# Results, 1980 ARRL September VHF QSO Party

You can't tell the players without the scorecard!

By Bill Jennings,\* K1WJ and Tom Frenave,\*\* K1KI

ne can certainly tell who the dedicated, serious vhf contesters are. How? By simply looking at the call signs in the score listings for a vhf contest in which conditions were just "fair to middlin"."

It appears that the 1980 running of the September VHF QSO Party qualifies as one of those vhf contests where conditions were just "fair to middlin'." You can tell that just by looking at the number of entries submitted. The 1980 contest saw 372 entries received vs. the 422 logs received for the same contest in 1979 - a 12% decrease. You can tell by the number of entries that there was no monster Sunday evening tropo opening along the eastern seaboard, as there was in 1979. Therefore, one had to work a little bit, listen a little harder to work needed multipliers, call "CQ" a few more times and spend a little more time to make a fairly decent score. That's what separates the dedicated vhf contester from the opportunist - the op who catches a big opening and runs up a big score in a hurry. We're pleased to print the scores of 372 vhf contesters in this report.

For those who did invest the time and effort to work the contest to the fullest, there were rewards to be reaped. There are three new alltime single-operator division records and three new all-time division records set by the multioperator stations. We won't list the new record holders here, but will direct you to the all-new, improved All-Time Division Leader Records Box. In that box you will find the alltime records for all three vhf contests; the June and September VHF OSO Parties and the January VHF Sweepstakes. Our answer to the old "clip and save" for the vhf contester.

We record yet another "first" in the pages of the September VHF QSO Party history, as related by N6CA.

The first 1296-MHz Utah-to-California cw QSO was made September 12, 1980, at 2110 PDT, by N6CA/7 and K6ZMW. Distance was 345 miles over a mountainous path. This was the third N6CA/1296 expedition to Utah in the past two years. On September 13, at 1440 PDT, the first ssb QSO was made over the same path. Conditions on lower bands were very poor on both days. Equipment at N6CA/7 was 100-watts output, 70 watts at antenna with water-cooled single 7289 homebuilt cavity amplifier, driven by homebuilt

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WA2FZW (front) and WB2IXP at the WA2ASM, multiop station site, overlooking scenic Route 78 in West Bridgewater, New Jersey (NNJ).

4-watt, solid-state transverter and antenna-mounted dual 645 preamp with 1.25-dB noise figure. Antenna was a single 38-element loop Yagi at 20 feet. Equipment at K6ZMW was 125 watts with dual 7289 watercooled WB6IOM amplifier, 6-foot dish at 70 feet and 1.25-dB noise-figure N6CA preamp. Signals peaked to approximately 20 dB out of noise. Moving frequency 5-kHz increments did not produce any noticeable effects on signal strength during fades. Originally it was thought that weather fronts virtually destroyed the Utah/California path. This was not the case. Weather on this trip was miserable at best; 30 to 40 mi/h winds in Nevada and southern Utah and relatively cold Los Angeles basin weather for good vhf tropo. This did not keep us from a good 20-minute contact on cw and ssb on Saturday. In spite of adding guy ropes to the tent for the high winds, the loop Yagi stayed on target, ±2°. This antenna has heard Arizona at 403 miles and worked it at 338 miles. Steve Katz, WB2WIK and the K2XR crew

found some interesting results with different

We installed some pretty serious contest antennas. The 70-foot crank-up tower with two 6-meter beams really worked. We used both antennas in tandem with a phase-adjustable splitter to enhance meteor-scatter signals and often noticed a 10- to 20-dB enhancement over just the top 6-element antenna. This array was the brainchild of Dave, K2XR, who really isn't a vhfer, but is an avid contester and will try anything

Having two beams at different locations (heightwise) on both 432 and 1296 MHz gave us some insight regarding the age-old height vs. feedline-loss controversy. As you might suspect, the higher antenna for each band brought in the local signals a bit stronger, However, the lower antenna for each band seemed to do every bit as well on the weak, long-haul (200 to 500 miles) signals. In the future, we'll probably concentrate on larger arrays, closer to the ground, fed with b-i-g feedlines to build up lots of gain and keep feedline losses to nearly zero.

## **Division Leaders**

Single Operator Division Multioperator **Atlantic** GW3NJY/W9 Central KØVXM\* Dakota WB4JGG Delta **W7EKI/8 Great Lakes** WA2YWP Hudson WBØZKG Midwest WA1MAO New England K7KOT Northwestern K6KLY Pacific N4CD\* Roanoke WBØIKJ Rocky Mountain WA4NJP\* Southeastern W6PFE Southwestern WA5VJB WB5KTC West Gulf VE3CRU Canadian VE3AEA/3

