2005 ARRL January VHF Sweepstakes Results

Heavy snow Midwest to New England took its toll—most scores are down!

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rom Minnesota, Wisconsin and northern Illinois east through Ohio, Pennsylvania and north to central New England, very heavy snowfall was the order of the day for the 2005 January VHF SS competition. More than a foot of snow fell in the densely populated northeast corridor during most of the contest period, causing problems for rover stations as well as fixed stations, some suffering storm-related antenna damage. Elsewhere, conditions were typically flat with a few exceptions in the Southwest and West Coast regions where occasional long-range tropo coupled with many active mountaintop rover stations kept things interesting.

The cold weather and snow-covered ground extending over a huge amount of real estate in the northeastern quarter of the country combined with typical flat January VHF conditions made for an interesting set of obstacles to communication. But we hams seem to manage to

communicate in spite of whatever Mother Nature throws at us! Weaker than normal signal levels were the order of the day. Rovers had to battle not only the snow and poor road conditions but the poor propagation as well. These are the things that make the January VHF Contest so challenging, and when those elusive "openings" do occur, sometimes quite short in time span, we rise to the challenge and log the QSOs as quickly as possible.

I use the W3CCX beacons in Philadelphia on the bottom four VHF bands as indicators of propagation quality down the east coast at the start of the VHF competitions. Around noon local east coast time on Saturday, I was only able to hear the 144, 222 and 432 MHz beacons over the 283-mile, partial seawater path between my Cape Cod location and downtown Philadelphia. The 50 MHz beacon was inaudible. The signal levels were weaker than normal, indicating minimal enhancement. This contest would be a

difficult one for sure!

Under conditions like these, with no significant propagation enhancement expected, participants relied on their skill and stamina to take advantage of the few minor enhancements that inevitably occur over relatively short time periods.

2005 Overall

The number of logs submitted for the 2005 January VHF SS was significantly lower than those submitted in the previous two years. Logs submitted this year totaled 718, compared with 836 in 2004 and 797 in 2003. This result is most likely related to the massive winter snowstorm, which affected the entire northeastern part of the US from Minnesota east to the coast and as far south as southern Ohio and northern Maryland. In spite of the bad weather, many rovers managed to brave the snow and give out needed rare grid squares on Sunday, once the bulk of the storm subsided.



The deluxe 5-star accommodations (left) used by the WC4J multiop team. Just as older equipment gets traded around, this portable operating center was formerly used by the K8GP Grid Pirates.



Bruce, WW1M, started his rover trek with this spectacular view near his home in Boulder, Colorado. Maybe not the best terrain to work stations through, but sure to bring a peaceful, easy feeling when you take a deep breath after a hard contest weekend.

There were 445 single operator, low power (SOLP) entries, down about 5% from last year. More interesting is the single operator, high power (SOHP) category for 2005 with 139 entries, which is down 14% from 2004 and down from 190 in 2003, representing a 27% decrease in logs over a two-year period. As expected, rover entries were down substantially, about 42% from last year with 52 competing vehicles compared to 89 in 2004. Limited multi-operator entries were down from 39 in 2004, representing a 21% decrease. Multi-operator entries were down only by one from last year to 25.

Propagation

As is generally expected for the month of January, VHF/UHF openings are generally sporadic, rare events. Participants in this year's January VHF Sweepstakes weren't surprised with the typically unenhanced conditions with few exceptions across most of the US and Canada. Some Midwest stations noted partial 6 meter openings to the south, notably Florida. K9UHY experienced an hour opening to Florida on Sunday evening. The same was echoed by KB8UUZ. AF8Z noted some partial 6 meter openings.

Gene, N9TF, who operated a Limited Multi station with his son, Mike, KC9ETU, noted that "Friday night there was a short 'teaser' of a 6 meter band opening to the SE into the EL grids. I knew we were doomed! Six remained closed after that opening faded!" Dan, NØURW, operating from Iowa in grid EN41, echoed the sentiments of most operators. "This is one for the record books as the worst band conditions ever from my QTH."

Bob, K2DRH, from EN41 noted one bright spot with meteor scatter: "I made several WSJT schedules and stayed up later than I'd planned, making several more random QSOs to try to make up for a log that was easily 100 Q's and 50 multipliers behind." Bob also noted that "random QSOs on WSJT seem to have come into their own, and it's not difficult to QSY to other bands. Sunday tropo on the bands started out slow and tapered off from there."

Finally, this comment from K2DRH summarizes the sentiments of almost everyone who contributed comments on propagation to the soapbox: "It's really disheartening to tune 2M during a contest and hear nothing in any direction, then call every 15 degrees while turning the antennas completely 'around the clock' on 144.200 with no takers."

The National Scene

Scores this year are down from previous years due primarily to insignificant

Affiliated Club Competition								
	Score	Entries						
Unlimited Category								
Mt Airy VHF Radio Club	1,412,465	53						
Medium Category								
Rochester VHF Group	1,194,898	40						
North East Weak Signal Group	668,145	18						
Potomac Valley Radio Club	535,887	29						
Western States Weak Signal	513,861	17						
Society of Midwest Contesters	278,307	19						
Pacific Northwest VHF Society	197,757	21						
Northern Lights Radio Society	141,377	24						

Western States Weak Signal	513,861	- 1
Society of Midwest Contesters	278,307	1
Pacific Northwest VHF Society	197,757	1
Northern Lights Radio Society	141,377	2
Yankee Clipper Contest Club	106,090	- 1
Badger Contesters	96,280	- 1
Northern California Contest	46,333	
Contest Club Ontario	33,108	1
Mad River Radio Club	27,545	
Six Meter Club of Chicago	24,414	
Florida Contest Group	21,441	
Frankford Radio Club	7,373	
Bergen ARA	4,430	
South Jersey Radio Assn	2,350	
Bears of Manchester	2,315	
Mobile Sixers Radio Club	1,027	
Local Category		
Factors Panhandle APC	94.097	

Local Category	
Eastern Panhandle ARC	84,087
Delaware Valley VHF Society	73,417
North Texas Microwave Society	55,685
Chippewa Valley VHF Contesters	44,250
CT RI Contest Group	40,814
Michigan VHF-UHF Society	11,385
Dauberville DX Assn	8,328
Eastern Connecticut ARA	2,149
Raritan Bay Radio Amateurs	1,806

