2014 ARRL January VHF Contest Results

Was it the PØLAR VØRTX?

John (JK) Kalenowsky, K9JK, hamk9jk@gmail.com

The winter of 2013 - 2014 brought a new weather term to much of the United States and Canada — the Polar Vortex. Or, as I have taken the liberty to transform the term into call signs — PØLAR and VØRTX. The resulting shift in the path of the jet stream and other atmospheric dynamics brought extreme weather conditions to much of the country. With VHF+ propagation so dependent on atmospheric conditions, this surely had some effect on the January VHF Contest, January 18 – 20.

Is it possible that the effects of PØLAR and VØRTX were a factor in 2014's 622 logs being one of the lowest counts in recent years? Not only did the atmosphere "look different" to radio waves, but the aggressive weather in much of the country must have affected the willingness of potential participants. Regardless of the exact causes, the 622 logs represent a 13% drop from 2013's 721 entries and follows the trend since 2010's 820 logs, with 2011 and 2012 also showing a decrease.

This year's reduced activity is also reflected in the total QSO count, falling just shy of 57,000 as compared to last year's total of just over 63,000. The count of "other" calls (for which logs were not received) among 2014's submitted logs dropped to just over 2500, which is down by about 1000 from last year's count.

Regions and Categories

The chart on page 86 illustrates the overall log submission count broken down by region over the past 5 years. Comparing 2014 to 2013, the West Coast is the one bright spot, with log submissions growing by 25%, 114 this year compared to 91 in 2013, while the log counts from the Northeast, Southeast, Central, and Midwest regions shrunk anywhere from 12% (Northeast) to 31% (Midwest), with Southeast and Central dropping by 26% and 24 %, respectively. The impact of PØLAR and VØRTX on this sea-



John, N2NC, enjoyed operating from Andy's, N2NT, VHF+ basement shack. Andy added three-band capability to his station this year. (Photo by N2NC)

Affiliated Club Competitio	n	
Club Name Lo	ogs	Score
Unlimited Category		
Mt Airy VHF Radio Club	68	2,184,377
Medium Category		
Southern California Contest Club Potomac Valley Radio Club North East Weak Signal Group Florida Weak Signal Society Pacific Northwest VHF Society Society of Midwest Contesters Northern Lights Radio Society Badger Contesters Contest Club Ontario Yankee Clipper Contest Club Frankford Radio Club CTRI Contest Group Roadrunners Microwave Group Six Meter Club of Chicago Bristol (TN) ARC Central Texas DX and Contest Club Hudson Valley Contesters and DXers Northern California Contest Club Rochester VHF Group Arizona Outlaws Contest Club Florida Contest Group	$\begin{array}{c} 10\\ 24\\ 20\\ 17\\ 25\\ 12\\ 5\\ 8\\ 11\\ 16\\ 4\\ 5\\ 9\\ 11\\ 3\\ 3\\ 6\\ 5\\ 8\\ 4\end{array}$	$\begin{array}{c} 1,571,240\\ 810,614\\ 593,373\\ 154,026\\ 152,455\\ 138,705\\ 137,417\\ 99,363\\ 57,993\\ 43,637\\ 31,756\\ 21,411\\ 15,860\\ 14,317\\ 11,425\\ 11,267\\ 11,267\\ 8,324\\ 7,868\\ 6,841\\ 5,755\\ 4,194 \end{array}$
Local Category		
Stoned Monkey VHF ARC Chippewa Valley VHF Contesters Bergen ARA Rappahannock ARA Nashoba Valley ARC Granite State ARA Ventura County Amateur Radio Society Contoocook Valley Radio Club 10-70 Repeater Assn	638385333 3	36,225 19,106 16,332 14,969 12,074 10,344 7,499 6,025 4,952

son's weather patterns were more pronounced east of the Rocky Mountains so there does seem to be some correlation.

Scanning across the categories, log counts in four of the 10 categories actually bucked the trend of reductions. The Single Operator, High Power log count grew to 142 logs in 2014, eight more than last year. Sixteen logs in Single Operator Portable is a 60% increase over the 10 from 2013. In the Classic Rover category, 2014's log count swelled by $\frac{1}{3}$ to 39 — 10 more than last year. The Rover Unlimited category held its own this year, matching the four in 2013.

