2004 ARRL January VHF Sweepstakes Results

For a change of pace...

rozen bands and frozen rovers were the name of the game for the 2004 January VHF SS this year. Mother Nature often fools us in winter with some nice weather, leading us to believe that the January contest might be blessed with some reasonable conditions. Not this year! Wind, rain, ice and snow seemed to characterize this event for many operators across the country. Even the magic band (6 meters) was hard pressed to produce a few lazy strings of grid multipliers for many of the big stations.

Cold weather is known for its ability to squeeze any chance for extended propagation out of the troposphere. With layers of cold-dense air closer to the ground, there is much less refraction to bend our precious RF energy back toward the ground as it flies over the earth's curvature. This was painfully obvious to many of us this year. The microwave bands were greeted with many hopeful operators trying their luck, but many of the emitted signals just fell to the ground like a lead balloon.

At times it seemed that the equipment was broken, but then a few close-in stations would show up with weaker-thannormal signals to show that it was not the equipment that was to blame, but rather poor conditions. Nonetheless, the January VHF event is always a good time, as club competition and great activity levels always seem to come to the rescue to gener-

Expanded Reports Available

For expanded 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 printout of the complete line scores by sending a self-addressed, stamped envelope to ARRL Contest Results, 225 Main St, Newington CT 06111. Please be sure to include the contest name and year.

ate fun for these high-band enthusiasts.

Even 6 meters was hard-pressed to produce any fireworks for those seeking the elusive DX. With the sunspots on the decline, there was no F2 propagation expected, and the $E_{\rm s}$ propagation gods were apparently not particularly happy with us either. It was a change-of-pace kind of contest this year, where one could slug it out using operating skill and good equipment to seek the activity for which the January VHF SS is well known. When multipliers are in short supply, WSJT can be a welcome boost to your score.

2004 Overview

The number of logs submitted this year was 799, pretty much on par with the past couple of years. The January

VHF SS remains the best-attended VHF contest, judging by logs received. Perhaps the heated club competition, along with some fierce rover competition is the

magic recipe for activity.

There were 468 SOLP entries, up about 10% from last year. The SOHP participants numbered 162 this time, down from 190 in 2003. Perhaps more stations want to compete in the low power category, and avoid the wrath of the big guns. The limited multioperator logs totaled 39 this year, up from 32 in 2003. There were 26 unlimited multioperator entries this time, along with some big scores from many of the 89 rover entries. The rover category is still growing, which is a testament to this exciting aspect of VHF contesting. How else could you get 89 lunatics to venture out

Top Ten

Single Op	erator Low Power	Lillinea munioperator					
K2DRH	162,321	W3SO	217,888				
WA3GFZ	124,236	K8CC	113,328				
W3KJ	113,390	N3JFM	88,981				
KB8U	102,564	AA4ZZ	81,000				
N1DPM	95,700	W1QK	75,764				
W4SHG	60,495	N8ZM	53,568				
NØKP	52,437	W2MMD	42,903				
AF1T	49,630	K2AA	41,616				
N9DG	47,190	W2EA	37,312				
WB2SIH	45,522	KB1DFB	30,300				

Single Operator Low Power Limited Multionerator

Single Op	erator High Power	Multioperator					
K1TEO .	454,176	K3EAR	944,064				
AA2UK	436,104	N2PA	394,487				
K1RZ	337,824	N3NGE	300,048				
K2AXX	316,487	K1JT	254,408				
WA3NUF	227,666	N2JMH	130,689				
K2SMN	128,397	N2BJ	109,200				
W3RJW	126,224	K3EOD	107,910				
K1GX	120,420	N8KOL	90,170				
AA3GN	114,982	W6TE	52,050				
WØGHZ	106.785	WA3ZKR	32,370				

Single Ope	erator Portable	Rover							
KFØQ .	22.920	N6NB (+	N6NB (+KG6TOA)						
N8XA	4,066	,	1,097,280						
W9GKA	3,978	N6MI	1,067,377						
KØNR	2,478	N6MU	1,053,582						
WD5AGO	2,378	K2TER (+KV2X)						
KQ6EE	1,674		400,189						
K9BIG	1,210	N2OPW	371,195						
WB2AMU	960	N7WLO	(+KL7BK)						
NØJK	345		370,804						
KT4GG	165	N6TEB (+KE6HPZ)							
			269,598						
		N6DN (+AD6HT)							
		,	252,636						
		W3IY (+ON4IY)							
		•	171,570						

KU7M

Affiliated Club Competition

	Score	Entries
Unlimited Category Mt Airy VHF Radio Club	2,856,837	56
Medium Category		
Rochester VHF Group	1,811,680	25
North East Weak Signal Group	1,036,971	28
South Mountain Contest Club	957,064	4
Potomac Valley Radio Club	919,775	21
Northern Lights Radio Society	706,824	51
Society of Midwest Contesters	542,740	21
Pacific Northwest VHF Society	280,109	21
Western States Weak Signal	228,949	10
Badger Contesters	223,046	23
Yankee Clipper Contest Club	164,148	g
Florida Contest Group	155,539	4
Mad River Radio Club	136,194	5
Crawford County ARC	112,484	9
Contest Club Ontario	110,983	11
South Jersey DX Assn	84,504	6
Carolina DX Assn	81,253	3
Northern California Contest	71,855	8
Six Meter Club of Chicago	34,738	18
Bergen ARA	29,224	8
Tennessee Contest Group	16,170	6
Warminster ARC	4,704	3
Mobile Sixers Radio Club	1,443	5
Rochester (MN) ARC	619	3
Local Category		
Delaware Valley VHF Society	249,920	g
Eastern Panhandle ARC	136,280	10
North Texas Microwave Society	121,663	7
Rappahannock Valley Amateur	62,971	3
Roadrunners Microwave Group	55,926	3 3 4
Dauberville DX Assn	5,996	3
Medina 2 Meter Group	5,477	4
Meriden ARC	2,811	4
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Jean, N1MJC, teamed with her OM Rick, N1RL, to learn some of the contesting ropes.



Marten, KC8HZM, and Jeff, KC8HZQ, freely admit they are starting at the bottom but are looking to climb the ladder of successful roving as far as they can.

into the dead of winter and do battle with all that radio apparatus?

Propagation

If you recall the 2003 ARRL September VHF QSO party, there were not any particularly enhanced conditions. From the perspective of many, however, the warm weather conditions were far better than what was in store for the unseasonably cold weather of January 2004. Tropo was virtually nonexistent, although many stations were fooled into thinking there was tropo when the bands would occasionally go from wintertime-poor to almost normal. It was amazing how difficult it was for many to work the usually easy microwave paths in sub-freezing temperatures.

DX signals just weren't there on the bands above 903, in general, on any extended paths. As for 6 meters, there was possibly F2, but a small amount of E_s propagation, particularly in the South. It was enough to provide some excitement for the watchful operators, although many missed most of it. There seemed to be significant 6 meter propagation for the top DX station, VP9GE, operating in the SOLP category, using only 6 meters. Ed managed to rack up 78 grid multipliers extending from southern Alabama up into Canada, working much of the East Coast in-between. This is an amazing accomplishment, especially considering the 100 W and a single 5 element beam at 12 feet! Perhaps the Bermuda Triangle was unleashing some of its magic on the magic band in this region.

In the East, several big stations managed to add a dozen or so grids on some short-lived E_s propagation, which seemed to produce mainly north-south paths. Ivars, KC4PX, in EL99 shared that "The Janu-

ary VHF contest in Florida is usually slow with minimal 6 meter $E_{\rm s}$. However this year, Florida was fortunate to have two significant $E_{\rm s}$ openings and a quick F2 into Mexico. Saturday afternoon at 2100 to 0000 was excellent into the Northeast VHF corridor from VE9 to W3/W4's but concentrating on New England VHFers. Then on Sunday from 2300 to 0300 a pipeline into Texas built up our grid square count (70 total on 6 meters). This, however, never came close to the June 2003 grid count of 266 on 6 meters." Nice work, Ivars!

The National Scene

How do you generate a big score when there's not much happening in the propagation department? The answer is to work everyone you hear, and find the rovers! Rovers made a huge difference to many stations in the top-10 this year. Living in a high-density heavily ham-populated region like the Northeast corridor helps, but you just can't work many available grids, unless some rovers decide to activate them.