**C6ADV** DX \*Indicates new division record

КЗМТК\* K9MRI W9IP/5 W8VP\* K2XR\* WAØNOK W2SZ/1 WB6NMV K3LNZ/8 AAØL W4CUE AE6E

XE2XW

## Call Area Leaders

	50	144	220	432
	MHz	MHz	MHz	MHz
WA1MAO	237/27	420/22	52/16	89/20
W2SZ/1*	358/29	621/23	95/19	115/23
WA2DPU	157/20	215/17	42/13	77/17
K2XR*	382/31	352/23	112/20	112/19
K3SXA	80/17	239/20	42/13	53/16
K3MTK*	272/22	353/23	81/19	58/18
N4CD	70/17	203/23	16/9	47/15
WA4WZQ*	102/16	201/13	4/2	18/6
WA5VJB	41/3	93/3	24/1	20/1
W9IP/5*	96/27	259/27	18/11	48/18
K6KLY	28/10	110/9	22/4	13/4
AE6E*	43/16	413/12	67/5	33/3
K7KOT	44/5	53/4	15/3	11/3
W6SFH/7*	—	11/4	—	4/3
WA2FGK/8	23/10	240/24	6/5	7/6
W8VP*	184/28	278/25	28/12	55/23
GW3NJY/W9	64/11	174/15	_	42/10
K9MRI*	121/19	298/22		38/10
WBØZKG	63/16	84/12		_
WAØNOK*	30/8	71/14	8/2	
VE3CRU	28/9	96/12	12/5	30/10
VE3AEA*	56/13	139/16	3/2	20/6
*Multioperator				

### **All-Time Division Records**

		Single-Operator		Multioperator	Multioperator		
		Call	Score	Year	Call	Score	Year
Atlantic	Jan.	WA3AXV	77,064	80	W3KKN	50,112	80
	June	WA2DPU	43,351	78	W3CCX/3	215,750	79
	Sept.	WA2DPU	45,360	79	K3MTK	74,046	80
Central	Jan.	K9RO	30,080	80	K9HMB	45,312	78
	June	W9IP	38,304	80	WØOHU/9	60,639	80
	Sept.	GW3NJY/W9	35,310	79	W9IP	84,739	79
Dakota	Jan.	WAØCSL	8190	76	KØVXM	7830	79
	June	KØVXM	29,127	80	WØOHU/Ø	60,164	80
	Sept.	KØVXM	3190	80	KØSE	10,492	79
Delta	Jan.	WB4JGG	16,884	80	WB4HEL/4	8880	73
	June	WB4JGG	36,936	80	W4BFB/4	74,404	78
	Sept.	WB4JGG	28,424	79	WB4LHD/5	58,050	79
Great Lakes	Jan.	K8LEE	41,080	76	K8III	80,984	79
	June	WA8TTS	38,064	79	WA8ONQ	111,111	80
	Sept.	WA8TTS	33,495	79	W8VP	55,264	80
Hudson	Jan.	WB2WIK	63,070	80	K2OWR	65,562 <sup>-</sup>	76
	June	WB2WIK	49,876	79	K2XR	186,538	80
	Sept.	WB2WIK	54,202	79	K2XR	142,006	80
Midwest	Jan.	K9ECV/Ø	12,690	68	KØVUY	14,196	76
	June	WBØTEM	30,304	80	WØOHU	68,796	79
	Sept.	NØIS	24,119	79	KØTLM	7470	79
New England	Jan.	WA1MAO	46,134	80	WA1RWU	70,400	80
	June	N6NB/1	86,254	80	W1FC	250,194	80
	Sept.	N6NB/1	102,795	79	W2SZ/1	175,835	79
Northwestern	Jan.	WA7KYZ	10,296	79	K7ND	9690	79
	June	K7GWE	20,515	74	W7LYE/7	35,776	77
	Sept.	WA6JUD/7	4056	76	WA7NAN	8759	75
Pacific	Jan.	WA6JUD/6	23,868	76	WA6BMV	24,814	77
	June	N6NB	69,184	77	WA6JUD/6	81,213	76
	Sept.	WA6JUD/6	24,640	77	WB6KBZ/6	31,995	78
Roanoke	Jan.	K3ICH/4	23,744	80	W4BFB/4	27,392	80
	June	K4WO	49,757	79	W4BFB	57,013	79
	Sept.	N4CD	25,536	80	W4BFB	190,210	79
Rocky Mountain	Jan.	N6NB/7	6120	80	WAØPHZ/Ø	8062	68
	June	WAØTVZ	22,935	77	WB5AXC/5	23,424	76
	Sept.	WØEVZ	546	64	NØKV	2970	79
Southeastern	Jan.	W4GDS	26,400	73	W4VO	18,966	78
	June	WB4OSN	55,380	80	WA4OYH	85,500	80
	Sept.	WA4NJP	11,220	80	W4VO	24,426	79
Southwestern	Jan.	N6NB	25,880	79	W6FNE/6	20,352	63
	June	K6YNB	60,342	76	W6AMT	105,080	76
	Sept.	K6YNB/6	34,013	76	K6MEP	18,960	79
West Gulf	Jan.	K5CM	14,100	78	K5STI	12,804	59
	June	WA5HNK	34,151	77	K5LZO	92,106	80
	Sept.	WD5FZM	6020	79	K5CM	18,630	78
Canadian	Jan.	VE1ASJ	21,156	79	VE1DXA	13,266	79
	June	VE1ASJ	26,277	80	VE3ONT	82,188	74
	Sept.	VE3ASO	18,816	73	VE3ONT	43,413	74
DX	Jan. June Sept.	— W2BN/C6 JA1RJU	18,700 8	— 77 79	— VP5AA K4GFG/C6	29,526 124	 80 78

There was some tropo to be found along the extreme East Coast from a cold front extending from New Hampshire through Virginia. N4CD's new record was helped by QSOs up the coast of up to 550 miles on 144 and 432 MHz. Six meters was a disappointment to most, though the persistent did outdo their 2-meter totals. The W9IP/5 group, all set for a run at the division record from Missispipi, ran into no special propagation but nevertheless did run up the total with a good deal of patience and digging signals out of the mud. Not a record, but hard work also has its rewards.