Other categories proved less popular. In Single Operator, Low Power, the log count of 256 was a substantial drop of 77 fewer than last year's count of 333. The new categories of Single Operator, Three Band and Single Operator, FM Only both dropped by 10 from 2013's counts, 67 for SO3B and 13 for SOFM this year. Multioperator (Unlimited) and Limited Multioperator log counts also shrank; 2014's 48 "M" and 20 "L" category logs were 11 and 9 fewer, respectively, than the count of logs in those categories last year. The 17 logs in the Limited Rover category this year was barely half of the 30 that were submitted in 2013.

The West Coast region's growth in log submissions was consistent across its three divisions, with the log totals from the Pacific, Northwestern, and Southwestern Divisions increasing by 12, 10, and 3, respectively. In the Northeast, the New England Division came close to bucking the trend, only dropping to 80 logs from the 82 received in 2013, while the Atlantic and Hudson divisions dropped by 17 and 11, respectively. Log count shrinkage was present in all the divisions of the remaining regions, with the Delta Division and Central Division showing matching drops of 13 each while the Rocky Mountain Division reported the largest percentage drop, 50% (10 in 2014 vs. 20 in 2013).

Division Winners

Single Operator, Lo	ow Power		
Atlantic Central Dakota Delta Great Lakes Hudson Midwest New England Northwestern Pacific Roanoke Rocky Mountain Southeastern Southeastern West Gulf Canada	WA3NUF K2DRH K0SIX N4QWZ N8WNA WB2JAY WB0YWW AF1T KE0CO AF6RR WB8TFV KK0Q N4TWX K6TSK KD5KC VA3ZV	$114,760\\115,878\\6,720\\41,990\\1,725\\34,155\\5,916\\57,448\\11,925\\16,240\\10,556\\1,120\\6,345\\10,472\\4,465\\13,601$	
Single Operator, Hi	gh Power		
Atlantic Central Dakota Delta Great Lakes Hudson Midwest New England Northwestern Pacific Roanoke Rocky Mountain Southeastern Southwestern West Gulf Canada	K1RZ WØUC WØGHZ W5MRB K8TQK W2BVH KFØM K1TEO N7EPD KC62WT N4HB W6OAL KØVXM KC6SEH K5AND VA7FC	220,865 61,341 30,514 5,778 58,487 18,144 1,792 323,375 26,660 20,191 12,096 258 33,960 6,136 8,866 731	
Single Operator, Po	ortable		
Atlantic Dakota Hudson Midwest New England Northwestern Pacific Roanoke Rocky Mountain Southwestern West Gulf Canada	N2TEB NIØW WB2AMU NØJK N4QX K7ATN N6NB KB4IRR W0STU N6WS W5RST VA3RKM	174 84 648 3 10 7,520 123,324 1 988 27 4 4	
Single Operator, Th	ree Band		
Atlantic Central Dakota Delta Great Lakes Hudson Midwest New England Northwestern Pacific Roanoke Rocky Mountain Southeastern Southeastern West Gulf Canada	KV2R K9MU KB0HNN KG5MD AC3HU W2ID KØJQA KW2T WB7FJG K6MI KD4AA WB0TGE N3LL N7RK AA5AM VE7DAY	4,200 11,968 406 1,378 150 442 910 1,026 12,160 2,686 6 1,863 1,378 1,392 850	

Central Dakota New England Northwestern Pacific Southwestern	WD9DMM WD9GDB KBØLYL KB1YSK K7NIT N9VM (N1VM KD2CKO	20 20 1,218 90 232 , op) 180 12
Multioperator Atlantic Central Dakota Great Lakes Hudson Midwest New England Northwestern Pacific Roanoke Southeastern Southwestern West Gulf	N3NGE N2BJ WØMR W2JJ AD0H W1XM KB7ME W6RKC KU1T W1LVL W6QAR KB0HH	524,654 4,797 840 750 1,862 70 21,168 675 85 602 1,342 7,084
Limited Multioper Atlantic Central Dakota Hudson New England Roanoke Southeastern Southwestern West Gulf	ator K2LIM W9RVG W0VB N2NT W1QK K1HTV W4NH K0DI K5QE	97,955 2,835 2,541 17,582 20,720 14,364 12,040 1,825 75,969
Rover Atlantic Central Dakota Delta Midwest New England Northwestern Pacific Roanoke Southeastern Southeastern West Gulf Canada	NN3Q/R W9F2/R KC0P/R AG4V/R AA11/R WE7X/R N6TEB/R K8GP/R N2CEI/R N6ZE/R KØMHC/R VE3OIL/R	74,008 25,069 5,376 10,902 10,622 4,800 2,088 335,140 293,178 29,205 6,878 9,558 30,932
Limited Rover Atlantic Central Hudson Midwest Northwestern Pacific Rocky Mountain West Gulf Canada	N2SLN/R W9DAV/R ACØRA/R WW7D/R W6YLZ/R ABØYM/R K5GJ/R VE3RKS/R	26,040 869 13,360 36,270 28,612 42,490 910 6,747 25
Unlimited Rover Atlantic New England West Gulf	KM3G/R KJ1K/R AF5CC/R	15,416 5,217 240

