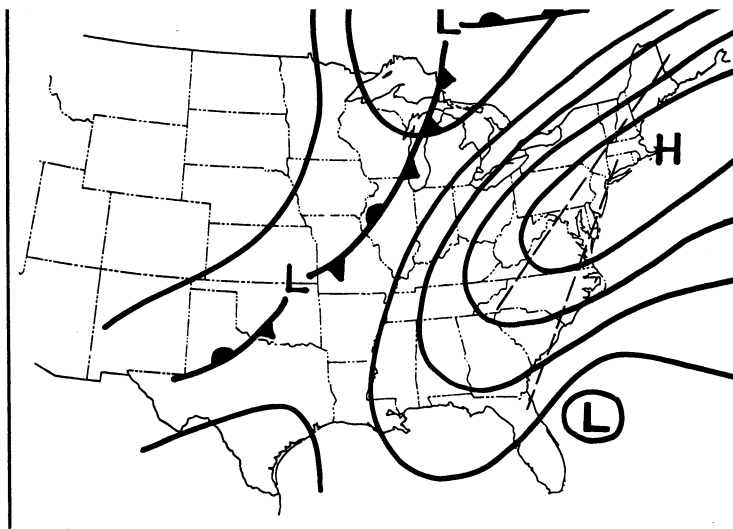


Results, 1984 ARRL September VHF QSO Party

By Edith Holsopple,* N1CZC and
Michael B. Kaczynski,** W1OD



It was beautiful. There was Hurricane Diana stuck off the Florida coast, blocked by a big high-pressure system off the Mid-Atlantic states — total gridlock. Linebackers for the Pittsburgh Steelers couldn't have gotten the stalled system to move. It just sat there all weekend, giving birth to a tropospheric duct that resembled the Bullet Train. DX contacts abounded up and down the East Coast, from Florida to Nova Scotia, in the world above 144 MHz. It was a classical gas.

Such were the incredible conditions that made the VHF QSO Party, September 8-9, 1984, more than just a memorable event. It was something that probably won't happen again for another quarter century. Dave, K1WHS, who was pleased to see northern New England included for a change, rates this as one of the two best tropo openings of the last 12 years!

And the scores show it. Mountaintoppers in the "golden corridor" made the best of it with some fantastic QSO and multiplier totals. N8FCJ, featured elsewhere in this write-up, set a new single-op record under the new grid square format, instituted in the '83 contest, with 99k points. Last year's top effort was also bested by WA2OMY/3, a home station, and W1XX/2, another mountain-top solo entry. It took nearly double the score this year to make the single-op top ten.

Meanwhile, on Mt. Greylock, Massachusetts, W2SZ/1 blew their old record out of the water with 660k points, while the W1VD fixed station crew (actually located on Johnnycake Mountain, Connecticut) also bested the SE effort of last year. A superlative effort was turned in by WB4NMA, at 351k points, as they worked all the 10-watters in the Northeast. To make this year's top ten, the multis needed nearly 3x last year's score. Thank you, Mother Nature!

Six meters had its moments of excitement as well, with double E_s noted in Florida to California, Nevada and New Mexico. W0ETT experienced two-way capability to all call areas for about six hours. In the Midwest, spotty E_s also left scattered footprints to points west. Although of short duration, Sunday night auroral fireworks kept K0ALL, W0SD and some of the Ontario boys real busy. Also some Midwest stations managed to commandeer a loooooonngggg burning meteor to work Virginia and West Virginia.

Although enhancement was sort of blah for

Multiplier Leaders — Single Operator

50 MHz		432 MHz	
W0ETT	92	K1FO	44
W5FF	85	WA8TTS/1	44
WB5DSH	81	N8FCJ	41
WB5KTC	73	W1XX/2	37
WB2ZKG	64	WB9MSV	37
K5IS	63	WD5BKV	34
KA0MQA	63	K8WW	33
W5NZS	62	WB9SNR	33
WB4NJG	61	K4CAW	32
WA5VJB	61		
WB5RUS	60		
WA0NOK	60		
144 MHz		1296 MHz	
N8FCJ	79	NF2P	16
K2LWR	74	K8WW	16
WA1OUB	65	K1LPS	13
WBULC	62	WA1JOF	12
K9AKS	61	W1JR	11
N5AFL/9	60	WA3JUF	11
W1XX/2	57		
WA3FYJ	57		
WB9MSV	57		
WA2OMY/3	55		
WD5BKV	53		
220 MHz		10 GHz	
W3GPY	28	VE2BTW	1
WA4NJP	23	WA5VJB	1
W2QCJ	22		
K1FO	20		
N2BFJ	20		