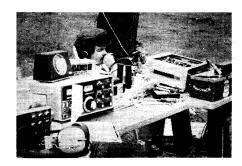
Oh yes, KH6FLD cornered the market on DX QSOs, logging 6 meter contacts with Guam, Soloman Islands, Papua New Guinea, New Hebrides and Nauru. Kinda makes up for the lack of stateside openings?

Perhaps the October and November

fireworks on six meters will last until the January VHF SS. No way to know unless you get on a check it out — January 17 and 18!

### **SOAPBOX**

Had the antenna and coax ready for 220, but no rig ... next time (K9MRI). Used homebrew triplers on 432 through 1296, but power output was at a minimum. Working on amplifiers for those bands now (WA2ANZ). Some good groundwave and coastal tropo, but nothing unusual (WA2SLY). This was the first vhf contest for the Birmingham ARC ... looks like we're hooked! (W4CUE/WD4PVI). After 10 years of active vhf contesting, I had to be absent from the fun for three years while living in an apartment. Now that I'm a homeowner again, who will cut the grass and fix the leaks in the roof while I'm listening for the rare ones? (W2CRS). Sure missed N6NB. Had looked forward to working him from Utah or Nevada (K6LMN). [You must have missed the opening, Roger. Wayne was on from Chicago. See the Illinois listings — Ed.] A very good contest here in north-



K1DS/1, operating out of Rhode Island, caught his multiop partner, K1PAM, pondering his fate on 6 meters.

eastern Georgia. Very dry and noisy on 6 and 2 with some good activity on 220 (WA4NJP). For the first time we made it through an entire contest without the uhf rigs going up in smoke. High point of the contest was working N5DL simultaneously on 2-meter ssb and 432 cw and hearing our 432 signal come back loud and clear on N5DL's ssb (W8VP). What a weekend; I think Bob and I worked harder this time than we have all year and then turned in our lowest score to date (KDØR). I would like to suggest a change in the rules for those of us in the "boondocks," which would allow the use of .52 simplex on a full-time basis during the contest. I can undertand the restriction in metropolitan areas, but here in Bismark, .52 is used so rarely that use during an entire contest period would cause no hardship for anyone. Got my 220 gear working and made what I believe is the first 220 MHz contest QSO in the state of North Dakota. It is possible that this was the first ever 2-way, 220-MHz QSO ever in the state (KCOW). Frustration is hearing stations on 432 that would be new multipliers for me that are transmitting 5 kHz outside my VXO range. Kindly tune. Thank you (N4CD). Poor conditions on 6 here — mostly groundwave and scatter. Most of the operators weren't fast enough to work the scatter—too bad! (AA9D). While we were running a meteor sked with WØVB (unsuccessful), KØVXM (also in South Dakota) broke in on 2 meters. We worked 'VXM on 2 and 432 with very strong signals for the 750-mile path (W9IP/5). The toughest three points 750-mile path (W9IP/5). The toughest three points I've ever made in a contest . . First cw/ssb QSOs. Utah to California on 1296 MHz! (N6CA/7). We need a 432 calling frequency (K7ZOK). Worked a W6 the day before the contest! (VEIASJ). Local activity very low on all bands. If I didn't have 2 meters, it wouldn't be worth it (VETASI). At XE2XW it was like we had left our 50-MHz antenna at home . . . worse than if we'd been hit by an electrical blackout. Our score deserves honorable mention and no snickers. The only reason for filing a report is that we put forth some efreason for filing a report is that we put forth some effort to make an XE available on 50 MHz and want to let those who need Mexico know that we're still plugging (XE2XW/W5XW). I know that the score is very low but I felt that the work involved plus the uniqueness of 10-GHz ssb deserves acknowledgement. KA1GT and I spent five hours trying to find a suitable site. We made a 15 dB over S9 (30 to 35 dB above the noise) QSO over a 7-1/2-mile path (WAIVUW). Propagation? What's propagation? (WAIMAG). Wow! What a contest! The conditions and activity on 6 and 2 meters were so good that my XYL had to come into the shack several times to wake me up (WA2CWA). If you wish to encourage operation on the 220 MHz band, please remove that restrictive rule
... Until you have the level of activity on 220 that you have on 2 meters, you are not helping the cause of higher band utilization. We all do not have ssb/cw rigs on 220. Give us fm fellows a chance (K2JF). Don't forget the East Coast 70-cm net called on Wednesdays at 9 P.M. EST and EDST on 432.090 MHz (W4ATC/WD4MBK/ K4CAW).