Single Operator, FM Only

Regional Top Category Finishers

The Northeast Region remained the log submission leader with 267 logs submitted. The Eastern Pennsylvania Section matched the New England Division with 80 logs each. With that concentration of VHF+ activity, the Northeast was home the eight top finishers in Single Operator, High Power, led by Jeff, K1TEO, with 847 QSOs and 199 Multipliers across 10 bands from his Connecticut QTH.

Multioperator categories were also big in the Northeast. The team at N3NGE racked up over 1200 contacts and 221 multipliers on eleven bands from their perch in Eastern Pennsylvania to claim the overall top score in Unlimited Multioperator by quite a margin. The region was also the home of the top two overall scorers in Limited Multioperator, with Western New York's LIM Amateur Radio Group, K2LIM, making a few more QSOs from their favorite high spot to edge ahead of Western Pennsylvania's Wopsononock Mountaintop Operators, W3SO.

In Unlimited Rover, the Northeast was also well represented with the top two overall scores in the category. Tyler, KM3G/R, visited six grids around Eastern Pennsylvania with a six-band station and Sig, KJ1K/R, with Buck, KC2HIZ, piloted their sevenband rover vehicle through eight grids around Western Massachusetts. Roving in January in New England, or anywhere with wintry conditions, is "highly non-trivial" at times and a tip of the contesting cap is due to those who ventured out in those adverse conditions.

The bump in West Coast activity stepped the region up to second place for log count. Among overall category leaders from the West Coast, Wayne, N6NB, towed his tower trailer up to Madera, California, near a grid corner, setting up in CM96, to claim the overall top score in Single Operator Portable by a substantial margin. Wayne had 11 bands at his command from 50 MHz through 24 GHz and logged 344 QSOs from his San Joaquin Valley spot.

The region was also home to the overall top scorer in Single Operator, Three Band, with John, K6MI, reporting 244 QSOs, also from the San Joaquin Valley Section, edging a competitor from the Central region by less than 200 points. Classic Rover and Limited Rover operations proliferated in the West Coast as well, with five of the top six Classic Rover and two of the top three Limited Rover scores.

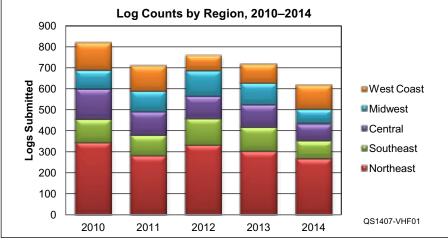
Dave, N6TEB/R, and Kent, K6WCI amassed 618 contacts among the 11 bands at their disposal to claim the top spot in Classic Rover and Mike, W6YLZ, reported 421 QSOs among his four bands for a leading effort in Limited Rover. Both Dave and Mike submitted their log from SJV although the ten grids they each visited also included the LAX and ORG sections. The third overall spot in Limited Rover was claimed by Darryl, WW7D/R, with 476 QSOs on four bands from 10 Western Washington grids, but two-thirds Mike's multiplier total.

With 85 log submissions, the Southeast claimed the third spot among the regions but didn't yield any overall category top scorers. Notable, however, were the roving Grid Pirates, K8GP/R, operated by Terry, W8ZN, and Andy, K1RA, who claimed the third spot in the Classic Rover category overall. Andy prepared and posted quite an interesting travelogue of their efforts on his website at www.k1ra.us/roving/k1ra-k8gprover-arrl-jan-vhf-ss-2014, including some videos. Terry and Andy compiled 900 QSOs across the 10 bands in the rover vehicle of Rich, N3UW. They submitted their log from the Virginia Section but the eight grids they visited also included Maryland and Pennsylvania.