Single Operator

Bob, K9DRH, is no stranger to winning the SOLP category and again he takes the number one spot in this hot operating category, with a score slightly higher than last year of 162k. Second place this year again goes to Paul, WA3GFZ, with a great showing of 124k from Packrats country near Philadelphia. The third place position goes to another Packrat, Joe, W3KJ, with 113k. Joe has done a great job adding bands, and making nice improvements to his station in FN20. Also topping 100k points in the SOLP category is Russ, KB8U, with an excellent performance totaling 102k.

In the SOHP sector, Jeff, KITEO, continues to dominate the national scene with an incredible 454k points. Being located

in a high-activity area doesn't hurt, but Jeff continues to show a keen sense of balancing operations on 10 bands, and making them all pay off! Posting a close second place effort was Bill, AA2UK. Bill continues to improve his station, and does a great job of inspiring a large number of Packrats within range of FM29. Bill's 436k represents a tightening of the race for SOHP honors in the East.

A very strong performance by third place finisher Dave, K1RZ, begins to show that FM19 is within striking distance of a SOHP contest win. Dave added a 1 W station on 3456 this year, and piled up a nice 15 QSOs on 7 grids on this growing microwave band. (The author even had a fun snow-scatter with Dave on 3.4 GHz as white-out conditions blanketed FM19 on the ride home.) Mark, K2AXX, finished in fourth place with an awesome score of 316k with solid totals on 10 bands.

Multioperator

The top unlimited multioperator position this year was taken by K3EAR, setting a new record of 944k from FM19hx. Despite the cold weather, this resourceful group succeeded in racking up points on bands through 76 GHz. N2PA was next in the ranks with a score of 394k operating from FN12, adding QSOs on bands through 24 GHz, and lasers.

Big efforts from the Packrats sector of the country propelled N3NGE and K1JT into third and fourth place respectively nationwide in the MU category. It's great to see experienced operators get together, and put forth such nice multioperator efforts during this cold time of the year. (We rovers really appreciate it!) Inviting lots of friends over for a multioperator weekend, using lots of rigs and amplifiers can help keep the house warm!

The limited multioperator section was

W3SO OPERATORS COURTESY K9AKS



It seems the operators at the W3SO limited multi may have taken the challenge to "dig through the pileups" and "sweep the bands for QSOs" a bit too literally. From left to right: W3PAW, W3YOZ, K4VV, KD3SA, W3TEF, W3BTX and WR3Z.



Curt, K9AKS, operated the University of Southern California station W6YV with this spectacular view toward downtown LA and the mountains beyond. The Library Tower in the center is the tallest building between Chicago and Taiwan.

led by W3SO in FN00 with a score of 217k. This was a significant accomplishment, with temperatures down to -10° , and 24 inches of snow on the ground, by contest end. The best way to keep your antennas from freezing up is to use them continuously! Second place in LM was captured by the K8CC group, with a total of 113k points!

Rover

The rover category this year saw huge scores and a big well-planned effort from N6NB/R, N6MU/R, and N6MI/R. Packroving and grid-circling was exploited to their finest to produce the top 3 rover scores of over 1 million points each. The nationwide winner, Wayne, N6NB/R, put in a fantastic effort to build 3 10-band stations, and carefully planned this big assault on the rover-record. The winning score of 1.097M was dominating, but fell short of the all-time rover record (under the present rules) of 1.392M, set in 1999 by N3IQ/R (ND3F, and K8ISK operators). Other big scores in the rover category were set by K2TER/R, N2OPW/R, N7WLO/R, N6TEB/R and N6DN/R.

Pack-roving and grid-circling powered these rover stations to huge winning scores in their respective regions. Although controversial, these techniques catapult rover scores into the stratosphere, as the QSOs and grids come rolling in, working other rovers rapidly over short distances. The top rover worked only 2 other rover stations for 97% of his QSOs!

Regional Highlights

The regional scores always show interesting aspects of the January VHF SS. This year, with no big E_s openings, the population centers, and areas with good rover

activity did well. Detailed division scores can be found on the web report, as usual at www.arrl.org/contests/results.

Northeast

Even super-cold temperatures, high noise levels, and howling wind cannot stop the fun in this heavily populated area. In addition to the top scores already mentioned, Fred, N1DPM; Dale, AF1T, and Buff, WB2SIH put forth good efforts to claim the 3rd, 4th and 5th spots in the SOLP category from the Northeast. Veteran contesters Phil, WA3NUF; Roger, K2SMN, and Ron, W3RJW, worked their way into 5th, 6th and 7th place nationwide in SOHP from this division.

N3JFM, and W1QK slugged it out for second and third place in the LM section this year with scores of 89k and 76k. Jim, N2JMH (taking a break from roving), entered the MU category this year, and did well with 131k. Nice job, Jim! Rover extraordinaire Brian, ND3F/R (although not submitting a log), worked over 200k points in just one day of operating!

Southeast

The SOLP leader here was Steve, W4SHG. Making great progress improving the station, Steve keeps adding bands and doing a great job from his less-thanoptimum QTH in FM18. K8GUN took second in SOLP, and is becoming a regular big signal in this region from FM09. Jeff, NJ2F; Richard, K4RTS, and Charles, KØVXM, added QSOs to many logs as well in this category. AA4ZZ led the LM efforts with a big 81k from NC. N4HB took the top MU spot, followed by AG4V.

Yours truly, W3IY/R, roved the Outer Banks of NC, VA and MD with copilot Christophe, ON4IY, and found 30 knot winds and sub-freezing temperatures a bit obtuse (but much fun) in the rover category this year. It was amazing how many usual microwave QSOs were not possible with the cold weather this time. Matt, KC3WD/R, persevered against weather and vehicle problems, and turned in a strong rover effort from this region as well. Single operator portable entries included KT4GG and KQ6NO. Your efforts are appreciated by all of us.

Central

Duane, N9DG, from this region, followed by Justin, K9MU, and Bob, KB9PJL, generated a strong SOLP effort. The LM category saw K8CC winning first place with 113k. N8ZM took second place with 54k. N2BJ captured top honors in the MU category with a big 109k points. Not far behind was Keith, N8KOL, with 90k. Russ, VE3OIL/R, provided spirited rover activity in the Central region taking the top spot. The second and third place rover honors were won by Pat, K9ILT/R, and Tim, KØPG/R.

Midwest

Dave, NØKP, captured the winning position in SOLP with a 52k effort. Second place was won by John, WØJT, with 36k points. Multi-Unlimited was dominated by WØEAA with a 25k score. A nice single operator portable effort was made by Larry, KFØQ, winning with a 23k tally. LM was grabbed by WØJH. The biggest score in the region was generated by rover station W9FZ/R (Bruce) with just shy of 94k! Jonathan, WØAMT/R, took second place with John, KCØLBT, assisting. Mike, KMØT, took a break from his usual base station operations and decided to join the rover deep-freeze. It's nice to see how the