#### **FEEDBACK**

Corrections to the 1979 September VHF QSO Party. Kindly refer to pages 99 to 104 of December 1979 QST.

In the multiplier box on page 102, that's K2LWR with 37 multipliers on 432, not K2OWR. Ditto on the comment in the text on page 101.

WB5KTC's corrected log sheets show a linescore of

WB5KTC's corrected log sheets show a linescore of 1550 - 139 - 10 - ABD to move Bonnie into fourth place in Northern Texas.

In the East Bay Section, WB6NMV, shown as the single operator section leader, was in reality a multioperator station with WA6VPH as the second op. This change moves N6DN/6 into the top single-operator slot in East Bay and makes WB6NMV the Pacific Division multioperator leader.

B-144 MHz, C-220 MHz, D-430 MH	z, E-1215 MHz, F-2.3 GHz, G-3.4 GHz	z, H-5.7 GHz, I-10 GHz).		,
U.S.A.	WB2ONA 5852-131- 38-ABCD WA2UDT 4620-132- 35-AB WB2CUT 4484-236- 19-B	L'A4LN/W3,oprs) 6688-161- 38-ABD	Orange	W8TN 578- 30- 17-ABD W8UT 154- 11- 7-D
1	WB2NCF 3960-163- 22-BD	4	KA6ARU 895-179- 5-B AC6C 594- 18- 18-BCDE KO6S 468- 32- 12-ABC	K3LNZ/8(WA3s EOQ NZL OYN, W4PSJ,oprs) 34,602-401- 73-ABCD
	N2ATZ 1862-98-19-B WB2IKL 1764-98-18-B WA2KKZ 180-14-12-BD	Alabama	Santa Barbara KB6XG 1224-114- 9-BC	9
Connecticut WA1MAO 79,985-800- 85-ABCD	K2XR(+K2s JWE OWR,KC2X, WB2W)K) 142,006-1154-101-ABCDE WA2SNA(AG2N,K2s BJG LPG,KA2s		AE6E(+N6s MI VI)	Illinois
K1PXE 30,015-296- 69-ABCDE WA1UQC 20,313-291- 61-ABCD K1FO 18,240-208- 57-ABCDE KA1BXB 7881-201- 37-ABD	BNF EPL,N2AAZ,W2LVT,WA2s EKM JCP JUO VZW WFF,WB2s ARS LHG RFB UPK WLW.WD2AAI.	W4CUE/4(KB4IY,W4YD,WD4s IXE PVI,oprs) 2682-149- 18-AB Georgia	17,639-432- 31-ABCDE WB9KMO/6(+K6HXW,W6OAL,	GW3NJY/W9
K1EM 6574-145- 38-ABD WA1ZNT 5664-177- 32-AB	Wa2SNAIGER, KAS BIG LPG, KAS BNF EPL, N2AZ, W2LVI , WA2'S EKM JCP JUO VZW WFF, WB2'S ARS LHG RFB U4W, WD2AAI, DA2ASW, WLW, WD2AAI, WA2ASW, WLW, WD2AAI, WA2ASW, WLW, WD2'S BMB FAZASW, WAS BMB FAZASW, WAS BMB FAZASW, WAS BMB	WA4NJP 11,220-238- 44-ABCD W4ISS 780- 35- 15-BD	K6ELQ(+K6VM),WA6s DJS JJZ) WB9KMO/6(+K6HXW,W60AL, WA6s EJO NHB OYS,WB6s UNH YQN,Opto) 8555-197-29-ABCDEI K6MEP(N6AET,WA6FPX,WB6s	11,592-280- 36-ABD K9RO 4440-123- 30-ABCD WB9SNR 2299- 58- 19-CDE K9MBX 2070-101- 18-BD
W1FAJ 4699- 96- 37-ABCD WA1GTP 2760- 92- 30-AB WA1CVN 1794- 67- 26-ABC	CLU IXP QYT) 32,064-419- 64-ABCD N2BOW(+KA25 KEU KEX, KB2EF,N2BMP)	NA4I 588- 49- 12-AB Kentucky	4416-158- 24-ABCE	WB9WMM 1064- 76- 14-B W9SE 888- 74- 12-AB
W1WHL 754- 58- 13-A W1XX 350- 35- 10-B AB1U 240- 30- 8-B	KB2EF,N2BMP) 13,981-304- 41-ABC WA2VFN(+K2s PM TKN,KA2s		Santa Clara Valley  K6KLY 5616-173- 27-ABCD  K1RZ/6 4752-264- 18-AB	WA9AHZ 660- 66- 10-A WB9DRA 648- 54- 12-A