Regional Leaders

Categories: A — Single Operator, Low Power; B — Single Operator, High Power; Q — Single Operator, Portable; 3B — Single Operator, Three Band; FM — Single Operator,

FM Only; M — Multioperator (Un	nlimited); L — Limited Multioperator; F	R — Rover; RL — Limited Rover; RL	J — Unlimited Rover	
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 Sections	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
WA3NUF 114,760 A N3RG 76,244 A WA3GFZ 70,434 A AF1T 57,448 A WB2JAY 34,155 A	N4QWZ 41,990 A WB8TFV 10,556 A K4FJW 6,800 A N4TWX 6,345 A KX4R 2,812 A	K2DRH 115,878 A N9DG 31,248 A VA327V 13,601 A N9LB 12,032 A VE3SMA 10,272 A	KØSIX 6,720 A WBØYWW 5,916 A KCØAKU 5,504 A KD5KC 4,465 A NØLL 1,512 A	AF6RR 16,240 A KE0CO 11,925 A K6TSK 10,472 A K2GMY 8,600 A K7YDL 4,844 A
K1TEO 323,375 B K1RZ 220,865 B K3TUF 215,740 B WB2RVX 196,846 B WA2FGK (K2LNS, op) 180,110 B	KØVXM 33,960 B W4ZRZ 28,028 B N4HB 12,096 B NG4C 6,149 B W5MRB 5,778 B	WØUC 61,341 B K8TQK 58,487 B W9GA 30,132 B K9EA 15,900 B WA8RJF 13,568 B	W0GHZ 30,514 B W0ZQ 14,040 B K5AND 8,866 B W5PR 6,307 B W5LUA 4,280 B	N7EPD 26,660 B KC6ZWT 20,191 B KE7SW 12,408 B K7ND 11,835 B K17JA 8,184 B
WB2AMU 648 Q N2TEB 174 Q N4QX 10 Q WA3WUL 8 Q W3MEO 4 Q	KB4IRR 1 Q	VA3RKM 44 Q	WØSTU 988 Q NIØW 84 Q W5RST 4 Q NØJK 3 Q	N6NB 123,324 Q K7ATN 7,520 Q KI6QEL 1,216 Q N6WS 27 Q
KV2R 4,200 3B NF2RS 3,080 3B (K2QO, op) 3,080 3B K3YDX 2,208 3B KC2TA 1,584 3B KW2T 910 3B	KD4AA 2,686 3B N3LL 1,863 3B N4NGZ 560 3B KG5MD 176 3B KM4ID 162 3B	K9MU 11,968 3B NT9E 1,496 3B AC8HU 1,378 3B WA9PWP 1,071 3B KO9A 1,037 3B	AA5AM 1,392 3B KØJQA 442 3B KBØHNN 406 3B KØVG 152 3B WBØTGE 6 3B	K6MI 12,160 3B N7RK 1,378 3B KP4MD 1,224 3B WB7FJG 1,026 3B K7VIT 915 3B
KB1YSK 90 FM		WD9DMM 20 FM WD9GDB 20 FM	KBØLYL 1,218 FM	K7NIT 232 FM N9VM (N1VM, op) 180 FM NI6G 60 FM KA6AMB 35 FM KH7CR 18 FM
N3NGE 524,654 M WA3EHD 33,405 M W1XM 21,168 M WB3IGR 20,808 M N1JEZ 11,285 M	W1LVL 602 M AJ4GC 598 M KE4WBO 369 M KU1T 85 M N1LF 78 M	N2BJ 4,797 M W8RU 750 M K9ZM 450 M	KB0HH 7,084 M W0MR 840 M KC5MVZ 364 M AD0H 70 M K3TD 25 M	KB7ME 7,486 M W6QAR 1,342 M W6RKC 675 M KL7XJ 12 M
K2LIM 97,955 L W3SO 88,458 L W1QK 20,720 L N2NT 17,582 L W3RFC 1,344 L	K1HTV 14,364 L W4NH 12,040 L WY3P 8,496 L N4BRF 2,975 L W4PH 435 L	W9RVG 2,835 L N9TF 2,075 L	K5QE 75,969 L W5CSC 3,276 L WØVB 2,541 L	KØDI 1,825 L AE7DW 40 L
NN3Q/R 74,008 R K3IUV/R 9,675 R AA1I/R 4,800 R K3EGE/R 1,422 R	K8GP/R 293,178 R N2CEI/R 29,205 R K4SME/R 25,245 R WB2ONA/R 21,942 R N2CYM/R 21,677 R	VE30IL/R 30,932 R W9FZ/R 25,069 R K9TMS/R 13,440 R K9BTW/R 12,264 R KC9QZO/R 4,660 R	KC09SKM/R 10,622 R KØMHC/R 9,558 R KC0P/R 5,376 R NØHZO/R 4,876 R KC0IYT/R 3,475 R	N6TEB/R 335,140 R K9JK/R 318,078 R W6TE/R 286,504 R WA6WTF/R 226,440 R W6TTF/R 226,440 R
N2SLN/R 26,040 RL N2ZBH/R 13,360 RL WB2SIH/R 1,200 RL N2DCH/R 432 RL		W9DAV/R 869 RL VE3RKS/R 25 RL	ACØRA/R 36,270 L K5GJ/R 6,747 RL WØJT/R 1,980 RL KD5EUO/R 1,659 RL ABØYM/R 910 RL	W6YLZ/R 42,490 RL WW7D/R 28,612 RL KE7/HG/R 7,896 RL N6ORB/R 5,856 RL K7BWH/R 2,610 RL
KM3G/R 15,416 RU			AF5CC/R 240 RU	AH6RH/R 504 RU