Regional Results 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			West Coast Region (Pacific, Northwestern and Southwestern Divisions; Alberta, British Columbia and NWT Sections)					
WA3GFZ W3KJ N1DPM AF1T WB2SIH	124,236 113,390 95,700 49,630 45,522	A A A A	W4SHG K8GUN NJ2F K4RTS KØVXM	60,495 43,788 27,740 22,847 21,507	A A A A	K2DRH KB8U N9DG K9MU KB9PJL	162,321 102,564 47,190 29,382 25,920	A A A A	Saskatchewan Sec NØKP WØJT KØSHF W6OAL NØLL	52,437 36,314 14,484 11,184 10,804	A A A A	W6YV(K9AKS, op) KC6ZWT W6AQ KF6YYV K7YO	23,994 21,448 19,266 15,336 11,685	A A A A
K1TEO AA2UK K1RZ K2AXX WA3NUF	454,176 436,104 337,824 316,487 227,666	B B B B	K4QI NW5E KC4PX WA8TTM W4ZRZ	87,300 64,735 61,930 56,700 44,642	B B B B	WB9Z W9GA K8MD WA8RJF K8TQK	91,307 70,800 62,920 62,694 55,896	B B B B	WØGHZ WØZQ KT8O W5LUA WW2R	106,785 85,734 54,145 52,546 50,285	B B B B	N7EPD W6KBX N6KN K6TSK WA6KLK	48,184 24,640 24,327 22,842 12,788	B B B B
WB2AMU N2IM K3MKZ/3	960 144 72	Q Q Q	KT4GG KQ6NO	165 60	Q Q	N8XA W9GKA K9BIG	4,066 3,978 1,210	Q Q Q	KFØQ KØNR WD5AGO NØJK KAØJWC	22,920 2,478 2,378 345 6	99999	KQ6EE KG6HSQ	1,674 145	Q Q
W3SO N3JFM W1QK W2MMD K2AA	217,888 88,981 75,764 42,903 41,616	L L L L	AA4ZZ K4ATM KU4JZ WX4MC	81,000 5,664 1,110 90	L L L	K8CC N8ZM KC9ETU K8RO N9FH	113,328 53,568 12,040 6,342 6,028	L L L L	WØJH NØKIS KD5JGA	2,838 1,620 1,175	L L L	VE7DXG K6MJU W6SN KO6JF W7DHC	17,184 6,650 3,872 3,380 2,470	L L L
K3EAR N2PA N3NGE K1JT N2JMH	944,064 394,487 300,048 254,408 130,689	M M M M	N4HB AG4V K4NGA N4JQQ	19,176 11,316 3,360 2,856	M M M	N2BJ N8KOL W9RVG	109,200 90,170 14,823	M M M	WØEEA KAØMR W5LCC K7RJ	24,966 3,705 2,268 780	M M M	W6TE K7MDL K6WLC	52,050 11,060 9,386	M M M
K2TER (+KV2X) N2OPW N1XKT K1DS K2QO/R	400,189 371,195 91,872 86,255 35,206	R R R R	W3IY (+ON4IY) KC3WD (+logger) K1KC (+WA4UJY) N4OFA (+N4FLM) WD4MGB		R R R R	VE3OIL K9ILT/R KØPG/R NE8I K9JK/R	50,320 33,865 33,800 18,306 15,688	R R R R	W9FZ WØAMT(+KCØLBT) KCØP KMØT KIØSk (+NØBAF)	93,824 31,430 12,144 6,929 4,725	R R R R	N6MI 1, N6MU 1, N7WLO (+KL7BK)	097,280 067,377 053,582 370,804	R R R
												N6TEB (+KE6HPZ) 269,598	R

other half lives from time to time. Mike reports it was a great learning experience.

West Coast

West Coast contesters W6YV (Curtis, K9AKS op); Norman, KC6ZWT, and Dave, W6AQ, captured 1st, 2nd and 3rd place in the SOLP madness. VE7DXG won the LM category, while W6TE took the top MU spot here with 52k. The rover brigade saw big action from the top nationwide finishers previously mentioned. Roving in 6 land is a unique game, with lots of inaccessible mountain ranges blocking many of the suspected radio paths between population centers. It's great to see the big efforts from rovers in the West Coast region.

Affiliated Club Competition

The January VHF SS continues to be the big draw for club competition in the VHF world. The top club effort this year goes (yet, again) to the Mount Airy VHF Club with 56 entries, and a huge score exceeding 2.8M points! These guys have always made a big effort to encourage and help each other. This year the efforts paid big dividends. It's great to see such camaraderie and expertise in action. I can tell you that it's really fun to be within radio range of such an energetic group of

VHF nuts. This club was the only entrant in the unlimited category.

In the medium category, the Rochester VHF Group led the pack with about 1.8M points, and 25 entries. Lots of microwave QSOs and rovers seem to thrive up here, despite the even colder weather than most of us have to deal with. The Northeast Weak Signal Group took a strong second place finish with over 1 million points and 28 participants. Third place in the Medium category goes to the South Mountain Contest Club, led by the record-setting performance of K3EAR. It's hard to compete with a club hosting the top MU effort of any contest.

In the local club category, the Delaware Valley VHF Society captured first place with 250k and 9 participating stations. The Eastern Panhandle Amateur Radio Club took the next spot with 136k and 10 entries. The North Texas Microwave Society took third place in the local club competition with nearly 122k points and 7 entries.

It's nice to see these clubs and organizations working to get their members on the air, contributing to this great operating event. It's important, especially in the dead of winter, to keep our fellow VHF and above amateurs stimulated, and operating. Clubs are a great venue for

finding other interested VHFers to share ideas with, and find out what you may be missing on the bands.

The Allure of the January VHF Sweepstakes

We always enjoy seeing the bands come alive, especially when the propagation is less than normal. Working stations on VHF bands is always fun, but a contest in January is an especially welcome opportunity to see what your equipment can do. It's a unique challenge to work the usual DX stations that were so plentiful in warmer weather. Often, it just takes trying several times, as conditions are always changing.

Listen for the weak ones, and see what you can find. Working under adverse conditions make us all grow a little, and helps us to prepare for emergency communications, should the need arise in your area. Tune in next year, and join the excitement. Find out who has new equipment or better antennas, or maybe find a new rover in your area and show him what is possible on this exciting part of the Amateur Radio spectrum. Each QSO has a little more meaning in the January VHF Sweepstakes. Try it for yourself in 2005. Bet you will find a pace that suits you.

Scores

Each line score lists call sign, score, stations worked, multipliers, and band (A= 50 MHz, B = 144 MHz, C = 222 MHz, D = 432 MHz, 9 = 902 MHz, E = 1296 MHz, F = 2304 MHz, I = 10 GHz).