Multiplier Leaders — Multioperator

50 MHz		432 MHz	
WB4NMA	109	W2SZ/1	63
N0LL	108	W1VD	53
W0UC/9	85	WB4NMA	50
W1VD	83	N4DT	49
N4DT	79	W1TKZ	45
W8VP	69	W8VP	41
K0TLM	67	W3SJI	40
W2SZ/1	65	K3YTL	37
K3YTL	62	K1WHS	32
144 MHz		WB2RVX	31
WB4NMA	89	K1TR	30
W2SZ/1	87	WB3LJK	30
W1VD	86		
W8VP	83		
W1TKZ	80		
N4DT	77		
K3YTL	75		
W3SJI	68		
WB2RVX	64		
K9MRI	61		
WB3LJK	58		
N0LL	58		
VE3GRC	58		
220 MHz		2304 MHz	
W1VD	40	W2SZ/1	8
W2SZ/1	40	K5GW	2
W8VP	38		
K3YTL	37		
W1TKZ	33		
WB4NMA	32		
W3SJI	29		
WB2RVX	28		
N4DT	26		
WB3LJK	25		
K1WHS	25		
W3GNR	21		
WA2SNA	21		
K1TR	20		

Surface weather map for the evening of September 8 shows the large high-pressure system responsible for providing extended tropo contacts along the U.S. East Coast. Hurricane Diana is the low-pressure center off Florida. Typical radio paths are shown by broken lines. (tnx W3EP)

Top Single-Band Scores

50 MHz		432 MHz	
WB5DSH	12,798	K1FO	16,984
W5FF	12,485	WA8TTS/1	11,176
K1TOL	10,904	N8FCJ	7872
N2CEI	9751	W1XX/2	7696
WB5KTC	9709	K3LDD	
WA1OUB	8586	(N3DQZ)	6292
KA0MQA	8190	WB9MSV	4736
WA5VJB	7564	K1PXE	4698
WA8ERB/0	6612	WA2FGK	
WB2ZKG	6528	(K2LNS)	4480
WB4NMA*	30,193	W3ZZ	4002
W1VD*	29,465	WB9SNR	3894
N0LL*	23,652	W2SZ/1*	33,768
		W1VD*	22,896
		WB4NMA*	13,100
		W1TKZ*	12,150
144 MHz		1296 MHz	
N8FCJ	31,126	NF2P	1968
K2LWR	23,014	K8WW	960
WA1OUB	22,620	WA3JUF	858
W1XX/2	19,152	WA1JOF	828
WB2QQQ	14,880	K1PXE	750
WA2OMY/3	14,190	W1JR	726
WA3FYJ	12,768	K1LPS	702
WA3DNM	12,516	K1FO	690
WBULC	12,338	WB2WIK	459
K3ZO	12,173	N3CX	459
W2SZ/1*	63,336	W2SZ/1*	5292
W1VD*	58,932	W1TKZ*	1938
W1TKZ*	47,040	WB2RVX*	1800
WB4NMA*	46,992		
220 MHz			
W3GPY	4480		
K1FO	2400		
N2EOC	2304		
N2BFJ	2080		
W1EJ	1908		
WA2OMY/3	1836		
WB2WIK	1824		
WA2TEO	1664		
K3HP	1560		
WB1QCJ	1540		
K3YTL*	10,804		
W1VD*	9040		
W2SZ/1*	8960		

*denotes multioperator stations

the rest of the country most of the time, the overall increased activity saw 14 of the 16 divisional single-op records fall, while 12 multi-op standards bit the dust.

Rare square department: In what may be a regular feature in the future, we have two nominations. N9KC operated from a hilltop on Wellsley Island in Lake Ontario in extreme southeast FN-14. Meanwhile, NR6E/6 had to remain alert for bears in the Yosemite National Park area in sparsely populated DM-07. What rare square can you activate?

Since this one is now a "wrap," don't forget the next VHF operating extravaganza: The VHF

*Communications Assistant, ARRL

**Assistant Communications Manager, ARRL

N4DT Vs. Murphy and the "Roan Roar"

All week long, as we tried to tie up loose ends prior to the September, 1984 VHF QSO Party, Don, WQ4V, had been pumping me up with magnificent propagation reports for the weekend. As a participant and not an enthusiast on VHF/UHF, little did I know how prophetic he was!