Top Ten			
Single Oper	ator,		ultioperator
		K3EAR	359,676
K2DRH	128,872	W3SO	172,539
WA3GFZ	72,261	W1QK	54,230
AF1T	70,288	KB1DFB	38,148
K1TR	69,432	N2UIO	25,387
K8GUN	47,816	N9TF	19,768
W3KJ	40,392	W2ZQ	19,071
W4SHG	34,839	N3RN	12,738
AA3GN	33,614	KG6MDW	7,359
WB2SIH	30,240	W3DOG	7,285
KB3XG	24,960		
		Multiopera	ator
Single Oper	ator,	W2FU	344,326
High Power		N2PA	284,200
K1TEO	354,144	N3NGE	266,880
K1RZ	185,900	K5QE	134,183
WA3NUF	131,224	K1JT	131,584
K3TUF	94,944	K3EOD	57,986
W3SZ	69,069	W6TE	44,891
K8EB	65,762	N2BJ	35,862
WZ1V	60,325	W9RVG	21,800
WA3DRC	57,340	N6KN	18,240
K8MD	54,610	_	
K2TXB	51,600	Rover	
ODD Davidate		N6NB	2,202,200
QRP Portab		N6ZZ	2,164,206
KA1LMR	23,058	N6MU	2,153,800
W6DWI	8,208	N6TEB	313,257
N8XA	4,200	N6DN	307,648
KG6EE	2,486	K2TER	188,160
KØNR	864	N2OPW	162,074
KA1VEC	585	K2QO	105,660
(NM1K,op) NØHJZ	404	N6RMJ VE7DXG	91,462
	464	VE/DXG	68,904
WB2AMU KI7T	396 198		
KØSM	16		

propagation enhancement combined with the winter snowstorm throughout most of the north central and eastern part of the country. Under more normal weather conditions, rovers are key to big scores in the January contest. The severe winter weather conditions greatly inhibited the ability of rovers to activate rare grids this time out.

Single Operator

Bob, K2DRH, operating from EN41 in

northwestern Illinois, took the top spot in the SOLP category for the fifth straight year. Bob's 128k score is down from his winning effort last year by 21%, which attests to the difficult 2005 conditions combined with severe weather issues. Second place again for the third year goes to Paul, WA3GFZ, with 72k points, down from his 2004 score by 42% and no doubt influenced by the extremely poor conditions coupled with the snowstorm in southeastern PA. Third place goes to New Hampshire resident Dale, AF1T, with 70k, who bettered his 2004 score by over 20k points. Not far behind Dale was Ed, K1TR, who took fourth place with 69k, also operating from NH.

A quick analysis of the Top Ten LP entries from last year compared to this year is illustrative of the effects of the extreme weather conditions coupled with little or no propagation enhancement. Six of this year's top ten LP stations were in the 2004 top ten list, and in every case but one, the 2005 scores of these stations are down by a minimum of 21%.

In the SOHP category, Jeff, K1TEO, continues at the top position with 354k, down by 22% from his winning score last year. Jeff continues his national dominance for the eighth time in a row from his excellent western Connecticut location coupled with a commanding signal on 10 bands. Dave, K1RZ, operating from Maryland made second place with 185k, up one position from his third place finish in 2004. Although Dave's score is down by 45% from his 2004 result, his impressive second place finish is a strong challenge from FM19, particularly on the microwave bands. Third place finisher Phil, WA3NUF, made a strong showing at 131k from Pack Rats territory. Fellow Pack Rats member Phil, K3TUF, finished in fourth place with 95k points, with Roger, W3SZ, fifth with 69k points.

Multioperator

The top multioperator spot goes to the W2FU team from the Rochester, NY area with 344k points. Jeff's team ran 12 bands to take the win in spite of the poor band conditions. Another western NY group, N2PA, took second place with a score of 284k operating from FN12, while Pack Rats group N3NGE, took the third spot at 266k. Marshall, K5QE, led a team in east Texas to fourth place with 134k, followed closely by another Pack Rats team hosted by Joe, K1JT, in New Jersey with 131k.

The limited multioperator section winner was the South Mountain Contest Club station, K3EAR, with 359k points. Second place goes to W3SO, the Wopsononock Mountaintop Operators, in western PA with 172k. Weather conditions were extreme and

the bands were dead for the most part at W3SO, "Flat band conditions and terrible weather made for a long weekend. The day-time weather was just above 0F, and at night it was in the minus teens." Third place went to W1QK with 54k and fourth to KB1DFB with 38k.

Rover

By moving team pack-roving and grid-circling to a new level, the rover teams of N6NB, N6ZZ and N6MU blew away the all-time rover record (under the present rules) of 1.392M set by N3IQ/R (ND3F and K8ISK operators) in 1999. All three teams broke the 2-million point barrier in this very successful assault on the rover record. Other significant scores in the rover category were turned in by N6TEB and N6DN.

N6NB commented, "Given excellent January weather, we traveled 1,000 miles during the contest and activated 22 grid squares in New Mexico and west Texas. Art Goddard, W6XD, celebrated his retirement from the ARRL Board of Directors by taking part in this adventure. We were joined by two other teams of experienced HF contesters (N6ZZ plus N2IC and N6MU plus K2MM). It was a memorable weekend, although activity was not high and conditions were mediocre." One can only imagine what kinds of scores could be generated using these techniques under excellent propagation conditions!

Regional Highlights

With the severe winter weather in the central and northeastern parts of the country along with generally poor propagation conditions with only a few minor exceptions, the scores are significantly lower this year than in the recent past. The only scores that set new records were the three rovers (N6NB, N6ZZ and N6MU) as noted above. Detailed division scores can be found on the Web report, as usual at www.arrl.org/contests/results.

Northeast

Although turnout for the event was not up to normal levels, the northeast region was well represented in spite of the unfortunate weather situation. The AFC championship football game also drew some attention from New Englanders! In spite of these distractions, participation was substantial. In addition to the top scores already mentioned, Joe, W3KJ; Joe, AA3GN; Bill, WB2SIH, and John, KB3XG, took the sixth, and eighth through tenth spots nationally in the SOLP category. Perennial high power participants Ron, WZ1V; Ed, WA3DRC, and Russ, K2TXB, finished in the seventh, eighth and tenth positions nationally.