DX	Vermont	WR3P 330 23 6 A BCD P
VP9GE 31,434 403 78 A A 1	KA1BSZ 25 5 5 A A W1FN (AA1KL, WB1BRE, AC1H, WA1ZCN,	W5KI 112 16 7 A AB K2QPN 112 28 4 A AB
Connecticut	W1AIM, KU1R, ops) 12,702 193 58 L ABCD	
K1TEO 454,176 1041 228 B ABCD9EFGHI K1GX 120,420 573 108 B ABCD9EFGHI	Western Massachusetts	K1JT (+K2TXB, KC2DLA, K2BMI, KU3A, N3EVV) 254,408 992 154 M ABCD9EFP
WZ1V 22,491 148 63 B ABCD9EFG	W1RZF 15,756 269 52 B A BCD NC1I 13,950 234 50 B A BC DE	K3EOD (+K3EGE, WA3WUL, WR3P)
KF6AJ 21,204 277 57 B ABCD K7BV 17,856 279 64 B A	NC1I 13,950 234 50 B A BC DE N1MUW 4,650 87 30 B ABC D9EFG	107,910 584 110 M ABCD9EFP W2MMD (N2NRD, KB2AYU, KC2KGM, WB2LNR,
K1EM 27,872 337 67 A ABC DE	N1DPM 95,700 386 110 A ABCD9EFGI K1SND 2,712 113 24 A AB	ops) 42,903 574 63 L ABCD K2AA (K2SMD, N3RG, W2RDS, W2MC, KC2JJT,
K1IM 20,829 283 53 A ABCD 9E K1ZZ 13,668 227 51 A AB DI	KK1W 2,071 109 19 A AB	N2EAC, ops)
K1CPJ 9,879 159 37 A ABCD 9 E FG K1WVX 5,005 106 35 A ABCDE	KB1MU 112 24 4 A BD N1CCF 60 10 5 A BC	41,616 480 68 L ABCD W2EA (KF2Y, KV2M, KV2R, N1RK, K2SCO, K2WB,
N1OFZ 2,231 96 23 A ABD	K1TTT (+packet)	ops) 37,312 474 64 L ABCD
WY1U 2,185 92 23 A ABD WB1GCM 2,109 96 19 A ABD	-,	Western New York
K1DJW 1,360 68 20 A AB	2 Factory New York	K2AXX 316,487 642 191 B ABCD9EFGHI W2FU 36,550 165 85 B ABCD9EFGHI
WA1GTP 1,029 40 21 A ABCD N1ZXL 627 55 11 A ABD	Eastern New York W3HHN 10.017 124 53 B ABCD9E	K2AN 22,450 200 50 B ABCD9EFGHL K8ZES (VA3IKE,op)
W1NRG (KB1CIW,op) 231 21 11 A AB	W2GKR 7,399 127 49 B AB CD WB2SIH 45,522 372 81 A ABCD9E	11,102 140 61 B ABCD
KB1EMJ 216 21 9 A ABD	N2GCZ 5,394 122 29 A ABCDE	W2EV 6,594 99 42 B ABCDE N2EZS 19,680 243 48 A ABC D9E
N1ZN 210 30 7 A AB KB1JDX 189 27 7 A B	KC2GDG 4,356 85 44 A ABCD WA1RKS 2,016 70 24 A ABCD	K2EY 11,109 115 69 A A B C D KA2ENE 8,062 219 29 A A B D
W1DMM 185 37 5 A AB KA1RWY 12 3 3 A ABD	N2UD 540 37 12 A ABCD	N2WVK 7,956 119 39 A ABCDE P
W1QK (+W1NG, W1QJ, W1JMA, WØBR, N1GS,	WA2BAH 84 12 6 A BD KC2KIS 70 11 5 A BD	N2HJD 7,250 197 25 A ABCD9EI K2OEQ 5,940 132 36 A ABD9
N1ABY, K1XS, K1PHG, KA1SYG) 75,764 671 94 L ABCD	KA2MCU 15 4 3 A BD N2FMC 8 4 2 A B	N2MKT 5,092 108 38 A ABCDE
KB1DFB (+N1XS, KB1H)	KC2KLF 2 2 1 A B	W2CXM (WO9S, op) 3,441 94 31 A ABD
30,300 405 60 L ABCD KW1AM (+N1SAX)	NYC-Long Island	W2ONP 2,430 107 18 A ABCD WB2YJH 2,394 140 14 A ABD
10,222 216 38 L ABCD	KC2KHV 50 8 5 B BD W2RKI 8,756 168 44 A ABC D	KB2NFS 1,170 67 13 A ABCD
Eastern Massachusetts W1GHZ 56,170 430 82 B ABCD9EI	N2RRA 4,884 223 22 A B	W9KXI 448 27 14 A BD W2LC 350 23 14 A ABD
N1GJ 16,038 168 54 B ABCD9E F	AG2A 2,533 149 17 A B KB2NOW 2,058 74 21 A AB C D E	W2DYY 189 16 9 A ABD
KO1I 11,000 242 40 B A BD9 W1FKF 10,152 113 36 B ABCD9EF GI	N2XDR 1,848 130 12 A ABD	K2DH 72 3 3 A IJ P KC2MHU 60 10 6 A AB
WG1Z 16,830 245 45 A A BCDE	KC2IQF 1,331 121 11 A A	N2IM 144 16 6 Q ABDP
K5MA 11,424 163 56 A A BCD KA1EKR 10,220 213 35 A ABCD 9	WM2Z 770 53 14 A ABD K2OVS 704 36 16 A ABD	N2PA (N2VSZ, W2JSG, W3OAB, N2JQR, N2KG, N2YB, ops)
AA1VL 6,262 173 31 A ABD K1UR 4,800 161 24 A ABCD	KB2JKW 440 30 11 A ABCD	394,487 954 223 M ABCD9EFGHIJL
N1FDX 1,975 77 25 A ABD	N2KIN 75 14 5 A ABD W2NSF 16 4 4 A AB	N2JMH (+KC2IDT, N2WK, K2DH) 130,689 461 117 M ABCD9EFGHIJP
K1EP 1,728 87 18 A ABCD W1DYJ 1,155 77 15 A AB	WB2AMU 960 53 16 Q ABCD	N2KXS (+WO2P)
K1HC 726 60 11 A ABC N1BC 649 51 11 A ABD	Northern New Jersey W2KV 12,390 231 42 B ABDI	20,020 184 55 M ABCD9EFGHIJL N2UIO (+KC2GMG)
K1VU 420 37 10 A ABD	WB2TT 2,875 104 25 B AD	14,335 204 47 M ABCDHL
N1EKV 396 31 9 A ABCD KB1KGP 216 36 6 A B	KC2KZR 351 39 9 B AB W2JEK 306 34 9 B AB	3
WB2PID 148 28 4 A ABCD W1CRK 144 16 9 A AB	KA2SSX 150 30 5 B B W2DTA 19,690 249 55 A AB CDE	Delaware W3OR 36,456 260 93 B ABCDE
W1XM (KB1CGZ, N1UEJ, KB1FMP, KC6F, KT1D,	K2AMI 6,262 156 31 A ABCD	WA3BZT 2,675 107 25 A AB
KD1KY, N1VDU, W1GSL, KB1GRS, KB9IJB, N1XUO, KA2ZLZ, KB1FMP, ops)	WB2CUT 5,425 217 25 A B W2VTV 4,108 142 26 A ABD	KB1KCY 130 26 5 A B
30,580 373 55 M ABCD9EF	N2CSF 3,498 106 33 A A B W2MSK 1,292 65 17 A ABCD	Eastern Pennsylvania WA3NUF 227,666 780 134 B ABCD9EFGHIJP
W1MAT (+KV1J) 4,675 154 25 L ABCD	K3GNZ 938 58 14 A BD	W3RJW 126,224 565 98 B ABCD9EFGHI
W1XX (+KB1KGP, NC1C) 1,975 78 25 L ABD	N2CG 885 59 15 A AB KE3PL 812 58 14 A A	AA3GN 114,982 569 86 B ABCD9EFGHI WA3DRC 104,550 491 82 B ABCD9EF GH I
Maine	W2WJO 689 51 13 A ABD K2ESE 630 36 14 A ABD	N3EXA 93,984 514 89 B ABCD9EF WØRSJ 88,027 545 113 B A BCD9
N1CJS 28 7 4 A AB	KC2LSU 616 54 11 A ABD	K3IPM 73,062 584 82 B ABCD9EF
New Hampshire	WA2NXK 528 41 12 A ABD	K3TUF 62,556 406 78 B ABCD9EF W3GAD 58,765 498 73 B ABCD9E
K1TR 77,832 503 94 B ABCDEFG W1ZC 6,912 156 32 B BD	Northern New York NS2P 4 2 2 A A	N3ITT 42,845 396 55 B ABCD9EF WA4GPM 39,675 253 115 B ABCDE
AF1T 49,630 363 70 A ABCD9EFGHIP AC1J 12,470 199 43 A ABCDE	Southern New Jersey	K3YI 35,154 393 63 B ABCDE
KU2A 10,101 136 39 A ABCD9EFG	AA2UK 436,104 810 216 B ABCD9EFGHI	K3CI 30,855 299 55 B ABCD9E WA3EHD 30,324 347 42 B ABCD9EF
AA1YN 9,805 155 37 A ABCD9E W1SD 6,280 145 40 A ABCD	K2SMN 128,397 556 127 B A B CD9EF W2SJ 11,540 177 20 B ABCD9EFGHI	KB3ZS 29,848 382 52 B ABCDE KF3DT 29,036 336 61 B ABCD9
WB1CMG 5,346 117 22 A ABCD9E J WW1Z 5,104 125 29 A ABCD9	WA2ONK 3,060 70 17 B C9 K2TXB/M 27 9 3 B B	WA3RLT 20,787 289 41 B ABCDEF P
N1JHJ 4,472 101 26 A ABCDEI P	K2TXB/R 27 9 3 B B	WA3YUE 20,163 237 39 B ABCD9EF WA2OMY 12,845 234 35 B ABCD9EF
WA1Z 3,125 117 25 A ABD N1YHW 2,145 141 13 A ABD	K3MWV 5,302 184 22 A AB CD W2PAU 3,692 126 26 A A BD	K3IUV 11,778 285 26 B ABCDE K3ISH 10,659 187 57 B AB
N1FOJ 1,536 96 16 A AB K1PDY 741 42 13 A ABCD	KC2KGZ 2,783 110 23 A A B D N2DEQ 2,235 121 15 A BCD	K3TV 9,420 314 30 B A B
WA1VKO 279 31 9 A AB	N2RF 1,770 99 15 A ABCD	K3MFI 9,320 250 20 B ABCD9EF KB3BBR 9,128 187 28 B ABCDEF P
KB1JCL 261 29 9 A AB	WB2VLA 1,332 79 12 A ABCD N2UO 1,036 74 14 A B	KB3HCL 4,471 173 17 B ABCDE
Rhode Island WB2VVV 5,883 111 37 A ABCD9EF	WA4FRA 528 61 8 A ABD	W3KM 4,242 108 21 B ABCDEF N3XJX 3,927 119 33 B AB
KB1LN 189 27 7 A A	W2MC 495 49 9 A ABD	W3KKN 3,192 124 14 B ABC9E

