B	288,960	M	NT8V	93920	М	WØNO	289,920	M	K7IR	303,040	M
WA3EKL	224320	М	K4OV	288,000	M	W9YK	83,680	M	WY7SS	264,480	M	VE6AO (VE6TC, op)	235736	M
WR3Z	221,600	M	K4B	230,880	M	W8BI (KD8HSV, op)	54,288	M	NØGF	235,092	M	VE6EX	212,800	M
W3IDT	187,200	М	W4MYA	217,440	M	K8EO	50,560	М	KØGND	182332	М	W7KNX	190,240	М
K2NNY	198,720	ML	KK5K	70,680	ML	N8HR	153,920	ML	N5DO	180000	ML	N6KI	100640	ML
W3ZGD	78,240	ML	KN4KL	50,080	ML	VE3MGY	130,560	ML	K7VU	157440	ML	N6LO	59,752	ML
WN3N	62,556	ML	W4YK	36,112	ML	KC8IMB	95,040	ML	KØORB	95326	ML	KL7JRC	54102	ML
W3LRC	39216	ML	K4BCH	28,704	ML	W8VI	86240	ML	KKØSD	87,828	ML	VE7IO	37280	ML
N2GZ	32604	ML				KB8TXZ	76960	ML	WA5JRS	73112	ML	KI6WD	31262	ML
W1AF	125768	s	W4UAL	159360	S	W8SH	60480	s	KØHC	254560	s	W6YX	256480	S
W1YK	89076	s	W5YM	46720	s	K9IU	8832	s	WØEEE	93760	s	W6RFU (KB3RPN, op)	49800	s
K2CC	59250	s	WD4EOG (KF4YPD, op)	3456	s	W8UM	8640	s	KØVVY	56736	s			
									W5UH (KU5B, op)	43520	s			
									KF5CRF	36040	S			

			n Winners			
, ,		, , , ,	er, U/UL = Single-Op Unlimited	d/Low-Power		
Call		Category Score	Call		Category	Score
	Atlantic			New Eng		
W3PAW	A	107,184	K1BX		A	233,760
W2ID	В	252,000	NC1I (K9PW, op)		В	279,520
N3OC	M	229,920	K1KP		М	242,720
K2NNY	ML	, -	N2GZ		ML	32,604
NW2K	Q	93,120	W1MR		Q	96,800
K2CC	S	59,250	W1AF		S	125,768
K3MM	U	274,080	WB1GQR (W1SJ, op)		U	310,560
N3TD	UL	92,000	W1WBB		UL	81,600
	Canada			Northwe	stern	
VA7RR	Α	256.160	W7YAQ		Α	212.000
VY2ZM (K1ZM, op)	В	358,240	N9RV		В	367,200
VE6AO (VE6TC, op)	М	235,736	K7IR		М	303,040
VE3MGY	ML		N6LO		ML	59,752
VA7AAA (VE7SZ, op)	Q	99,200	NN7SS (K6UFO, op)		Q	108,160
VE3RZ	U	144,160	AL9A		U	141,600
	UL				UL	
VA2WA (VA2WDQ, op)	_	64,000	KK7X	D:6		42,256
1/070	Central	047 400	KUGLO (NUIO)	Pacifi		055.000
K9ZO	A	217,120	KH6LC (NH6V, op)		A	255,360
K9CT	В	240,640	KH7X (KH6ND, op)		В	352,000
N9SJ	M	183,040	K6MMM		M	170,080
N9CK	ML	56,480	K600		Q	77,440
K9ARF	Q	21,170	W6YX		S	256,480
K9IU	S	8,832	W7RN (WX5S, op)		U	276,320
N2BJ	U	234,880	N6RK		UL	62,568
K9IR	ÜL			Roano	-	,
	Dakota	,	W4AAA (KK9A, op)		A	223,200
NØKK	A	207,360	NN3W		В	296,000
WØSD (WØDB, op)	В	251,840	K4OV		M	288,000
NØGF	M	235,092	KN4KL		ML	50.080
KKØSD	ML	,	K4WY		Q	/
		- /		`		32,232
NDØC	Q	81,844	WD4EOG (KF4YPD, op	0)	S	3,456
KØVVY	S	56,736	W4MR (AA4NC, op)		U	250,560
K1KD	U	264,480	N4RA		UL	89,600
KØTI	UL	111,680		Rocky Mo		
	Delta		N7MZW		Α	139,986
NA4K	Α	182,080	N2IC (NØQO, op)		В	300,000
N8OO	В	237,276	KØDU		M	297,280
W5RU	M	310,880	K7VU		ML	157,440
KK5K	ML	70,680	KØKE		Q	92,320
KS4X	Q	19,434	WA5ZUP		Ü	249,120
W5YM	S	46,720	KK6MC		ÜL	98,720
N4ZZ	Ü	269,120		Southeas	-	00,120
WBØRUR	ŬL	57,920	N4PN	Ooutilea.	A	222,880
	Great Lakes	07,020	K4SSU (NA4BW, op)		В	276,000
W5MX	A	141 402	NP2B		M	
K8AO	В	141,492	W4SVO		Q	288,960
		199,870				77,616
NT8V	M	93,920	W4UAL		S	159,360
N8HR	ML	/	K5KG		U	104,160
KT8K	Q	55,380	N4KH		UL	49,600
W8SH	S	60,480	1/01/175	Southwe		,==
N8SNM	U	206,400	K9WZB		Α	188,480
WS6K	UL	55,932	AA6PW		В	227,040
	Hudson		W6YI		M	372,160
K2UF	Α	125,120	N6KI		ML	100,640
KM2O	В	130,666	W6AQ		Q	45,732
NO2X	M	124,480	W6RFU (KB3RPN, op)		S	49,800
WA2IID	ML		K6LL		Ü	282,560
AA2VK	Q	44,660	WU9B		ÜL	90,168
W2VQ	Ü	99,360		West G		30,100
KA2D	UL		N1CC	41631 G	A	122,240
14.20		40,332				
KUGC	Midwest	455.000	NR5M		В	313,280
KUØG	A	155,200	KBØHH		M	163,360
KØDEQ	В	171,840	N5DO		ML	180,000
WØNO	M	289,920	KJ5RM		Q	47,012
KØORB	ML	95,326	W5UH (KU5B, op)		S	43,520
KØRH	Q	85,162	KJ5T		U	232,320
KØHC	S	254,560	K5IID		ÜL	75,840
NØXR	Ü	271,200	-		-	-,3
NUØQ	ÜL	49,440				
11020	UL	73,440				