	CHK HOA,N2BNL,WB2s LVC MUA NQV) 12,958-279- 38-BCDE N2BMN(+KA2BTD,N2BOS) 12,751-296- 41-ABD	WB4NXY/4 867- 40- 17-ABCD W4SMU 418- 35- 11-BD KC4EG(+KB4MN,KC4EF, WB4YTI) 5406-140- 34-ABD	WB6KBZ 3388- 82- 28-ABCDE WA6MZF 2272-114- 16-BCD K6JEY 312- 34- 8-BD	W9ABA 231- 33- 7-B N6NB/9 1- 1- 1-B AA9D(+KA9CKI,WD9EBQ) 3429-120- 27-ABC
WB1FVS(+AK4L, KA1s BRD CLT DZV GD) 60,680-735- 74-ABCD W1QK(+W1PV,WA1s KOX PMA WXV,WB1s EZL HJR) 39,990-552- 62-ABCD	12,751-296- 41-ABD Southern New Jersey	North Carolina WA4AAV 1672- 88- 19-AB	AJ6T 240- 24- 5-D San Diego	3429-120- 27-ABC Indiana
Eastern Massachusetts	WA2DPU 40,870-491- 67-ABCD W2EIF 20,032-231- 64-ABCDE WA2KOK 12,672-221- 48-ABCD	WD4ODS 663- 39- 17-AB N4SM 476- 34- 14-AB W4ZZ 462- 33- 14-AB N4AJF 90- 15- 6-AB	AB6H 198- 18- 9-ABC W6KBD 1- 1- 1-B	WD9EME 3192-103- 28-ABD KA9ASH 2580-101- 20-ABCDE KB9JD 2508-112- 22-ABC
W1QXX 16,470-225- 61-ABCD- WB1FKF 10,850-178- 50-ABCDE	W3CXU/2 12,126-157- 47-BCDE K2JF 8229-178- 39-ABC	WA4WZQ/4(+KA4HKK,WA4WZP, WB4HRR.WD4GQU)	San Francisco	W3EP/9 2052-114- 18-B N9AZC 1344- 84- 16-B K9EFY 550- 50- 11-B
W1JR 7955-102- 37-CDEI N1AIS 3312-184- 18-R		12,839-325- 37-ABCD Northern Florida	WB6WML 138- 23- 6-AB KA1BFK/6 105- 15- 7-AB	W3EP/9 2052-114- 18-8 W3EP/9 2052-114- 18-8 N9AZC 1344- 84- 16-B K9EFX 550- 50- 11-B K9MRI(+K9s SLQ TVZ, WB9MDQ,WD9FAO)
WAICRE 1394- 77- 17-AC NIAFQ 663- 51- 13-AB	WZHKW 6494-191- 34-AB KZBWR(+K2ZRJ) 23,730-252- 70-ABCDE WA2DKB(+K/AZS-CDF HLT-BCD KC2J(+KAZH-HD-WAZS-DG-JGTJ WUL-WB2S-AN-LOGB-QOT WUE, WD2AEM,K3HP) 4521-106- 33-ABD	W4ODW 828- 68- 12-ABC	San Joaquin Valley K6LMN 1360-124- 10-BC	WB9MD4,W497AC) 25,245-457- 51-ABD WB9NTL(+K9VA,KA9AZK, KB9QR,N95 ACT AG) 8695-211- 37-ABCDE WB8HUC/9(KB8UJ,WB8s GEU GEX GEY GFA,ppr)
WIAY 300- 18- 10-ABC WIXM(KIKEC,WIXG,WA4TTG, oprs) 42,196-421- 77-ABCDE	WUL,WB2s ANJ DQB QOT WUE, WD2AEM,K3HP) 4521-106- 33-ABD	South Carolina           N4DT         3075-110- 25-ABCD           WA4LDU         2530-100- 23-ABD           NB4S         189- 27- 7-B	Hawaii KH6FLD 84- 14- 6-AB	WB8HUC/9(KB8UJ,WB8s GEU GEX GEY GFA,oprs) 6612-208- 29-ABC
WAIAYS(+AJIE) 11,234-268- 41-ABD WAIMAA(+WAIs MZL NSL,	Western New York	NB4S 189- 27- 7-B WB4NBK 180- 20- 9-AB	7	Wisconsin
WB1HGA) 900- 30- 30-AB Maine	WB2BGI 15,176-245- 56-ABCD W2PGC 7334-148- 38-ABCDE W2CNS 6279-127- 39-ABD K2GK 5282-119- 38-ABCD	Southern Florida WA4LOX 2310-110- 21-AB	•	K9XY 2332- 95- 22-ABCD WA9KGQ 1188- 62- 18-ABCD N9TD 650- 65- 10-B WA9LZM 108- 18- 6-A
K1TOL 6757-233- 29-A K2QE/1(+AG2X,WA2s FPF OQN) 6206-214- 29-AB	W2AV 2200-100- 22-B	K1FJM/4 294- 41- 7-ABD Tennessee	Arizona WA7JTM 460- 46- 10-AB	WA9LZM 108- 18- 6-A KA9CHZ(+WD9ACY) 1500-100- 15-AB