K3IB 1,596 76 21 B B K3JJZ 1,540 113 10 B BC	N3JDR 15,198 WA3PTV 1,242	182 51 A 53 18 A	A BCDE ABD	N4JQQ (+packet) 2,856	56	34 M	ABCDE
W3GXB 1,144 81 11 B ABC W3HMS 1,045 42 19 B ABD9	NG3W 600 W3BBO 576	30 20 A 30 18 A	AB A BD	Virginia			
N3KN 518 37 14 B AB KD3TB 376 47 8 B A	K3ZCY 231 K3RWN 231	14 11 A 17 11 A	ABDE ABD	KE2N 25,917 KN4SM 17,017 K4WYS 1,593	307 183 49	53 B 77 B 27 B	ABCDEF ABD ABD
W3JG 360 39 8 B ABD WA3GFZ 124,236 581 87 A AB C D9EFG HIJ P	WØQPS 182 W4ZE 77	23 7 A 11 7 A	ABD A	W2YE 1,044	87	12 B	Α
W3KJ 113,390 532 85 A ABCD 9EFGI N3FUJ 43,505 594 55 A ABCD	WBØIWG 6 W3IOH (+W3HH, \	3 2 A N3SVJ, WA3TT:	AB S, WA3VXJ,	W4NFT 252 W4SHG 60,495		109 A	
N3FTI 40,722 328 66 A ABCD9EFG WA3NWL 34,079 373 53 A ABCD9E	KA3YNO, AI3J, A 29,319		B3DPU)	K4RTS 22,847 K4FJW 9,372	183 144	67 A 44 A	
KB3XG 30,756 217 44 A ABCD9EFGHI AA3RE 14,304 235 32 A ABCD9E	W3SO (K3RÚQ, K W3YOZ, K4VV, W	D3SA, W3BTX,	W3PAW, W3TEF,	WA4VE 6,432 N4MM 6,290	155 185	32 A 34 A	AB
N3KKU 13,770 294 34 A ABCD N3FD 11,890 297 29 A ABCD		947 176 L	ÁBCD	KA6AKH 5,088 K4MTS 3,150	142 95	32 A 30 A	
N3PLM 11,544 242 26 A ABCD9EF K3DMA 10,200 275 24 A ABCDE	720	38 15 L		AK1E 1,720 W4/KL7GLL 1,653	55 77	20 A 19 A	
N3TR 7,659 180 37 A ABD	4			K3TEZ 1,634 W4IM 756	69 52	19 A 12 A	BD ABCDE
KA3FQS 7,199 215 23 A ABCD K3GNC 6,864 144 26 A BDE	Alabama W4ZRZ 44,642	301 101 B	ABCD9EF	NC4S 468 W4NEZ 385	36 24	13 A 11 A	AB
WA3ELQ 3,808 161 17 A ABCD W3MEL 3,780 128 27 A ABCD	N4JDB 3,783 W4LIA 2,233	82 39 A 59 29 A	ABD ABD E	N4EUK 135 N4JED 27	27 9	5 A 3 A	A B
K3EGE 3,690 125 18 A ABCD P W3ICC 3,444 175 14 A ABCD	KE6QR 1,204	73 14 A	ABD	WM3T 25 N4HB (+N4ZJ, AB ⁴	5	5 A	AB
W3EFH 2,550 115 15 A ABCD W3SZ 1,744 54 16 A ABCD9	Georgia W4WA 20,216	201 76 B	ABCD	19,176 KU4JZ (+KG4YVA)	211	68 M	ABC9
KB3EXB 1,540 66 20 A ABCD KB3GJT 1,170 87 10 A ABCD	W4EUH 7,140 KD4K 3,232	128 42 B 75 32 B	ABCD ABCD	` 1,110 ´	65	15 L	ABD9
N3GNW 826 87 7 A BC W3AWA (WA3KFT,op)	KE4GVX 28 WA4IOB 2,754	6 4 B 76 27 A	ABD ABCD	West Central Flo K9HUY 14,616	orida 261	56 A	АВ
712 75 8 A ABCD KB3ILS 690 62 10 A ABD	W4ATL 392 N4GG 45	28 14 A 8 5 A	AB ABD	K1TZD 2,886 KC4YDY 510	76 34	37 A 15 A	AB D
KD3ST 680 40 17 A AB KB3JGS 676 52 13 A AB	K4NGA (WB4AEG 3,360			1104151 310	04	10 /	A
W3RZU 549 61 9 A B N3AHP 279 27 9 A ABCD	Kentucky			5 Arkansas			
K3VEQ 240 42 4 A BC W8IJ 96 10 8 A ABD	K4SAC 40 North Carolina	7 5 A	ABD	KG5MD 2,560	50	40 B	ABCD
N3EVV 96 4 3 A IJP K3ALS 90 18 5 A AB	K4QI 87,300	416 150 B	ABCDE	KT4GG 165 Louisiana	11	11 Q	ABD
KA3MGB 80 16 5 A B N3MXT 70 35 2 A B	NG4C 3,840 N4HN 2,184	70 40 B 78 28 A	ABCD9E AB	K5ER 1,350 K5CZD 1,210	48 45	25 A 22 A	ABD ABCD
WA3AQA 44 22 1 A C WA3AAN 18 9 2 A A	K3KO 390 KS4S 360	30 13 A 31 12 A	A A	N5JM 400	25 6	16 A 2 A	AB AB
W3TDZ 2 2 1 A B K3MKZ/3 72 3 3 Q FGI	N4CW 348 NX9T 231	29 12 A 21 11 A	AB AB	N5HMH 12 Mississippi	0	2 A	AD
K3EAR (K3MKZ, K3RDA, K9PW, N3EMF, N3FA, N3IKO, N3TKK, N3WV, WA1HHN, WG3E)	W2ZV 91 KE4DRN 1	13 7 A 1 1 A	AB B	W8FR 2,176 KN4QS 280	61 20	32 A 14 A	ABD AB