In the limited multioperator section, the top four stations previously mentioned are all in the northeast region. Fifth place nationally was taken by George, N2UIO, with 25k points operating from Western NY, and seventh place went to W2ZQ, the Delaware Valley Radio Assn in New Jersey with 19k points. Multioperator entrant Allen, K3EOD, operating in NJ took sixth place nationally with 58k points.

Rover entrants who successfully tolerated the heavy snow and cold weather include Bill, K2TER, with 188k, and Paul, N2OPW, with 162k placing sixth and seventh nationally, while Mark, K2QO, also a NY entrant, came in eighth with 105k points.

Southeast

The SOLP leader was Dan, K8GUN, with a score of 47.8k. Dan took advantage of his 9-band effort from FM09 to prevail under very poor conditions. Second place goes to Steve, W4SHG, with 34.8k points from 9 bands from his FM18 QTH in VA. Charles, KØVXM; Ken, KD4HIK, and Gus, K4FTO, round out the Southeast Region LP top five. The top five Southeast Region HP scores were all bunched together between 22k and 28k points: Dan, K8GUN, at 28,615; Howard, K4QI, at 28,227; Ron, WA8TTM, at 27,056; Gary, KE8FD, at 24,795, and Ken, KE2N, at 22,308. W3PGA, operating from WV in FM09 led the limited multiop category with 4k points. The multiop category leader was AG4V with 17k points, followed by KC4PX with 15k and WC4J with 11k.

Central

Bob, K2DRH, not only led the Central region with 128k points, but as noted above, he was the national LP winner. Russ, KB8U, Great Lakes Division leader with 24k points took second place in the Central Region. N9DG with 22k, K8MR with 19k and WA9FIH with 16k round out the top five LP entries. The top HP effort was made by Erwin, K8EF, from Michigan with 65k, followed by Mark, K8MD, with 54k and Jerry, WB9Z, with 44k. The top LM entry was Gene, N9TF with 19k. The top M entry was Barry, N2BJ, with 35k, followed by Marshall, W9RVG, with 21k. Rover activity was minimal, but Jim, VE3OIL/R, topped the list with 3.9k points, followed by Mike, WB8BZK, at 3.2k and Doug, N7NGO, at 2.6k. Understandably, the winter snowstorm played havoc with this region keeping activity levels below normal.

Midwest

The SOLP winner in the Midwest Region is Dave, NØKP, with 20k points, his

second win in a row. Vince, NØVZJ, took second place with 16k, followed by Floyd, WQ5S, at 11k. The top SOHP spot was claimed by Gary, WØGHZ, with 32k points, followed closely by Dan, NØURW, at 31k. Jonathan, WØZQ, finished in third place with 19k. The top LM score was posted by John, K5ETX, with 2k points. In the MU category, Marshall, K5QE, posted an excellent score of 134k, far ahead of the other contenders. The scoring excitement of the entire event took place in West Texas with the three rover teams of N6NB, N6ZZ and N6MU setting new all-time records for this category of 2.2M, 2.164M and 2.153M respectively. These scores are double the scores they achieved last year roving in California. Steve, N5AC, posted a decent rover score of 32k for fourth place.

West Coast

The top two SOLP contenders from the west coast region were very close. Jim, K7YO, in OR took the top slot with 17k points, while second place was claimed by Norman, KC6ZWT, at 16.6k points. Ed, W7GLF, took third place with 13k points from WA. In the SOHP category, Ralph, K6TSK, took top honors with 21k, followed by Don, W6KBX, at 18k and Leonard, WA6KLK, at 15k. Robin, W6DWI, took the QRP portable category with a score of 8k points, second place nationally. The LM category top spot was claimed by Trevor, KG6MDW, with 7k points. The multioperator category winner was Dave, W6TE, with 44k points, which also represents the seventh spot nationally. The rover category produced some interesting competition between the two top west coast entrants, Dave, N6TEB, at 313k points and Paul, N6DN, at 307k, placing them at the fourth and fifth spots nationally.

Affiliated Club Competition

The January VHF Sweepstakes is the primary event for club competition in the ARRL VHF/UHF competitions. Because of the severe weather conditions this year, both participation level and scores were down from recent years. In spite of the weather and poor conditions, the club competition was intense. Once again, the only club in the unlimited category this year is no surprise. The Mt Airy VHF Radio Club, as it has so many times in recent years, ended up with both the highest score and the largest number of participants. Their score of 1.4M with 53 entries is only half the winning score they produced last year with 56 entries, a clear indication that weather conditions were a huge factor in the Philadelphia area.