New Hampshire	K2OS 1860- 93- 20-B WA2SDY 1520- 76- 20-AB WA2SZY 810- 54- 15-B	WB4JGG 10,633-197- 49-ABD WA4QYK 1365- 57- 21-ABD WB4LHD(+N5A47D)	Idaho KB7N 96- 16- 6-AB	Ø
AFIT 18,600-251-62-ABCDE WAITZV 16,524-277-51-ABCD WBICJT 11,760-206-48-ABCD ACLJ 8398-198-38-ABCD WIEL 6720-101-42-ABCDE	KZQR 2163-103-21-B KZQS 1860-93-20-B WA2SDY 1520-76-20-AB WA2SDY 810-54-15-B WZFB 770-55-14-B KZQEQ 90-18-5-AB KZQEQ 90-18-5-AB KZQEQ WSV) PHA VFX.WB25-PGU WSV) WA2WYLL'KZQED-18-5WB2LLR WZYUL'KZQED-18-5WB2LLR KZJFV(+WAZTMC) 10,248-26-42-ABCD WAZZJF(KZRKW,WA2RQC,WB25 FBP MYZ NFB,DPS)	5544-158- 33-ABD Virginia	Montana	Colorado
AC1J 8398-198- 38-ABCD W1EJ 6720-101- 42-ABCDE W1JSM 3440-172- 20-B	PHA VFX,WB2s PGU WSV) 28,024-424- 62-ABD WA2WVL(+K2s LDU MP,WB2JLR,	N4CD 25,536-336- 64-ABCD WD4GXN 11.650-208- 50-ABD	W7KNT 215- 43- 5-AB KB7Q 32- 16- 2-AB	WBØIKJ 255- 44- 5-ABD AAØL(+KAØGJO,NØs AVY DV) 518- 65- 7-ABDE
WIJSM 3440-172-20-B WAIGDR 676-52-13-AB WIICU 198-22-9-B KITR(+KIBA,WAIs PBU QWF UGJ) 17.19-330-49-ABCD	MOVU) 12,800-218- 50-ABCDE K2JFV(+WA2TMC) 10,248-226- 42-ABCD	K4QIF 6006-106-33-BDE NØKV/4 4800-149-32-ABC WA4SBC 4234-119-29-ABD W31Y/4 3744-70-32-ABCD N4CNN 1818-101-18-B	Nevada K7ZOK 962- 37- 13-AB WA7JUO 144- 24- 6-B W6SFH/7(+WA6KOD, KA7JGH)	lowa
UGJ) 17,199-330- 49-ABCD Rhode Island	9828-154- 52-ABCDE	W31Y/4 3744-70-32-ABCD N4CNN 1818-101-18-B N4CWP 114-19-6-B	W6SFH/7(+WA6KOD,KA7IGH) 133- 15- 7-BDE	WBØZKG 4116-147- 28-AB WBØTEM 3276- 99- 28-ABCD WBØSWD 1581- 93- 17-B
WA1PBR 5586-122- 38-ABCD W1BAT 3460-173- 20-B W1AJR 3360-120- 28-AB	N2JY(+WB2KIW) 8976-185- 44-ABCD	N4CWP 114-19-6-B W4ATC(AA4s NC OO,WA4s BPJ DFS OFP,WB4ILW,WD4MBK, oprs) 8073-181-39-ABCD	Oregon  K7HSJ 830- 65- 10-ABCDE  W7TYR 780- 60- 10-ABCDE	WDØFOY 1235- 60- 19-ABCD N9BD/Ø 196- 14- 14-AB WNØDRC 105- 15- 7-B
WA4MMP/1 130- 13- 10-AB K1DS/1(+K1PAM) 2050- 79- 25-ABCD	3	N4HB(+WB4BVY) 5425-175- 31-AB KC4AO/4(+K4WQS,KB4NT) 630- 84- 7-BC	W7TYR 780- 60- 10-ABCDE WB7OOF 292- 64- 4-BC N7DB/7 90- 14- 5-ABCD	Kansas
Vermont	Delaware	West Indies	Utah N7BHC 45- 14- 3-ABD	WBØISW 1786- 80- 19-ABCD WØRT 1335- 85- 15-BD NØLL 60- 12- 5-AB
K1LPS 9600-158- 48-ABCD K1BF 2451-129- 19-B W1AIM 2133- 72- 27-ABD	K3SXA 33,594-414- 66-ABCD K4CHE/3 19,278-352- 51-ABCD	WA2ZWH/KP2 75- 15- 5-A	N6CA/7(+WB6OPA) 70- 12- 5-BF	KDØR(+WBØNRV) 1343- 77- 17-ABD
KA1BXW 696- 87- 8-B W1WEF/1 392- 56- 7-B W1EXZ 102- 17- 6-A W1TKZ(K1s OGF TK UR,	Eastern Pennsylvania  N3AHI 29,953-309- 77-ABCDEI K3IUV 22,597-263- 59-ABCDE W3IIT 8816-211- 38-ABC	5	WB7QVZ(+WA7ADK) 57- 19- 3-B Washington	Minnesota  WØVB 3024-101- 24-BCDE  WØOHU 2337-101- 19-BD
WIOOP,WA1PQY,WB1BUM, N2AWG,WA2ORV,oprs) 45,678-593- 69-ABCDEF	K3IUT 8816-211- 38-ABC K3IWK 6405-165- 35-ABD AE3T 4020-134- 30-AB	Arkansas WB5JAR 658- 47- 14-AB		KØGJX 792- 72- 11-AB KØSE 432- 34- 12-ABC WDØEKL 120- 30- 4-AB