Friday, September 7, was spent erecting towers, mounting antennas, putting up tents and readying for the contest. A gorgeous day left us all with sunburns. There was no pain, though excitement may have been the anesthetic.

Roan Mountain is a series of three bald peaks known as Roan Peak, Roan Bluff and Cloudland. The three peaks straddle the North Carolina/Tennessee State Line. Our operation position was a grassy bald on Cloudland near the Appalachian Trail just inside North Carolina. Cloudland is named after a hotel that was on the mountain and burned down in the early 1900s. It is aptly named because it seems that dusk is always accompanied by a lowering of the clouds until the peak is covered. The name Roan Mountain is derived from the masses of rhododendron that bloom there and give the mountain a brilliant roan color. The operating site, about 6300 feet above sea level, provided a clear shot in all directions.

Because there is no commercial power on the mountain and because all gasoline for generators must be carried up, we knocked off at dusk Friday, although we were not through. Our "advance party" — N4DT, WQ4V, AJ4N, KB4DVN and I then spent the evening alternating between talk-in for the rest of the group and going down the mountain to a Tennessee State Park for much-needed showers.

Talk-in was necessary because of the descended clouds. Turns were impossible to find without a guiding hand. Friday evening brought all but one of the group up the mountain. WB4CTW, WD4GYN and KJ4X made it up as operators. In addition, my XYL, Donna, and our sons came up. Although Donna is a ham (N4HIN), she elected not to operate with us. She volunteered (I know better than to ask) to serve as breakfast cook, and the boys (I can ask them) helped out as runners between stations for schedules, etc.

Saturday morning, we put the last of the antennas up. While some of us were getting them up, others were hooking up stations and testing. First was a report from 2 meters of 1- and 2-land "booming in." Then one of the guys who had been trying to get back home on 2-meter FM from his car reported a QSO with Indiana. The excitement mounted! We hurried.

As 1800Z rolled up, I sat down at the 432-MHz position. I was a little downhearted because our new Henry 2004A amplifier had failed during testing, but hoped somehow to make up for it. Was I in for a shock! The conditions were tremendous! Not only did we not miss the amp, we worked more than we hoped for without it. At no time during the test, regardless of beam direction, could I not hear 1-land!

Slightly delayed by priorities, we were about an hour or two late getting on 1296. Joe at W2SZ/1 had told me to "get on with 100 mW of exciter and a dipole." He said the band was *that* good. When we got on, it was with 2 W to a 4 bay of helixes up almost 30 feet. When the guys on 1296 called "CQ", their first call was answered by W1TKZ in Vermont. I think the fellows in Vermont could have heard the resulting celebration without radios!

Saturday evening brought with it the winds of Hurricane Diana. What we affectionately called the Roan Roar blew in at dark. Winds gusted at gale force and may have peaked higher. Although I was somewhat protected inside the 432 tent, I knew it was becoming critical. The tent was inflating and deflating, moaning and groaning at the seams, and the wind was howling. Suddenly, Frank, K4ADI, called from the 6-meter tent. He yelled for help and I took off. His tent was going fast. The aluminum frame had snapped and its jagged edge had torn the tent. I helped him get a grip on the tent to hold it up until I could get more help.

Danny, N4DT, was operating 2 meters from a van, our most secure station. I got him out and we yelled for the others. The wind was so loud that nothing else could be heard. Danny decided to collapse the 6-meter tent and secure it as a cover for the equipment. To prevent the inevitable, the 432 tent was also collapsed and held down with heavy rocks.

While we were protecting the equipment in the 432 tent, the 2-meter tower came down in a heap. Although secured in six places, two guys (1/4-in nylon/cotton) snapped. The four boomers were a mess. The H-frame snapped like balsa. Since we had seen what the wind could do, we decided to add guys to the other towers. The 432 tower was already leaning at about 30 degrees when we caught it! Danny decided to shut down 220 and 1296 to protect against injury should one of the towers fall onto the tent. Ralph, WB4CTW, and Steve, WD4GYN, hooked onto the Ringo Ranger from Ralph's car to work some FM. Ralph is also equipped for 6-meter mobile, and they made a few QSOs with his whip. The rest of the group went to bed to get some sleep — maybe the wind would end by morning.

While the wind did let up, it was far from over on Sunday morning. We were able to salvage one boomer and get back on 2-meter SSB/CW. The 432 tent was reconstructed and examination showed no serious antenna damage. Two of the four 16-element Yagis were skewed on the H-frame. A few taps with a long pole and we were back on the air.