In the medium category, once again, the Rochester VHF Group produced the lead-

Regional Scores					
Northeast Region (New England, Hudson and Atlantic Divisions; Maritime and Quebec Sections)	Southeast Region (Delta, Roanoke and Southeastern Divisions)	Central Region (Central and Great Lakes Divisions; Ontario Section)	Midwest Region (Dakota, Midwest, Rocky Mountain and West Gulf Divisions; Manitoba and Saskatchewan Sections)	West Coast Region (Pacific, Northwestern and Southwestern Divisions; Alberta, British Columbia and NWT Sections)	
WA3GFZ 72,261 A AF1T 70,288 A K1TR 69,432 A W3KJ 40,392 A AA3GN 33,614 A	K8GUN 47,816 A W4SHG 34,839 A K0VXM 12,040 A KD4HIK 6,517 A K4FTO 5,610 A	K2DRH 128,872 A KB8U 24,273 A N9DG 22,560 A K8MR 19,840 A WA9FIH 16,014 A	NØKP 20,820 A NØVZJ 16,896 A WQ5S 11,128 A W6OAL 7,449 A NØLL 6,820 A	K7YO 17,000 A KC6ZWT 16,677 A W7GLF 13,800 A KC6SEH 10,080 A KF6KDA 9,534 A	
K1TEO 354,144 B K1RZ 185,900 B WASNUF 131,224 B K3TUF 94,944 B W3SZ 69,069 B	W4WA 28,615 B K4QI 28,227 B WA8TTM 27,056 B KE9FD 24,795 B KE2N 22,308 B	K8EB 65,762 B K8MD 54,610 B WB9Z 44,200 B WA8RJF 37,206 B WB9SNR 23,947 B	W0GHZ 32,472 B N0URW 31,240 B W0ZQ 19,093 B K9MK 13,910 B W3XO 13,176 B	K6TSK 21,465 B W6KBX 18,780 B WA6KLK 15,736 B KG6IYN 11,890 B WA7TZY 7,770 B WB7BST 7,770 B	
KA1LMR 23,058 Q KA1VEC 585 Q (NM1K,op) WB2AMU 396 Q KØSM 16 Q N1ZGY 15 Q	N3AWS 4 Q	N8XA 4,200 Q	KØNR 864 Q NØHJZ 464 Q WASWJY 6 Q NØJK 1 Q	W6DWI 8,208 Q KG6EE 2,486 Q KI7T 198 Q N2YM 1 Q	
K3EAR 359,676 L W3SO 172,539 L W1QK 54,230 L KB1DFB 38,148 L N2UIO 25,387 L	W3PGA 4,017 L KI4GZD 3,267 L KU4JZ 2,700 L AD4F 1,280 L N4DXY 861 L	N9TF 19,768 L	K5ETX 2,080 L K5USS 1,638 L NØUNL 1,281 L KE5BAV 931 L WB0RMK 342 L	KG6MDW 7,359 L W6OE 4,392 L K6YR 2,220 L W7MRG 1,280 L K7XC 1,036 L	
W2FU 344,326 M N2PA 284,200 M N3NGE 266,880 M K1JT 131,584 M K3EOD 57,986 M	AG4V 17,748 M KC4PX 15,624 M WC4J 11,664 M N4JQQ 7,720 M K1KC 1,771 M	N2BJ 35,862 M W9RVG 21,800 M	K5QE 134,183 M WØEEA 9,000 M	W6TE 44,891 M N6KN 18,240 M WW2CQ 1,869 M	
K2TER 188,160 R N2OPW 162,074 R K2QO 105,660 R K1DS 28,231 R N1XKT 24,531 R	N4FLM 8,910 R W5TV 8,760 R KD4NOO 4,584 R KB1EXM 3,080 R W4OZK 1,040 R	VE3OIL 3,942 R WB8BZK 3,213 R N7NGO 2,640 R	N6NB 2,202,200 R N6ZZ 2,164,206 R N6MU 2,153,800 R N5AC 32,568 R W5LL 14,080 R	N6TEB 313,257 R N6DN 307,648 R N6RMJ 91,462 R VE7DXG 68,904 R K3UHF 64,227 R	

ing score of 1.19M with 40 entries. This score is 34% lower than that which they produced last year with only 25 entries. RVHFG's focus on encouraging rover and microwave activity separates them from their competition. RVHFG hosted 8 stations running 9 bands or more, 3 of whom were rovers plus 3 large multiop efforts. It's difficult to compete with a club hosting the top MU station (W2FU) in any contest. Second place was again taken by the North East Weak Signal Group with 666k points from 18 participants, down from 28 last year. Third place goes to the Potomac Valley Radio Club with 535k points from 29 participants. The fourth place finisher was Western States Weak Signal with 513k points and 17 participants.

The Eastern Panhandle ARC took first place in the local club category with 84k points and 6 participating stations. Second place was claimed by the Delaware Valley VHF Society with 73k from 7 entrants. These two groups switched places from last year! The North Texas Microwave Society took third place with 55k from 5 entrants.

Given the extremely unfavorable weather conditions in the north and eastern part of the country as well as parts of southeastern Canada, it's great to see such a good turnout for this year's VHF SS. The scores were generally down, but the en-

thusiasm was high. Club activity in particular helps to motivate members to get on the air regardless of the conditions and scores. Getting on the air and making QSOs is the key to success, and the clubs did a fine job this year motivating their members under adverse conditions.

On to Next Year

Given the weather extremes for the 2005 running of the VHF SS, it is reasonably safe to say that nearly any conditions, weather or propagation, will be better than what contestants had to endure this year.

Expanded Reports Available

For complete results, participant soapbox and the complete scores in a user-searchable database, please visit www.arrl.org/contests/results. ARRL members without Internet access may obtain a print-out of the complete line scores by sending a self-addressed, stamped envelope to ARRL Contest Results, 225 Main St, Newington, CT 06111. Please be sure to include the contest name and year.

Scores next year are likely to be better than 2005, as the Northeast snowstorm of January 2005 is not likely to be repeated in exactly 12 months! The January VHF SS offers a unique challenge to those who enjoy battling against the twin adversities of generally unenhanced propagation and the possibilities of inclement weather. Clubs in particular motivate their members to get on the air in any way they can to contribute to club success.

If you are not presently a member of your local VHF oriented radio club, find a member and get yourself signed up. Clubs play a key role in generating activity for the January competition. Club members have the expertise to answer questions and provide help for new VHF/UHF enthusiasts to get set up with effective stations on the bands above 50 MHz. Obtaining help from local experts is the key to success, and you will enjoy being part of a team effort to produce a winning score.

Strays

I would like to get in touch with...

♦ amateurs who are employees of the United Nations.—Charlie Trice, K8IJ, k8ij@arrl.net

Scores

Each line score lists call sign, score, stations worked, multipliers, hours, number of grids activated (if Rover), and bands (A= 50 MHz, B = 144 MHz, C = 222 MHz, D = 432 MHz, 9 = 902 MHz, E = 1296 MHz, F = 2304 MHz, I = 10 GHz). Call signs of Division leaders and band indicators are listed in boldface type.