WB1GQR(+KA1EAN,WB1BWV, WB2BE)) 12 604-244- 46-4 BCD	WA2OKT 3059-161- 19-B WA3JUF 2976- 53- 24-CDE N3AR 2808-117- 24-AB	N5DL(+WB5PSE,WD5s CAN CAP) 13,616-250- 46-ABCD	K7KOT 2235-123- 15-ABCD WB7UUP 1760-145- 11-ABCD KA7BLA 1693-139- 11-ABCD KB7G/7 624-104- 6-AB K7LYT 17- 17- 1-A	Missouri
WA1MAG(+KA1CXD,WA1s JEX MAG NBU TBV,WB1HIH) 6630-195- 34-AB	W3ETB 2024- 79- 22-ABD	Louisiana WA5 YOU(WB5NIF,opr)	Alaska KL7WE 150- 40- 3-ABD	AIØL 1616-101- 16-B KØTLM 1520- 69- 19-ABD KBØGR 1170- 78- 15-AB
Western Massachusetts WA1ZAM 18.096-321- 52-ABCD	K3KEL 81- 9- 9-B K3MTK(WB2YEH,WA3s KPP LBI	576- 28- 16-ABCD Mississippi	8	WB00TA 1080- 72- 15-AB K0CB 465- 28- 15-ABCD WA0NOK(+WA0OFO) WA0NOK(+W20FO)
W1KK 5580-149- 36-ABC AC1T 5460-182- 30-AB WA1VTA 3920-196- 20-B	74,046-764- 82-ABCD WB3CZG(+AI3G,K3MKZ,N3AVC, WB3s CXE IWZ,WD9DBT)	W5UCY 441- 49- 9 AB W9IP/5(+AE9M,K9AKS,WA9YLB) 40,421-421- 83-ABCD		KCOP(+KAOCRO) 116- 29- 4-AB
W1WLE 3538-122- 29-AB WB1ABF 3336-139- 24-AB W1JP 2975-119- 25-AB	38,160-461- 72-ABCD WB3JYO(+KA3s EEX ETT FOG, N3s AMM BBY.WB3FFH)	New Mexico	Michigan KB8RK 328-41-8-B KA8DDQ 231-33-7-B	North Dakota KCØW 224- 27- 8-ABC
KISF 1653- 50- 29-ABC W2SZ/1(AD2J,K1DH,K2s MM TR WI,N8AFM,W1XK,WA2s AAU	27,534-299- 78-ABCD K3YTL(K3s FOL MWA,KA3EED, WA3YON,WB3s CAI FAA FKQ	W7ZEA 252- 55- 4-BC N5ACP 156- 37- 3-ABC WD5GNW(+WØZYF) 140- 27- 5-ABC	W8KNH 81- 9- 9-B WB8DSG 60- 12- 5-A	South Dakota KØVXM 3190- 93- 29-ABCD
GFP,WA8USA,WB1CBH, WB2PKO,WB9EAE,oprs) 160,286-1222-107-ABCDEF	FYT JPC YON, oprs) 27,132-406- 57-ABCD WB3LNZ(+K3YL, KB3s HE IB.	140- 27- 5-ABC Northern Texas	WD8DSV(+AI8D) 6355-199- 31-ABC WD8SBO(+WA8KDP) 1284-107- 12-AB	KØVXM 3190- 93- 29-ABCD WBØHHM 168- 28- 6-В
2	N3ADC,WB3s DJF FRL FXJ JHX) 19,918-384- 46-ABC W3LP(W3s GFN JUZ UH.	WA5VJB 2025-179- 9-ABCDH K5IS 54- 9- 6-AB	WB4LNM/8(+WA@TAQ) 272- 34- 9-AB	VE
Western Massachusetts WA12AM 18,096-321- 52-ABCD W1KK 5580-149- 36-ABC AC1T 5460-182- 30-AB WA1VTA 5460-182- 30-AB WA1VTA 3320-189- 20-B WA1VTA 3320-189- 20-B WA1VTA 3320-199- 20-B WA1VTA 320-199- 20-B WA1VTA 340-189- 20-B WA1VTA 340-	WA3CUQ,oprs) 9196-242- 38-AB AJ3R(+W3EEK,VE3HOH)	WB5KTC(+AD51)	Ohio W7EKI/8 12,150-206- 50-ABCD	Maritime - Newfoundland VE1ASJ 3201- 97- 33-AB
K2SHB 8557-164- 43-ABD	1938-102- 19-B KA3AAE(+KA3EVB) 1008- 72- 14-B	KE5C(+WB5VZL) 544- 62- 8-ABD Southern Texas	W7EKI/8 12,150-206- 50-ABCD WA8TTS 2698- 71- 19-D K8WW 2628- 73- 18-D N8AXA 1957- 95- 19-ABCD	Quebec VE2SH 4247-117- 31-ABD