The 6-meter tent required a lot of "engineering" to get it back up, since the frame had broken. Steve, AJ4N, led that project to completion. The tent was a real sight! The 220 and 1296 tent and antennas made it fine. That location is slightly shielded by trees and may be the site for all antennas the next time we go up there.

While Murphy ended up with a pretty good score, we beat him. We all had a tremendous time in spite of the problems. We worked half way to VUCC on 432 alone. We made a QSO into Maine (K1WHS) on 1296 that may be an "overland" record and certainly ranks high on the list. We chit-chatted for long periods with W2SZ/1 on 1296. We enjoyed the beauty of the mountain instead of being saddened by the problems it caused.

Final Score: Murphy — a lot; N4DT — much, much more! — G. E. Grooms, NE4G



N4DT and WQ4V survey damage to the four boomers on Sunday morning.

calling me, but I couldn't make it. Thank you, stationary high-pressure area and Hurricane Diana (VE1AHM). I heard K4MSK from Florida, but couldn't get through the pileup (VE1APA). It was nice to work five grid squares on 432 with half a watt and five elements (VE2BTW). We had a super time working from Maryland to Los Angeles (W0IA). The gods of propagation must have been looking down on this contest. There hadn't been a decent opening for at least a month, and on Saturday night, it was a beaut. The South was coming in like gangbusters (WB0GPM). I had some nice surprises — KC2TX in Maine to KB9S in Wisconsin on a "dead" band (W3HDH). I could sum up the contest in one word — frustrating! This huge tropo opening was too much. Even VE2DFO at the eastern edge of my FN-25 grid was well in it, but all I got out of it was an enhancement. And with all the DX rolling in, those NJ stations weren't interested in a VE3 (VE3FN). Glad to have been at least a little part of this fabulous gift of nature (K1DS). This was my 89th VHF contest, not counting the UHF contests in August. The activity is still fascinating with new experiences in each event (W1EJ/W1EUJ). With band conditions as they were, we would have traded all our beer for 1 W on 1296 MHz. Boy, did we miss the boat (WA2FXB)! We were amazed to work so far with so little, especially when we worked W2SZ/1 and W1VD with only the barefoot 3-W rig on 432 MHz. The 432 quad was mounted at the center of the 144-MHz quad-quad array. We found amazingly little interaction, desensitizing or interference even with the harmonic relationship of the frequencies in use (K8CQA). AFIT operated 1296 and we had to tie rocks to each of his legs after his N4DT QSO so that he wouldn't float away (K1WHS). We had double-hop E skip on 6 meters, which is quite rare this time of year. Grids DM-26 and CM-95 were worked for our first time ever on terrestrial propagation. K6HXW's QTH is located close to the Pacific Ocean, on a very obstructed mountainous path over California at its widest point (K7ICW). On 2 meters, instead of "where's the beef?" ... Where was Minnesota? I worked over, under, around and through, but no MN. It seems like the locals hibernated on 6-meters (WA9BTY). Obviously, the Midwest was the wrong place to be. Not only was the 2-meter band open up and down the East Coast, but we had difficulty working stations in the Southeast because their antennas were pointed northeast. There is no justice (K9AKS). There should be a limit on power. Many stations were running 300-plus watts when not required. I had to limit my operation to periods when a 350-W station nearby was not operating (KA9QIK). Conditions were quite average on 2 meters. We here in the Midwest had no idea of the Great Opening along the East Coast. Of course, perhaps you fellows did not

Top Ten

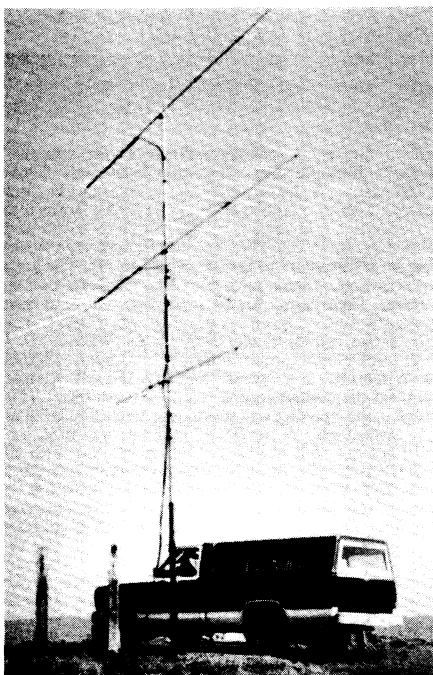
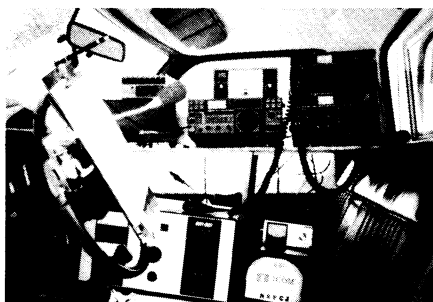
Single Operator		Multioperator	
Call	Score	Call	Score
N8FCJ	99,528	W2SZ/1	660,951
WA2OMY/3	85,388	W1VD	487,416
W1XX/2	83,640	WB4NMA	351,237
WA2FGK (K2LNS,opr)	71,272	W1TKZ	327,864
WA1OUB	60,180	K3YTL	308,258
WA2TEO	57,673	N4DT	271,431
WB2WIK	53,872	WB2RVX	228,732
K1PXE	50,730	W3SJ	201,292
K3HP	50,255	W8VP	192,720
W3IP	47,700	K1WHS	135,468