MAYNH 600 50 12 A AB
NTUCK 1.512 83 21 B ABCD 2
Bestern Massachusetts ## W1PM
Northern New Jersey WB2PID 432 39 9 A ABCD W2UDT 5,040 145 28 A ABCD W2UDT 5,040 145 28 A ABCD W2SPID 432 39 9 A ABCD W2UDT 5,040 145 28 A ABCD W2SO (N2GDU, N8GXR, WV2NY, K9KVN, K81HKN 203 25 7 A ABD K2NUD 2,835 135 21 A ABD ABCD ABCD ABCD WB2ONA 1,968 87 16 A ABCD ABCD WB2ONA 1,968 87 16 A ABCD W2FU (+K2AXX, WA2TMC, K0SM, K2DH, AF2K, NG2P, N1MU) W1CRK 12 6 2 A AB ABCD ABCD W2FU (+K2AXX, WA2TMC, K0SM, K2DH, AF2K, NG2P, N1MU) W1GHZ 36,270 326 65 B ABCD9EI W2JEK 780 60 13 A AB N2FR, W2JEK 780 60 72 ABD N
N1ZGY 15 3 3 Q BCD K2HVE 70 10 7 A AB W1XM (KB1CGZ, KT1D, WG1Z, KF4KJQ, W1GSL, AB2KT 45 15 3 A AB +loggers) 16,302 254 39 M ABCD9EF KA2SSX 42 13 3 A BD
NY1E 880 55 16 B AB N2CSP 10 5 2 A AB N1BNC (+N1WYS @N1BNC) W2KV 14,104 244 43 B ABDI N2CEI 12,321 333 37 B A N2CEI 12,321 333
Northern New York