The Central Region was the source of 81 logs and home to the Single Operator, Low Power leader, Bob, K2DRH. Bob shared the story of the many challenges he had for this January's contest in the online soapbox at **www.arrl.org/soapbox/view/8857**. He logged 402 QSOs and 178 multipliers across the eight bands from his station in the northwest corner of the Illinois section. Bob's multiplier count was a big factor in his claiming the top spot for the category over Phil, WA3NUF, from the Northeast Region. While Phil had ½ more QSOs (539), Bob's 178 multipliers almost doubled Phil's 95.

Also notable from the Central Region was the effort of Justin, K9MU, in Single Operator, Three Band. Justin claimed the

Five-year comparison chart of logs by region.

Top Ten b	y Categ	ory	
Single Opera Low Power K2DRH WA3NUF N3RG WA3GFZ AF1T N4QWZ WB2JAY WB2JAY W3SZ N9DG N3FTI	ttor, 115,878 114,760 76,244 70,434 57,448 41,990 34,155 33,264 31,248 21,560	Limited Mult K2LIM W3SO K5QE W1QK N2NT K1HTV W4NH WY3P W5CSC N4BRF	97,955 88,458 75,969 20,720 17,582 14,364 12,040 8,496 3,276 2,975
Single Opera High Power K1TEO K1RZ K3TUF WB2RVX WA2FGK (K2LNS, op K3IPM W3PAW WA3DRC	323,375 220,865 215,740 196,846) 180,110 73,920 69,000 67,464	Multioperato N3NGE WA3EHD W1XM WB3IGR N1JEZ KE1LI KB7ME KB0HH N2BJ K2PLF	524,654 33,405 21,168 20,808 11,285 8,029 7,486 7,084 4,797 4,104
W0UC N3HBX Single Opera Portable N6NB K7ATN K16QEL W0STU WB2AMU N2TEB N10W	61,341 59,090	Rover NGTEB/R K9JK/R K8GP/R W6TE/R W6TE/R W6TF/R NN3Q/R VE30IL/R N2CEI/R K4SME/R	335,140 318,078 293,178 286,504 226,440 226,440 74,008 30,932 29,205 25,245
NIGW VA3RKM N6WS N4QX Single Opera Three-Band K6MI K9MU K92R NF2RS (K2QO, op) KD4AA K3YDX N3LL KC2TA N3LL KC2TA N3EL KC2TA N3EL	44 27 10	Limited Rov. W6YLZ/R ACØRA/R WW7D/R N22BH/R K5GJ/R N6ORB/R K7BWH/R W0JT/R Unlimited Rd KM3G/R KJ1K/R AH6RH/R AFSCC/R	42,490 36,270 28,612 26,040 13,360 7,896 6,747 5,856 2,610 1,980
Single Opera FM Only KBØLYL K7NIT N9VM (N1VM, op) KB1YSK NI6G KA6AMB WD9GDMM WD9GDB KH7CR KK6DCM KD2CKO			240

second overall spot in the category with 153 contacts and 64 multipliers (30 of them on 50 MHz) from his Wisconsin location, less than 200 points behind the category leader, John, K6MI, from the West Coast.