WA2TIF 8030-365- 22-B WA2ANZ 6300-160- 36-ABCDEI W2IP 1020- 60- 17-B WB2KHE 572- 44- 13-AB	Maryland - D.C. K3AKR 16 128-240- 56-ABCD	KA5AAW 1128- 82- 12-ABD K5LZO 273- 39- 7-AB	N8AXA 1957- 95- 19-ABCD KA8DVD 1700-100- 17-AB WA8TJL 1564- 89- 17-ABD W8SMD 864- 72- 12-AB KD8Z 726- 23- 22-BD	VE2SH 4247-117- 31-ABD VE3ASO/2 3322-151- 22-B VE2BBK 2025- 56- 27-ABCD VE2KW 276- 23- 12-AB
WB2KHE 5/2- 44- 13-AB K2DNR 462- 21- 11-C K2BGU 403- 31- 13-A WB2SHE 320- 32- 10-B	WR3LIK 6723-249- 27-R		WB8VSU 720- 57- 10-BCD KB8RQ 621- 23- 23-ABD K8DIO 550- 25- 11-D	Ontario
K2LSA((WA2s FSP KYW,WB2s HEM TBB.oprs)	W4NVW/3 6536-159- 38-ABCD W3IP 6055-126- 35-BCD W3HQX 2760-138- 20-B WA3RWP 2603-137- 19-B WA3UJE 1785-105- 17-B	6	W8LCY 396- 44- 9-B WD8JPP 360- 18- 18-ABC W8FF1 234- 39- 6-B	VE3CRU 8580-170- 39-ABCDEI VE3FGU 4500-180- 25-AB VE3FN 504- 21- 12-D VE3AEA/3(VE3s FDP HC1 IQZ,
20,450-383- 50-ABCD New York City - L.I.	N3AFM 1380- 92- 15-A N3BAP 848- 53- 16-A	Rest Bay  N6AMG 2373- 98- 21-ABD WA6LHD 232- 29- 8-B	N8BSB 196- 14- 14-AB VE6BDG/W8 69- 23- 3-B	oprs) 8917-218- 37-ABCD
WA2YWP 27,671-403- 59-ABCD N2BFJ 12,804-278- 44-ABC WB2JAY 8680-245- 31-BC	W3MSN 300- 18- 15-ABE W3USS(K3s ZJ ZR,N3s ATH BED,WD4BIC,KL7GLL,oprs) 21,126-499- 42-ABC	WAGLHD 232- 29- 8-B WB6NMV(+WAGS VPH ZJF, WB6NAC) 7479-232- 27-ABDE	AMF DFX DUI GLO,W5UA, WA8FHF,WB8s DQE ERA TRK TSI WD84HV oprs)	Alberta  VE6SW 52- 11- 4-ABD  VE6AFO 42- 18- 2-BD
K2RIW 6048-126- 24-D WB3HHS/2 2669-157- 17-B WA2EUS 1072- 51- 16-BD	W3PGA(K3s CXB FRX PHH, KB3s CV EL.N3IT.W3s JDF VRD.	WB6NMV(+WA6s VPH ZJF, WB6NAC) 7479-232- 27-ABDE N6APQ(+N6BGR, WA6SBJ, KA6s BDC FIY ITV ITZ LVK MKZ) 3995-213- 17-ABD W9DHK(+WB6WML)	WA8ONQ(+N4AMG,N8BPB, W9OFH.WA3OJX.WA8s NJR	British Columbia
KA2DTE 1- 1- 1-B WA2SLY(+WB2IDP) 8064-222- 37-AB	6336-192- 33-AB	W9DHK(+WB6WML) 1547-119- 13-AB Los Angeles	49 665-557- 77-ABCDE	VE7ASI 324- 28- 9-ABCD
K2OVS(Multiop) 6450-120- 43-ABD	Western Pennsylvania WB3CBB 3536-136- 26-AB WA3CPH 1444- 76- 19-B	W6PFE 1248- 75- 13-ABCD	W8VPV(N8AKF,WA8LRW, WB8JNO,WD8s CVH MIL,oprs) 7657-223-31-ABCD K8UZW(KA8S CNI DNE ETK	DX C6ADV 1- 1- 1-A
Northern New Jersey WB2QOQ 18,032-267- 56-ABCD KB2AH 17,328-328- 48-ABD	WA3CPH 1444- 76- 19-B W3CSA 1444- 73- 19-ABD W3KJM 96- 12- 8-A W3GNR/3(+K3s PS TFL,KA3s	WA6DCT 96- 8- 8-BC	GPW,WA8GMT,WD8RZG,oprs) 6851-221- 31-AB West Virginia	XE2XW(+K5HVC,WA5NAD)
WB2WIH 14,016-232- 48-ABCD WA2CWA 11,438-301- 38-AB WB2TFH 8448-152- 44-ABCD W2VC 6780-105- 30-DE	W3KJM 96- 12- 8-A W3GNR/3(+K3s PS TFL,KA3s DEO DWR,WA3s BUX FFC JBV UKE) 23,424-332- 61-ABCD K3HKK(K2BS,KA3DBW,	15,552-387- 36-ABCDE K6BPC(KD6BX,WA6HXD,WB6s AXE YVP,oprs) 6864-213- 24-ABCD	WA2FGK/8(K2LNS,opr) 13,005-276- 45-ABCD W8AEC 705- 25- 15-AD	Check Logs
W2VC 6780-105- 30-DE	N3BBH,WB3s AIE CXR,	6864-213- 24-ABCD	W8AEC 705- 25- 15-AD	K1GXU,K1WJ,KA3CQR,LA4LN/W3