W3RZU 1,695 86 15 A BD K3VEQ 1,666 83 17 A ABCD W3GXB 1,378 91 13 A ABC N3VJH 1,125 89 9 A ABCD N3JNX 704 26 22 A ABD W3SC 697 33 17 A ABD N3PLM 689 46 13 A ABCD KB3JGS 616 50 11 A ABD W3DSX 468 30 13 A ABCD	4 Alabama KE6QR 1,995 88 19 A ABD WB4VHF 1,180 58 20 A ABD AF4OD 4,600 79 46 B ABCD N4DXY (N4JDB, N4ION, KS4B, K4AAF,ops) 861 34 21 L ABCD Georgia	KN4SM 6,890 103 53 B ABCD N4MM 4,495 138 29 B ABD WF4R 1,449 54 21 B ABCD K2EVW 364 25 14 B ABC K4WYS 306 27 9 B ABD KU4JZ (+KF4PCT) 2,700 125 18 L ABCD WC4J (+WA4HR) 11,664 229 36 M ABCDE
N3AHP 272 31 8 A ABCD KF3DO 243 25 9 A ABCD K3YTR 230 23 10 A AB K3BPP 190 29 5 A ABC W8IJ 170 15 10 A ABD WA3AAN 110 22 5 A A	WA4IOB 2,600 76 26 A ABCD K4SZ 1,197 41 21 A ABCD K4KAZ 765 36 15 A ABCD W4KXY 592 37 16 A AB KF4OLO 84 14 6 A AB W4WA 28,615 214 97 B ABCD	West Central Florida K9HUY 3,710 106 35 A AB K04MA 1,334 51 23 A ABD 5
W3EFH 24 3 2 A CP W3JG 18 5 3 A ABD WA3NUF 131,224 590 94 B ABCD9EFGHIJI K3TUF 94.944 491 96 B ABCD9EFGI	K1KC (+WA4BLM @K1KC) 1,771 68 23 M ABD North Carolina	Arkansas N5HNY 120 13 8 A ABD
K3TUF 94,944 491 96 B ABCD9EFGI W3SZ 69,069 335 69 B ABCD9EFGHI WA3DRC 57,340 341 61 B ABCD9EFGHI K3IPM 44,840 470 59 B ABCD9EFG N3ITT 31,482 297 54 B ABCD9EF	N4HN 2,673 86 27 A ABD N4TL 456 38 12 A AB K3KO 112 16 7 A AB K4QI 28,227 220 97 B ABCDE	Louisiana K5ER 1,860 51 30 A ABD W5WZ 45 8 5 A ABD N5ASA (+KD5SII) 84 12 6 L ABD
W3KM 24,647 293 49 B ABCDEF W3GAD 22,560 304 40 B ABCD9EF N3FA 20,988 296 53 B ABCD9E W0RSJ 17,136 255 48 B ABCD9E WA3RLT 16,940 224 44 B ABCDEFP KB3ZS 15,588 292 36 B ABCDE	NG4C 3,626 76 37 B ABCD9 K4TP 200 25 8 B B KI4GZD (+KG4LEV, KC4QPR, KC4QPR, KG4LEV, KG4LEV, KC4QPR,ops) 3,267 103 27 L ABCD	Mississippi W8FR 1,300 43 25 A ABD KB5SSJ 612 34 18 A AB W5RCI 1,760 36 32 B ABCD N3AWS 4 2 2 Q A
K3CI 12,670 209 35 B ABCD9E KB3BBR 8,514 153 33 B ABCDEFP K3ISH 3,276 91 36 B AB KB3HCL 3,038 150 14 B ABCDE W3KKN 1,529 68 11 B BCDE N3FTI 1,387 47 19 B ABCDEHI K3IB 896 56 16 B B W3AWA (WA3KFT,op) 737 58 11 B ABCD	Northern Florida KE4YYD 1,947 52 33 A ABD KI4FIA 1,533 64 21 A ABCD W2BZY 1,258 33 17 A ABCD9EF N5PIP 1,159 60 19 A ABD KU4VQ 324 29 9 A ABD WA2IID 50 9 5 A BD WA4UF 42 7 6 A AB KN4Y 21 7 3 A A	New Mexico K5RHR 2,889 69 27 A ABCDE WB2FKO 176 22 8 A B KB5ZSK 161 14 7 A ABCDE K5TOK 1 1 1 A A W5SIX (K5AM, op) 182 19 7 B ABCD
W3FEY 370 18 10 B BCDE WA3EHD 259 37 7 B B N3EXA 216 24 6 B BCD K3EAR (K3RDA, K9PW, N2YHK, N3EMF, N3GH, N3WV, WA1HHN,ops) 359,676 1397 206 L ABCD	KU4WD 18 9 2 A AB WA8TTM 27,056 203 76 B ABCD9EFG Puerto Rico NP3CW 252 27 9 A ABD	North Texas WQ5S 11,128 154 52 A ABCD NM5M 2,806 77 23 A ABCD9E N5TIF 1,034 41 22 A ABD WA5YWC 549 43 9 A ABCD KlØK 1 1 1 A A
N3RN (+KA3EEO, KA3ZHT) 12,738 150 66 L ABCD N3NGE (+W2PED, K1WHS, N3AD, N3EXA, WU3C, W3FEY) 266,880 910 160 M ABCD9EFGHI W3RT (+N3HTZ)	South Carolina N4UFP 1,564 57 23 A ABCD WA2EMF 420 34 12 A ABD KR1ST 230 21 10 A ABD NU4SC (K3IXD, op)	K9MK 13,910 138 65 B ABCD9E KA5BOU 5,852 89 38 B ABD9E AF8Z 5,480 93 40 B ABCDE WA5WJY 6 3 2 Q B K5USS (+KE5CCI)
10,168 214 31 M ABCD9E KA3WXV 513 54 9 M ABD	210 20 10 A ABD AF4OX 78 13 6 A A KE8FD 24,795 190 95 B ABCDE	1,638 93 13 L ABCD Oklahoma
Maryland-DC W3IP 16,188 220 57 A ABDE W3ARS 3,611 122 23 A ABCD N3ALN 3,240 157 18 A ABCD K2PLF 3,225 116 25 A ABD	Southern Florida K0VXM 12,040 115 43 A ABCD9EFGHIJ KB2SFA 2,024 70 22 ABCD KI4CYB 588 49 12 AB	NEØP 45 8 5 A ABD KBØHH 9,536 99 64 B ABCDE KE5BAV (KD5CLK, KD5TDK,ops) 931 42 19 L ABD
N3UM 2,400 100 24 A AB W6AXX 2,260 113 20 A B KF6VBJ 1,679 55 23 A ABCDE W3CB 1,545 89 15 A ABCD N3VOP 1,470 78 14 A ABCD W3STU 1,216 48 19 A ABCD	W3IIT 66 10 6 A ABD KT4JA 8,610 121 42 B ABCDEF NJ2F 5,796 123 36 B ABCD KC4PX (+NW5E) 15,624 174 63 M ABCD9EF	South Texas K5IX 1,470 62 21 A ABCD KM5RG 1,008 49 16 A ABD K5NZ 684 37 18 A ABD WA5UFH 416 26 16 A AB KB5URQ 56 14 4 A B
N3AM 1,200 75 15 A ABD K3ZO 1,008 63 16 A B KB3KAQ 627 57 11 A A Al3Z 572 52 11 A AB WI2T 480 41 10 A ABD KB3KXX 258 43 6 A AB NS3T 186 30 6 A ABD	Tennessee KD4HIK 6,517 99 49 A ABCD WA4YRK 1,976 55 26 A ABDE W4BCU 1,782 62 18 A ABCDE WB4IXU 1,445 47 17 A ABCD9E AD4F (+KG4DIE) 1,280 53 20 L ABCD	N5XU (WM5R, op) 28 6 4 A ABD KØMHC 18 5 3 A ABD KM5I 4 2 2 A AB W3XO 13,176 127 61 B ABCDEF W5UWB 912 24 19 B BCDEI K5ETX (+KC5YKX)
N3FNE 132 22 6 A A K1RZ 185,900 599 143 B ABCD9EFGHI N3OC 50,138 330 86 B ABCD9EFI N3HBX 46,784 425 86 B ABCDE	AG4V (+packet) 17,748 155 68 M ABCDE N4JQQ (+packet) 7,720 120 40 M ABCDE	2,080 69 26 L ABD K5QE (+K5MQ, N5KDA, KD5HPT) 134,183 421 203 M ABCD9E
W3ZZ 14,382 179 51 B ABCD9E W3EKT 4,983 151 33 B AB WB3IGR 1,428 55 21 B ABCD KC3EF 480 37 12 B ABD W3ADX (+W3ADC) 350 45 7 L ABD	Virginia W4SHG 34,839 259 79 A ABCD9EFGH K4FTO 5,610 124 34 A ABCD K4FJW 4,352 86 34 A ABCDG AD4TJ 2,975 95 25 A ABD	6 East Bay W60MF 7,544 109 41 A ABCDE N4DLA 1,512 64 21 B ABCD Los Angeles
WA3ZKR (+KA3EJJ) 10,240 152 40 M ABCD9EFGHI Western Pennsylvania WØQPS 13,968 222 48 A ABDE	W4CIA (KI4HLV, op) 2,808 128 18 A ABD N4VA 2,688 119 21 A ABD K4MTS 1,275 62 17 A ABDE N8YSZ 740 69 10 A ABD	KG6GIQ 8,244 140 36 A ABCDE KG6DHQ 6,680 117 40 A ABDE KG6HMN 3,848 136 26 A AB D KG6EE 2,486 76 22 Q ABCDE W6QE (+K6EY, KA6CMC)
WA3PTV 2,400 78 24 A ABD K3ZCY 1,275 39 25 A ABCD KA1ZE 31,374 337 83 B BD	KI3O 459 45 9 A ABD AI4IO 376 44 8 A ABD W4NEZ 256 24 8 A ABCD	4,392 128 24 L ABDE N6KN (+W6FO) 18,240 272 48 M ABCDE
KE3WM 3,744 104 36 B A N3EBT 2,212 60 28 B ABCD W3SO (K4VV, WR3Z, AI3M, W3BTX, W3TEF, W3SF W3YOZ, KB3LG,ops) 172,539 769 171 L ABCD	WK4Y 220 20 11 A AB KI4FWE 205 41 5 A A K4THE 168 20 8 A ABD K4PZC 75 13 5 A ABD KI4DNN 30 11 2 A BD KE2N 22,308 289 52 B ABCDEF	Orange KG6EG 4,656 91 24 A ABCDI KC6UIX 2,610 71 29 A ABD KN6VR 1,824 71 19 A BD K6TSK 21,465 213 53 B ABCDE