944,064 1799 298 M ABCD9EFGHIJKLF N3NGE (+K1WHS, W2PED, K3AX, AB2KT, N4HY)	AA422 (+AA40, IX			KJ5RC 50 North Texas	10	5 A	Α
300,048 1054 168 M ABCD9EF W3RT (+N3HTZ, KB3HE)	81,000 K4ATM (+KE4YYJ	, KG4ZTM, KG4		W5LUA 52,546	211	94 B	ABCD9EFGHIJ
28,371 365 49 M ABCD9E N3JFM (+W1LBY, N3JXB, KB3GIC, WA3IEM, KE3JU	KG4MNK, KG4M 5,664	184 24 L	ABCD	WW2R 50,285 K9MK 10,773	235 156	89 B 57 B	ABCD9EFGHIJK ABCD
88,981 710 101 L ABCD N3RN (+KA3EEO, KA3ZHT)	Northern Florida NW5E 64,735	a 462 121 B	ABCDE	N5TIF 2,146 W5SXD 2,002	74 58	29 A 26 A	ABCDE
19,418 201 73 L ABCD N3IP (W4RFJ, N3GSD, N3EMQ, W3JG,ops)	WA8TTM 56,700 N2QGV 400	330 108 B 39 10 B	ABCD9EFGHIJ ABD	NM5M 1,484 AD5NR 1,222	76 80	14 A 13 A	ABD
869 64 11 L BD	W2BZY 12,144 WD8KUF 11,712	188 46 A 150 61 A	ABCD9EF AB CD E	WQ5W 1,088 NØXLR 621	64 56	17 A 9 A	AB ABD
Maryland-DC K1RZ 337,824 853 184 B ABCD9EFGHI	KU4WD 8,280 KE4YYD 3,959	162 45 A 91 37 A	ABCD ABD	W5RMH 441 KA5DWI 434	43 28	9 A 14 A	ABD
N3HBX 64,251 512 99 B A BCDE W3ZZ 18,178 215 61 B ABCD	WA2IID 30	6 5 A	A	NØRQ 171 AA5AM 65	17 13	9 A 5 A	
K3ZO 14,398 313 46 B AB W3RAR 1,444 67 19 B ABD	South Carolina KE8FD 24,752	195 91 B	ABCD9E	Oklahoma KBØHH 5,194	78	49 A	ABCDE
Al3Z 24,516 301 54 A ABCD 9E W3STU 23,639 224 77 A A B CD	K3IXD 253 Southern Florid	23 11 A	AB	NEØP 544 NH6CJ 338	30 25	16 A 13 A	ABD
W3IKE 14,575 175 55 A ABCD9E W3ARS 6,270 151 33 A ABCDE	KC4PX 61,930	466 110 B	ABCD9EF	KA5SIG 315 WD5AGO 2,378	28 62	9 A	
N3VOP 3,519 126 23 A ABCD K2PLF 3,042 107 26 A ABD	NJ2F 27,740 KØVXM 21,507	330 73 A 180 67 A	ABCD ABCD9EFGHIJ	KD5JGA (+KD5LL)	_, KB5F	HMZ, N5	
KT3RR 2,354 107 22 A B K3YDX 1,575 87 15 A ABD	N4IS 5,828 W3IIT 3,811	122 31 A 94 37 A	B C DE ABD	KD5ZTT, KD5ZW 1,175	42	25 L	ABD
N3UM 1,548 86 18 A AB W6AXX 1,428 84 17 A B	NL7AU 1,850 N4GM 1,134	74 25 A 54 21 A	A A	South Texas K5LLL 22,561	185	77 B	ABCD9EFGI
WA4PRR 1,406 67 19 A ABD KB3KAQ 1,272 106 12 A AB	KE4WBO 912 N3II 525	36 19 A 35 15 A	ABCD AB	W3XO 21,584 W5UWB 11,781	226 146	76 B 63 B	ABCDEF ABCDEF
N3UR 1,054 62 17 A B AK3E 1,045 43 19 A ABD	KØMHC/4 480 WX4MC (N1XC, N		ABD	K5QE 7,332 K5IX 4,488	125 129	52 B 33 B	ABDE ABD
AC3P 696 53 12 A ABCD KC3EF 594 55 9 A ABD	90 Tennessee	15 6 L	AB	KA5GLX 1,064 KC5OLC 2,904	56 80	19 B 33 A	Α
W3CB 385 35 11 A B N3FNE 272 34 8 A A	KD4HIK 12,285	143 63 A	ABCD	WA5UFH 2,046 KM5RG 1,386	57 54	31 A 21 A	
KB3GBC 182 26 7 A AB W3LL 114 19 6 A A	AD4F 3,834 W4BCU 3,810	54 54 A 87 30 A	ABCDE ABCD E	AJ4F 1,071 N5PPK 800	63 40	17 A 20 A	AB
WA3ZKR (+KA3EJJ) 32,370 285 65 M ABCD9EFGHI	WA4YRK 2,133 WN4M 2,077	60 27 A 67 31 A	ABD AB	N5VHO 520 N5DTT 240	43 24	10 A 10 A	ABD AB
KI3DS (K3ASK, K3BAY, K3TH, KB3EEJ, ops) 2,369 100 23 L ABD	W4TDB 336 KG4OLG 270	24 14 A 24 10 A	AB ABD	KZ5CW 220 KG5U 117	24 22 28	10 A 10 A 3 A	AB BD
Western Pennsylvania	AG4V (+packet) 11,316	114 69 M	ABCDE	KD5VNV 80	10	8 A	
N3EBT 6,345 114 47 B ABD				W5GAI 66	11	6 A	