Seventy-one logs from the Midwest wraps up the five regions. Kudos to Art, KBØLYL, for his persistence in completing 87 contacts from his Minnesota Section location. Art stretched his FM signal across 14 grids to claim the top spot in the Single Operator, FM Only category. Art used only one of the four bands allowed, 144 MHz, for his leading effort.

Lacking the concentration of stations to work that exists in the Northeast Region, the team of operators at K5QE worked hard to claim the third spot in the Limited Multioperator category from their East Texas location (in the South Texas Section). The crew at Marshall's station racked up 207 multipliers so almost ²/₃ of their 315 contacts were in a unique multiplier for them.

The Midwest was also less hospitable to Rovers but Wyatt, ACØRA, teamed up with Brian, KDØLRG to brave the cold and challenging road conditions. They piloted their four-band station through 10 grids to complete 328 QSOs, achieve this year's top multiplier count among limited Rovers (78), and finish second in the category.

Affiliated Club Competition

Of the 394 logs (63% of the total) that listed a club name (excluding the "NONE" club), more than 80 different club names were listed. Thirty-one of those club names met the minimum requirement of three logs to be included in the battle for the highly coveted gavels. The details are found in the table of Club Competition results. Congratulations to the six members of the Stoned Monkey VHF ARC for finishing atop the 10 clubs in the Local category! Ten logs from the Southern California Contest Club cemented their claim to the Medium Club gavel among the 21 clubs vying for it. The Mt Airy VHF Radio Club Packrats continued their streak of topping the 51-log hurdle to reach the Unlimited Club category and earn that gavel. Their log count grew to 68, three more than last year, but their aggregate total score dropped by a little over 400,000 from 2013.

Wait Until Next Year...

While the presence of PØLAR and VØRTX may have subdued this year's level of activity, all the participation is welcome and appreciated. Let's see if we can bounce back next year. We can hope that the bad effects of PØLAR and VØRTX will stay away and maybe some mid-winter sporadic E fire-works will surprise us, as they did in 2012 and 2013.

With the weather showing wide swings away from historical norms, it is likely that conditions will be unusual in the years ahead. Sometimes that may be a good thing and in other years, like 2014, it may be detrimental to VHF+ contesting. Propagation prediction, like forecasting the weather, is an inexact science, so the only way to be sure of what is possible is to turn on the radio and find out!

The dates for 2015 are set for the third weekend of January; 1900 UTC on the 17th will be here soon enough. Get the contest on your calendars, do the antenna work while the weather is nice this summer, tune up the rovermobiles, and we'll see you on the bands in the new year!

July 2014 W1AW Qualifying Runs

Earn your Code Proficiency certificate or endorsements by listening to W1AW Qualifying Runs. Legibly copy at least one minute of text by hand and mail the sheet to:

W1AW Qualifying Run, 225 Main St, Newington, CT USA 06111

Include \$10 (check or money order) if this is a submission for your initial Code Proficiency certificate; \$7.50 if you are applying for an endorsement (available for speeds up to 40 WPM). Your text will be checked against the actual transmissions to determine if you have qualified.

July Qualifying Runs will be transmitted by W1AW in Newington, Connecticut at 10 PM EDST on Wednesday, July 9 (0200 UTC, July 10) and at 7 PM EDST on Friday, July 25 (2300 UTC) at 1.8025, 3.5815, 7.0475, 14.0475, 18.0975, 21.0675, 28.0675 and 147.555 MHz. The West Coast Qualifying Runs will be transmitted by K6YR on Wednesday, July 16, at 9 PM PDST (0400 UTC, July 17) at 3590 kHz. Unless indicated otherwise, sending speeds are from 10 to 35 WPM.

Listen for W1AW Portable Centennial QSO Party Operations in July!



	-			
June 25 – July 1	W1AW/3 W1AW/9	Maryland Illinois		
July 2 – July 8	W1AW/7 W1AW/9	Utah Wisconsin		
July 9 – July 15 No operations scheduled.				
July 16 – July 22	W1AW/4	South Carolina		
	W1AW/Ø	Colorado		
July 23 – July 29	W1AW/1 W1AW/9	Rhode Island Indiana		

July 30 – August 5 W1AW/4 Kentucky