K6IBY 3,472 72 28 B ABCD Santa Barbara	Western Washington W7GLF 13,800 166 46 A KG7P 4,309 93 31 A	ABCD9 KG9Z	304 2 222 2 220 2	7 6 A 0 11 A	BD ABD AB
W9EC 1,026 36 19 A ABCDS KE6RCI 828 74 9 A BD N6ZE 680 34 20 A AB KC6NBI 1,080 60 18 B AB K6YR (+K6SHU)	K7CW 2,088 116 18 A WA7MLD 1,862 82 19 A W7FKI 1,700 74 20 A N6KW 1,066 71 13 A	ABD KG9N B W9SE ABCD WN9GUC ABD KA9OBZ ABD K9JK NBCOV NBCOV	30 24 6	7 7 A 8 3 A 5 4 A 2 2 A	AB AB BD ABD BD
2,220 68 30 L ABD Santa Clara Valley KF6MXK 2,430 104 18 A ABCD K6EU 1,440 60 20 A ABCD N2YM 1 1 1 Q B	NØAX 1,056 61 16 A KD7UI 845 65 13 A WA7TZY 7,770 132 30 B WB7BST 7,770 134 30 B W7MGC 6,188 144 34 B K7ND 6,006 109 39 B	ABD NØICV AB WB9Z ADE WB9SNR ADE W9JGV ABCD K9SM ABCD N9TF (+K0	44,200 30 23,947 19 2,675 10 396 2	7 25 B	A ABCDE ABCD9E B ABCD9E
San Diego WA6MHZ 1,408 70 16 A ABCD N6IEF 1,056 69 12 A ABCD NF6V 111 31 3 A ABD	KA7RRA 1,120 59 16 B	ABCD ABD N2BJ (+K2	19,768 26	4 86 M D9EXD)	ABCD9EF ABCDE
KG6WLS 64 16 4 A AB WB6MNR 21 6 3 A AD KG6IYN 11,890 198 41 B ABCDS K6NKC 5,936 128 28 B ABCDS KF6JBB 2,140 84 20 B ABCD		ABCD9EF WA1MKE ABCD W9THD ABCD K9EA ABD K8LEE	14,874 14 1,430 6 20,746 17 8,502 21	0 22 A 7 82 B	ABCD9E ABD ABCDE A
San Francisco AA6DX 1 1 1 A A WA6KLK 15,736 193 56 B ABCDS KG6BEI 1,152 72 16 B AB KG6WOU 25 5 5 B AB W6DWI 8,208 175 38 Q ABD	N8UUP 2,262 78 29 A K8DOG 1,113 46 21 A	ABD Wisconsir ABD N9DG ABD K9MU A K9VHF ABCD N9TTX ABD W9RAY		6 80 A 1 56 A 3 55 A 6 31 A	ABCD ABCD ABCDE ABCDE
San Joaquin Valley KF6KDA 9,534 165 42 A ABCD KF6CNV 6,798 150 33 A ABCD W6WYT 4,557 90 31 A ABE KG6HHE 216 24 9 A AB W6TE (+W6ALE, K6AAB) +4,891 268 77 M ABCDS WW2CQ (KG6JKJ, KH6WZ, WA6NIA, KF6	K8ZKJ 90 25 3 A WA8QKZ 65 12 5 A K8BSG 16 8 2 A K8EB 65,762 354 131 B K8MD 54,610 294 127 B K2YAZ 9,452 90 68 B DEFGI W8MIL 3,344 62 44 B	ABD N9NDP ABD KB9Q AB W9CDL ABCD9E K9VS ABCD9E N9SOO ABCD9E WB9MXX ABCD K9AIH K9DQ	1,564 6 1,496 5 1,326 6 750 4 630 3 528 4 450 3 416 2	3 22 A 7 17 A 4 15 A 5 18 A 4 12 A 9 9 A	ABCD ABD ABD AB
1,869 62 21 M ABCDE Sacramento Valley KC6ZWT 16,677 231 51 A ABCDE KC6SEH 10,080 157 42 A ABCDE W7PT 1,411 64 17 A ABD NT6K 2 2 1 A A W6KBX 18,780 209 60 B ABCDE KG6MDW (+W6GNU) 7,359 179 33 L ABD	El Ohio K8MR 19,840 189 80 A WB8AUK 14,060 147 74 A K8WW 4,140 62 36 A WN8R 3,960 84 36 A K8AB 2,940 85 28 A W8CJJ 1,860 60 31 A	ABC D W9PHJ ABCD 9E W9ROG	65 1 56 1 48 1	9 8 A 3 5 A 4 4 A 2 3 A 8 6 A 0 70 B 0 53 B 1 61 B	ABD ABD B B ABD ABD AB BCDE ABCD9EI ABCD9E
7 Arizona K6IAH	KB8UUZ 704 44 16 A KC8UDV 364 27 13 A KC8CFI 40 7 4 A WA8RJF 37,206 205 106 B K8TVD 4,860 80 45 B N8XA 4,200 76 35 Q	A 0 ABD Colorado BD W6OAL ABCD9EFG WV0H ABCDE N0POH ABCD9E W0KU N0UGY	7,449 11 3,096 9 854 4 369 2 966 3	6 24 A 5 14 A 8 9 A 7 14 B	ABCD9EFI ABDI ABCD ABDI ABCD9EI
Eastern Washington W7JGO 1,728 54 24 A ABCD K7AWB 234 31 6 A ABCD	West Virginia K8GUN 47,816 356 86 A W8CMK 4,455 123 27 A N8II 1,890 105 18 A	ABCD A	864 3 KØKHZ, N9B 9,000 8	D, N9KC)	ABCD ABCD9EFGHIJ
Idaho W7USB 2,064 61 24 B ABCDI W7MEM 672 31 16 B ABCDI		ABCD KCØRAD ABCD9E KØSRL WØVAN	1,000 4 330 2 168 1 31,240 21	8 11 A 6 7 A	AD
Montana NW7MT (NW7O, WA7MT,ops) 50 8 5 L ABC	9 Illinois	KM0T Kansas ABCD9EF N0LL	1,501 4 6,820 9	0 55 A	ABCD9EF ABCDE
Nevada K7ICW 3,640 64 40 B ABCDI K7XC (+KD7KKO, K7XC, KD7KKO) 1,036 60 14 L ABCD	E KG9IL 12,390 212 42 A AA9MY 7,800 85 60 A WO9S 7,482 131 43 A	ABCD9 WØRT ABCD9EI NØJK ABCDE ABCD Minnesota	1	1 1 Q	ABCDE A
Oregon K7YO 17,000 240 50 A ABCD N7DB 6,816 165 32 A ABCD K17JA 6,125 109 35 A ABCD W7QH 4,653 113 33 A ABCD K7SMA 1,377 68 17 A ABD K7HSJ 810 41 15 A ABCD K7VIT 726 63 11 A ABD WR7X 300 21 12 A ABD W87RSG 261 19 9 A ABCD W7SST 48 14 3 A BD W86FFC 1,173 41 23 B BD Utah K7RJ 612 17 9 A BDI	N9TZL 4,588 107 37 A W9JXN 4,077 121 27 A K9YC 3,335 104 29 A WA9BXB 3,097 136 19 A WR9L 2,581 89 29 A KC9AMM 2,146 62 29 A KC9AMM 2,146 62 20 A WD9GJK 2,040 103 17 A N9OBB 1,566 47 27 A N9TUQ 957 66 11 A WA9CCQ 860 67 10 A W9NHX 792 59 11 A W9GKA 770 26 22 A	ABD KB0LYL AB W0JLF ABD KB0NR ABD W0LER ABCD K0JO ABD KC0REO ABD N0DML ABD WA2MNO ABCD WQ0A ABD KC0RQH BD WB0LJC	893 3	8 64 A A A A A A A A A A A A A A A A A A	B ABD ABD ABDE ABCD ABD AB ABCD AB ABCD ABCD ABCD ABCD