WM5R 1 1 1 Q B	N7DB 2,850 117 19 A ABCD WB7RSG 1,248 78 13 A ABCD	West Virginia
West Texas AE5B 5,445 118 45 A ABCD	WB7RSG 1,248 78 13 A ABCD WR7X 630 30 18 A ABD K7VIT 295 52 5 A ABD	N8RAT 44,388 413 81 B ABCD K8GUN 43,788 394 82 A ABCD
W5LCC (KC5MVZ, KE5ABS, KB5KYJ, KC5MVV, ops) 2,268 54 27 M ABCDE	W7KKE 168 21 6 A ABI	W8CMK 6,180 153 30 A ABCD
6	Utah N7MLD 385 19 11 B ABCDI	N8II 1,064 76 14 A A
East Bay	NJ7A 1,512 45 21 A ABCDE N7DBW 1,026 37 18 A AB C DE	WV8E 175 25 7 A AB K8NBC 84 18 4 A ABD
W6OMF 7,560 100 45 A ABCDE K6RE 384 21 12 A ABCD 9 E	KC7PVD 91 12 7 A ABD	KC8KSK 30 5 5 A AC
W6SN (+W6GNU, KG6MDW) 3,872 158 22 L ABD	K7RJ (+ WJ7L, KD7LEA) 780 27 15 M ABDEI	9
KO6JF (+ KL7IDY, WØEEC, KJ6AF, KF6YRG)	Western Washington	Illinois
3,380 134 20 L ABD Los Angeles	N7EPD 48,184 363 76 B ABCD9 E FG WA7TZY 12,505 187 41 B ABD E	WB9Z 91,307 493 131 B ABCDE W9XA 20,944 220 68 B ABCDE
N6KN 24,327 324 53 B ABCDE	K7ND 2,583 67 21 B BCDFG W7MGC 1,392 66 16 B ABCD	WB9SNR 14,352 165 52 B ABCD 9 E W9JGV 2,400 100 24 B B
W6YV (K9AKS, op) 23,994 353 43 A A B C D E	WB7BST 756 27 7 B E WB7FJG 2,340 108 20 A ABD	W9VA 1,332 67 18 B ABCD K9SM 336 16 14 B ABCDE
W6AQ 19,266 315 38 A A B CDE KF6YYV 15,336 296 36 A ABC D E	KG7P 1,904 93 17 A ABCD WA7MLD 960 68 12 A ABCD	W9SE 120 12 10 B AB Al9L 56 7 7 B ABD
KG6GIQ 11,572 182 44 A ABCDE K6HLH 4,768 76 32 A ABDE FGI	K7WA 792 58 12 A ABD	K2DRH 162,321 549 183 A ABCD9E
KG6DHQ 2,047 70 23 A ABD W6QE 828 69 12 A AB	KD7TJC 574 41 14 A AB N7AM 504 18 8 A B E	KG9IL 23,280 337 48 A ABCDE G WA9FIH 18,550 295 50 A ABCD
W6RCL 424 39 8 A ABD	KD7ALF 100 20 5 A AB N6KW 91 13 7 A AB	KO2R 10,350 148 50 A ABDE N9GH 6,670 90 46 A ABCDE
WB2TVB 95 19 5 A B KQ6EE 1,674 63 18 Q ABCDE	N6MZ 30 10 3 A A K7MDL (+KD7OJP)	WA9CCQ 6,061 184 29 A ABD AA9MY 3,872 66 44 A ABDE
K6WLC (+WA6PZK, AB6CF, KG6TBR) 9,386 198 38 M ABCDE	11,060 211 35 M ABCDE W7DHC (+KA7GKK)	W9LT 3,674 122 22 A BD K9IJ 2,725 69 25 A ABCDE
K6MJU (+WA6DWL) 6,650 164 25 L ABCDE	2,470 104 19 L ABCD	N9KO 2,516 120 17 A ABCD
Orange	KI7EL (+N7XKJ, KB7PSG) 1,652 101 14 L ABCD	N9OBB 2,336 63 32 A ABD WD9GJK 1,872 114 13 A ABD
K6TSK 22,842 267 54 B A BCDE KC6UIX 3,136 83 32 B A BD	8	KB9II 1,869 77 21 A ABC WB9WOZ 1,717 86 17 A ABD
N6HC 744 62 12 A AB KF6XA 189 21 9 A AB	Michigan K8MD 62,920 340 130 B ABCD9 E F	WA9RIJ 1,638 101 13 A ABD KB9YSI 1,620 71 20 A ABD
Santa Barbara	K2YAZ 26,362 172 98 B ABCD9E K8RS 14,544 133 72 B ABCD9E	W9NHX 1,308 94 12 A ABD N9TUQ 1,248 81 13 A ABD
KC6NBI 1,224 68 18 B AB W9EC 1,440 50 20 A ABCDE	KB8U 102,564 364 154 A ABCD9EFGI	N9OF 1,190 58 17 A ABD AK9Y 1,068 70 12 A ABD
KE6RCI 1,001 74 11 A BD	KF8QL 10,065 109 61 A ABCD9E K8EB 7,920 101 48 A ABCD9E	N9SDT 896 52 16 A ABD
Santa Clara Valley KG6TJX 1 1 1 B A	K8NWD 4,104 106 38 A A B D K8DOG 1,742 58 26 A ABD	W9NSP 748 50 11 A ABCD W9AVB 680 55 10 A ABD
K6KLY 7,412 174 34 A ABD KF6MXK 2,850 117 19 A ABCD	W8IDT 902 41 22 A B WB8DQT 817 43 19 A B	WA9CJZ 616 64 8 A BD W9CEJ 272 34 8 A AB
N6JLJ 55 11 5 A AB	WA8YLZ 224 26 8 A ABD K8SIA 200 22 8 A ABD	KB9WQJ 220 18 10 A ABD KA9BVQ 210 28 6 A ABD
W6ZZZ 1 1 1 A B	NF8M 12 6 2 A A	W9LYA 160 28 5 A BD K9LPL 156 39 4 A B
San Diego K6CYS 152 12 8 B BCE	K8CC (+K9TM, WX3M) 113,328 612 144 L ABCD	W3HDH 130 13 10 A A
KF6NKC 432 28 12 A BDE KG6HSQ 145 29 5 Q B	K8RO (+K8EO, N8PYN) 6,342 120 42 L ABD	NØICV 126 17 7 A ABD W9AFR 102 12 6 A BD
San Francisco	W8RU (+KC8VGG, KB8VWM) 972 43 18 L ABCD	KB9KDC 84 21 4 A AB WN9GUC 81 16 3 A BD
WA6KLK 12,788 202 46 B ABCDE KG6BEI 528 44 12 B AB	Ohio	KC9AZJ 76 14 4 A ABC KA9UZH 36 18 2 A B
W6XU 407 35 11 B ABD	WA8RJF 62,694 271 129 B ABC D9EFG K8TQK 55,896 307 136 B ABC D9EFG HI	K9DKI 34 17 2 A B W9GKA 3,978 92 34 Q ABCD
San Joaquin Valley WJ6T 6,536 136 38 B ABD	K8TVD 13,332 139 66 B ABCDE WA8TJL 11,275 130 55 B ABCD9EF	K9BIG 1,210 45 22 Q ABD N2BJ (+K2PAC)
KF6CNV 9,555 199 35 A A BCD E KF6KDA 8,288 189 32 A A BCD	WA8RCN 2,675 107 25 B AB K8MR 21,684 217 78 A ABCD	109,200 566 120 M ABCD9EF
W6TE (+K6MI, K6VLF, W6ALE) 52,050 283 75 M ABCD9EFGIP	WB8AUK 11,256 149 56 A ABCD	W9RVG (+WD9EXD, WD9EMF, WB9SKB) 14,823 151 81 M ABCDE
Sacramento Valley	W8PAT 7,645 94 55 A ABCDE K8WW 5,724 130 36 A ABC	KC9ETU (+N9TF) 12,040 258 35 L ABCD
W6KBX 24,640 228 70 B ABCDE KA6VQV 9,072 127 48 B ABCD	KK8O 4,896 106 36 A ABD KT8U 4,012 88 34 A ABDE	Indiana
KC6ZWT 21,448 262 56 A ABCD	KC8QAE 3,564 105 27 A ABD K8AB 1,696 85 16 A ABD	N9QX 3,441 98 31 B ABD WD9DSN 330 24 11 B ABD
KC6SEH 3,390 79 30 A ABCD E NC6P 117 11 9 A BD	KA8HQL 950 30 25 A BD W8DEL 690 37 15 A ABD	WA1MKE 18,881 156 79 A ABCD9E N7NGO 2,624 70 32 A ABD
_	KB8UUZ 510 34 15 A A W8KNO 468 36 13 A AB	WB9DRB 756 30 21 A ABCD W9ZB 748 40 17 A ABD
7 Arizona	K8NVR 456 38 12 A AB	NM9P 448 28 14 A ABD K9GPS 234 21 9 A ABCD
KE7NR 5,207 88 41 B ABCDE	W8IDM 429 29 13 A ABD K8FH 352 32 11 A A	KE4CYC 10 5 2 A B
N7IR 52 13 4 A A Eastern Washington	KC8UDV 231 20 11 A ABD N8QQA 210 27 6 A ABD	Wisconsin W9GA 70,800 376 120 B ABCD9E
N7AU 6,747 115 39 B ABCDE	K8USA 198 25 6 A ABCD N8QWJ 170 26 5 A ABD	NØAKC 8,474 126 38 B ABCD9E
W7JGO 252 19 9 B ABCD K7AWB 1,054 50 17 A ABCD	KB8YHF 70 10 7 A AB W8WTS 10 5 2 A AB	W9JN 2,070 51 30 B ABCD N9XRO 735 42 15 B ABC
W6LLP 192 19 8 A ABD Idaho	N8CBW 4 2 2 A AB N8XA 4,066 66 38 Q ABCD9EI	N9DG 47,190 328 110 A A BCD K9MU 29,382 262 83 A A BCD9E
W7USB 2,268 64 28 A ABCD	N8KOL (+K8ROX, WM8I)	KB9PJL 25,920 246 64 A ABCD 9E KC9BQA 20,740 245 68 A ABD
Montana	90,170 465 142 M ABCD9E N8ZM (+KB8ZR, W8PLZ, N8IDS, KD8FO)	N9JR 13,862 156 58 A ABCDE N9LLT 10,746 151 54 A ABCD
NW7O (+WA7MT) 330 20 15 L ABCD	53,568 365 124 L ABCD W8DD (+KC8SHY)	K9DQ 10,534 179 46 A ABCD
Oregon	` 1,105´ 55 17 L ABD	W9RAY 6,030 133 30 A ABCDE
K7YO 11,685 208 41 A ABCD		N9UDO 4,329 96 37 A ABD