KØAWU 13,065 WØAMT 6,006 NØJCF 5,550	35 16	9 14 /DØB	B GZ, L	ABC	VA2UK 5 VA2IC 4 VE2TUA 2 VE2DC 1 VE2XX 2,7	30 336 1 338 1 364 256 000 660	33 39 83 19 15 64 36 96 143 122 98 85 51 64 47	12 12 6 9 10 31 13 46 42 37 28 24 25 24 29	AAAAABB AAAAAAA	ABCD9E ABD ABDE ABCD9E ABCD9E ABCD9E ABCDE ABCDB ABCDB ABCDB ABCDB ABCDB ABCDB ABCDB ABCDB ABCDB	VE3DXP 578 34 17 A B VA3NFA 468 39 9 A ABDE VE3HHT 407 28 11 A ABCD VA3DF 208 13 8 A C VE3JW (VE3VIG, op) 138 16 6 A ABD VA3TSG 110 22 5 A AB W1AJT 55 11 5 A A VE3VHB 54 9 6 A B VA3OR 25 5 5 A A VE3SH 9 3 3 A A VE3TFU 22,848 143 84 B ABCD9EF British Columbia VE7CMK 330 30 11 A B VA7MM (VE7CMK, VE7CNF, ops) 216 9 6 L E
Rovers Atlantic					Midwest						Southwestern
K2TER (+KV2X) 181.125	470	105	R	ABCD9EFGHIJP		,782	87	31	R	ABCD	N6TEB (+KE6HPZ) 313,257 708 147 R ABCD9EFGHIL
N2OPW (+K2EHF) 159,424		105	R	ABCD9EFGHIJP	New England W1AUV 1.	,919	65	19	R	BDI	N6DN (+N6VHF) 307,648 701 152 R ABCD9EFGHIL
K2QO 102,960	309 301	90 37	R R	ABCD9EFGHIP ABCD9EGHIJP	Northwestern	,515	00	10	•	DDI	N6RMJ (+WB6JDH)
N1XKT 24,050		37	R	ABCD9EGHIJP	K3UHF 64,	,227		79	R	ABCD9E	W6KA (W6ELI, KJ6NO, ops)
K3LFO (+W3DIO) 16,884	260	42	R	ABCDE	KAØTP (+KE7CNH)			67	R	ABCD9EI	8,995 182 35 R ABCDE K6LMN 5,056 123 32 R ABCDE
KG4IDG (+KB3JAU) 1,476	71	18	R	ABD	- /	,000 ,964	154 163	30 21	R R	ABCD ABCD9E	W6YV (WB2TVB, KG6CUK, ops) 952 58 14 R ABD
KC2MCB 957 K3DMA 840	76 36	11 10	R R	BD ABCDEIP	Pacific						KI6CQ 728 40 13 R BD KG6ONE (+KG6KVI)
KC2IDT 528	25	12	R	ABDE	W6GMT 11, NI6G (+N1VM)	,750	208	47	R	ABD	20 3 4 R ABD
Central WB8BZK 3,213	77	27	R	ABCD9E	3,	,450 .656	114 62	23 23	R R	ABD ABD	West Gulf N6NB (+W6XD)
N7NGO 2,640	69	33	R	ABD	Roanoke	,000	0_		••	7.55	2,202,200 2041 242 R ABCD9EFGHI N6ZZ (+N2IC)
Dakota KCØIYT 5,180	144	20	R	ABCD9EI	KB1EXM 3,	,058 644	101 36	22 14	R R	ABCD ABD	2,164,206 1957 242 R ABCD9EFGHI N6MU (+K2MM)
WØZQ-R -45	-2	5	R	BI		044	30	14	n	ABD	2,153,800 1937 242 R ABCD9EFGHI
Delta						,350	82	50	R	ABCDEI	N5AC (+W5TX) 32,568 251 69 R ABCD9E W5LL (+W5BL) 14,080 181 55 R ABCD
N4FLM (+N4OFA) 8,910		45	R	ABCD9E		,400 686	100 42	25 14	R R	ABCD ABD	KD5SHM 9,504 146 48 R ABCD AF5Q 216 19 9 R ABCD
W5TV (+AE5P) 8,760 KD4NOQ 4,584	113 97	40 24	R R	ABCD9E ABCDE	Southeastern						Canada
Hudson						,040 432	39 19	20 18	R R	ABCD ABCD	VE7DXG 68,904 377 87 R ABCD9EP VE7DAY 36,501 239 69 R ABCDEP
KC2HIZ 516 WS2L 175	32 24	12 7	R R	ABD ABD							VE3OIL 3,942 76 27 R ABCD9EF