KB9Q 2,268 65 27 A ABCD	North Dakota			KC8HZM	+KC8HZQ)				
K9VS 2,079 77 27 A AB	KØUD 260	17 13	A ABD	W8DRC	2,268 882	66 49	27 F 14 F		6 4
W9YYZ 1,768 55 26 A ABD WA1UJU 1,755 65 27 A AB	Nebraska			N8OFS	858	78	9 F	A	2
WB9MXX 1,292 76 17 A AB	WTØA 1,334	46 29	A AB	W8LON W8EH	252 70	21 8	12 F		3 2
N9NOP 1,008 50 18 A ABCD W9XT 989 33 23 A ABD	N1DDF 611 NØKIS (+WDØBGZ	41 13	a ab d	Hudsor		o	, ,		2
N9ISN 630 33 15 A ABD	1,620	58 27	L ABD	N2MH	35,064	313	72 F	ABCDE	9
W9KHH 136 14 8 A BD WX9M 136 17 8 A AB	South Dakota			KJ1K (+KE		195	56 F	ABCD9E	9
K9OSH 88 9 8 A ABD	WBØHHM 392	23 14	A ABCD	N6ZE	4,495	126	29 F	ABD	5
KS9WI 60 10 6 A AB KC9ECI 1 1 1 A B	Maritime-Newfo	undland		KC2HIZ/R NS2K	1,504 1,050	58 52	16 F		4 4
KC9ECI 1 1 1 A B N9FH (+N9VA)	VE1YX 3,201	97 33	В А	WA2LXE	552	37	12 F		5
6,028 106 44 L ABCD	Quebec			Midwes	st				
W9YT (WO9U, K9ITW, KC9ETY, ops) 481 33 13 L ABD	VE2PIJ 432	29 12		KMØT WØKT	6,929 108	96 11	41 F		4 1
~	VA2IC 395 VA2UK 119	79 5 17 7		New Er		"	3 11	l bb	'
Ø Colorado	Ontario	., ,	A AD		+KB1EUH)				
W6OAL 11,184 131 48 A ABCD9EFG	VE3TFU 35,442	218 99	B ABCD9E	N4 IE7/.I	17,236	220	62 F	ABCD	10
NØPOH 4,158 113 27 A ABC D	VE3BFM 4,255	55 37	B ABCD9E	N1JEZ (+ł	12,352	109	32 F	ABCD9EFGHIJK	8
N1SZ 690 52 10 A ABD9 KØUK 8 4 2 A AB	VA3FIN 16,830 VE3SMA 14,942	169 66 134 62	A ABCDE A ABCD9EF	W1AUV W1OH	2,320 209	98 17	20 F	BD ABD	3 2
KØNR 2,478 85 21 Q ABCD	VA3KA 12,992	158 58	A ABCDE	Northw		"		ADD	2
WØEEA (+N9KC, N9BD) 24,966 181 73 M ABCD9EFGIJ	VE3NPB 7,267 VE3CVG 6,407	100 43 101 43	A ABCDE IL A ABCDE	N7WLO (+					
lowa	VA3NFA 2,236	66 26	A ABCDE	KU7M (+K	370,804	1092	133 F	ABCD9EFP	15
NØURW 31,351 240 107 B ABCD	VE3VZ 1,416 VE3HHT 1,239	40 24 43 21	A ABCD A ABCD	·	164,488	571	116 F	ABCD9EF	16
NØGZ 7,991 99 61 B ABCD E	VA3TSG 261	29 9	A AB	K3UHF KB7DQH	27,776 23,744	342 262	56 F 53 F		10 11
KCØRAD 150 15 10 A A B ABØSD 25 5 5 A A B	VE3CR 182 VA3HUN 39	18 7 11 3		N7CFO	16,680	242	40 F	ABCD9EFG	6
Kansas	VASOR (VESRCN,		A ADD	W7ZZT KE7V (+K	3,020 7CW)	90	20 R	ABCDE	4
NØLL 10,804 106 73 A ABCD E	20	5 4 3 3		(897	57	13 F	ABD	2
KØUO 6,820 87 55 A ABCD E WØRT 2,074 42 34 A ABCDE	VA3UQT 12 British Columbi		A ABD	Pacific					
WØRT 2,074 42 34 A ABCDE NØSMA 384 30 12 A ABD	VE7CMK 256	а 268	В АВ	N6NB (+K	G6TOA) 1,097,280	1418	180 F	ABCD9EFGHI	16
NØJK 345 20 15 Q ABE	VE7BZR 68	17 4		N6MI	1,067,377	1340	179 F	ABCD9EFGHI	16
KAØMR KAØMR KAØKCI 3,705 58 39 M ABCDE	VE7DXG (+logger) 17,184	281 48	L ABCD	N6MU AE6GE (+	1,053,582 NI6M)	1307	178 F	ABCD9EFGHI	16
Minnesota	VA7MM (VE7CMK	, VE7CNF,o	ps)	,	138,570		93 F		14
WØGHZ 106,785 431 105 B ABCD 9EFGHIJ	140	7 5	L E	K7XC/R K6NC/R (-		583	89 F	ABCD9EI	14
W0ZQ 85,734 405 99 B AB CD 9EF KT8O 54,145 345 85 B ABCD9E F HI	Rovers	47 M D	AD.	o Kenc/P/I	59,360 (G6HXI, op)	542	80 F	ABCDE	17
KØAWU 15,958 161 79 B A BCDE	C6A/K6LMN 1,034 Atlantic	47 22 R	AB	- '	59,360	542	80 F		17
KBØZKX 11,223 175 43 B ABCDE WØAUS 10,434 165 37 B ABCDEI	K2TER (+KV2X)			WA6OEM KE6FI/R	11,400 9,880	212 191	38 F 40 F		6 4
WØVB 6,794 158 43 B B	400,189			14 KG6GMT	(+KG6HHE)				
WØLCP 3,025 98 25 B ABD NØUK 1,340 50 20 B ABCD	N2OPW 371,195 N1XKT 91,872	513 187 R 508 66 R		14 4 KD5FID	6,697 960	135 47	37 F		8 4
NØUK 1,340 50 20 B ABCD NØHZ 860 73 10 B ABD	K1DS 86,255 K2QO/R 35,206	478 65 R 348 58 R		4 K3KOA/R 7 -	784	37	16 F	ABD	4
KØFQA 840 47 15 B BD	NE3I 12,768	293 28 R	ABCDP	₅ Roanoi					
KØJO 731 36 17 B ABD WØPHD 720 27 20 B ABDE	AAØFH/R 4,628 K3LFO (+KA3TNY)	79 26 R	ABD9EFGHI	4 W3IY (+O		682	105 F	ABCD9EFGHI	10
KØNY 330 24 11 B ABD	2,950	83 25 R	ABDE	5 KC3WD (-		0=4		40000FF0UID	_
KCØFQZ 300 30 10 B AB NØKP 52,437 305 77 A AB CD 9E FGH I	KC2DMN (+W2EV) 2,754	77 17 R	BDEP	3 KB1EXM	74,734 14,229	121	79 H 51 F	ABCD9EFGHIP ABCD9EFGP	5 6
WØJT 36,314 305 67 A A BC D9E	N2XDO 2,278	102 17 R	BD	6 KG4LEV 2 KD4GCF	3,744 520	121 31	24 F		3 4
KØSHF 14,484 229 34 A ABCD9EFI NØHJZ 9,044 176 38 A ABCD	AA2YG/R 1,378 WA1HHN 576	53 26 R 9 8 R		2 KG4RUL/F	130	13	10 F	AB	2
NØMK 7,029 169 33 A ABD	KC2MCB 328 KC2KPI 30	33 8 R 4 5 R		3 W4WNT	88	9	8 F	ABD	2
WA2VOI 6,630 136 34 A ABCD NØVZJ 6,384 152 42 A AB	Central	7 0 11	22	· HOCKY	Mountair	1			
KBØLYL 4,800 240 20 A B	K9ILT/R 33,865	295 65 R		8	4,725		25 F		6
KAØPQW 4,284 100 34 A ABCD WBØLJC 3,150 90 14 A ABCD9EFI	K0PG/R 33,800 K9JK/R 15,688	294 65 R 274 37 R		8 WB2FKO	160	16	10 F	В	5
WØJLF 2,090 93 22 A ABD	WB8BZK/R 12,093	293 29 R	ABCD	4 8180 (.)					
KØKFC 1,744 83 16 A ABCD NØOA 1,341 116 9 A ABCD	KC9DQQ 1,368	78 12 R	BD	4 `	13,504	165	64 F		14
WØKF 1,260 101 9 A ABCDE	Dakota W9FZ 93,824	665 64 R	ABCD9EFI	WD4MGB 9 W4OZK		111 141	57 F 35 F		4 7
NGØE 1,020 53 17 A ABD KBØOZN 783 67 9 A ABD9	WØAMT (+KCØLBT)			Southw				7,5052	•
KBØDCO 767 47 13 A ABD	31,430 KCØP 12,144	409 35 R 167 33 R		9 5 N6TEB (+					
WKØX 448 49 8 A ABD KØSQ 387 43 9 A A	KCØIYT 2,754	96 17 R		3 N6DN (+A		610	147 F	ABCD9EFGHIP	11
KØVH 387 43 9 A AB	WØIS (+KCØOIA) 2,431	108 17 R	ABCD	3	252,636	607	148 F	ABCD9EFGHIL	11
KBØNES 312 28 8 A ABCD KØVG 270 35 6 A ABD	KCØOIA (+WØIS)			N6RMJ (+		357	80 F	ABCD9EFGI	5
NØCHI 238 34 7 A AB	1,740 WA9IGK 864	86 15 R 33 16 R	ABDE	3 4 WB6JDH	12,142			ABCDE	4
KBØFXK 175 22 7 A ABCD N2DUP 112 23 4 A ABD	WBØVHF 472 N2DUP/R 120	43 8 R 16 6 R		West G					
KCØPBY 100 25 4 A AB	Delta	u n	. 100	- KD5ULG (+KD5ZSD) 1,944	43	27 R	ABCDE	6
WØOHU 50 10 5 A B	N4OFA (+N4FLM)			KC5OBX	1,560	42	26 F	ABCD	6
NØYNT 28 14 2 A B KFØQ 22,920 190 60 Q ABCD9EFG	13,200 K4AL/R 6,222	192 48 R 98 51 R		3 N5PYK 4 AF5Q	1,065 576	38 30	15 F 16 F		1 5
KAØJWC 6 3 2 Q B	WA4JA 1,200	43 25 R	ABD	5 KD5WVL	238	15	14 F		5
WØJH (WBØVHF, KCØPWY, KCØPWX, KCØQEI, ops)	K1GU 2	1 2 R	В	1 Canada		0.15	oo -	400005575	_
2,838 111 22 L ABD	Great Lakes NE8I 18,306	139 54 R	ABCD9EFGHIJK	VE3OIL 9 VE3CRU	50,320 8,526	340 121	80 F 58 F		8 4
	KB8VAO/R 2,856	42 24 R		3	-				