Sweepstakes, January 12-13. See December *QST* for the significant rules changes. September certificates will be in the mail around February 15.
— W1XX

SOAPBOX

This was my first attempt at contesting at home, and I was very surprised at the results using my modest sta-

tion. My operating time was cut very short by work and children's activities, so I decided to concentrate on grid squares. 144 MHz was great all through the contest and even 50 MHz opened once. Since many ops now hunt grids, I think it drew many to the event who would not have any interest otherwise (N8DKL). I worked one grid square further on 432 than on 2 meters — using 1/8 of the power and 1/8 of antennas. This was approx. 1200 mi vs. 1100 mi (VE1UT). I worked five new states and 11 new grids during the opening. I heard Georgia



Number one single-operator station, N8FCJ.

Division Leaders

Single Operator

Call	Score
WA2OMY3*	85,386
VE3ASO*	40,120
WB9MSV	35,329
WA8CQG	3320
W5RCI*	16,896
W8ULC*	37,620
W1XXJ2*	83,640
WA8NOK*	35,712
WA1OUB*	60,180
WB7UUP*	7667
W6RXQ*	12,936
N8FCJ*	99,528
W0ETT*	17,388
WA4NJP*	32,125
K6LMN7*	5562
WA5VJB*	36,290

Division

Atlantic
Canadian
Central
Dakota
Delta
Great Lakes
Hudson
Midwest
New England
Northwestern
Pacific
Roanoke
Rocky Mountain
Southeastern
Southwestern
West Gulf

Multioperator

Call	Score
K3YTL*	308,256
VE3LNX*	80,910
K9MRI*	51,660
N5DL	32,766
W8VP*	192,720
W2DMC*	85,215
N0LL*	84,600
W2SZ1*	660,951
NFX*	12,300
WB6KBZ*	37,051
WB4NMA*	351,237
W8MA*	12,444
WB4VHF	396
N6ENU	27,630
K5GW*	39,325

*denotes new all-time Division record

Solo Mountain-Top Operation

Three months planning! Two weeks packing. Destination: Ellebers Knob, West Virginia (FM08), 4 miles east of the home QTH, but 30 miles by road.

Fri. 0800L: Leave home QTH, 90-minute drive, last 9 miles at 5 mi/h or less.

2200L: All antennas up.

Sat. 0130L: All radios tested. Sleep.

0500L: Wake up, too excited to sleep.

1400L: Contest starts.

Sun. 0032L: 2-meter amplifier blows up.

0430L: Sleep.

0530L: Work on 2-meter amp.

0830L: Back on the air with amp.

2300L: Shut-down.

Mon. 0240L: Head home.

0440L: Pleasant dreams.

0915L: Unpack (takes all day).

Analysis: Some say the mountain-top stations have it made. Was it worth it? You bet! — N8FCJ, top Single-op score

know we had an hour and a half of E skip on 6 meters to Kansas and Colorado! What a nice little treat (W3EP/9). Could you please provide a better tropo opening on 144 and 70 cm? Also, throw in a few hours of aurora conditions so rotators can rest for a while (W9YCV). Grids are great, but I hope you realize that with more multipliers available, the rich (mountain-toppers) get much richer and the poor get only slightly better off (K1FO). I think Murphy forgot to put Sept. 8, 9 and 10 on his calendar (WA1YKN). W1VD was so loud on 2 meters, I could copy him in my basement, about 70 miles away, without an antenna. That's RF (WA3EEC). Scatter, aurora, tropo, E skip and a 20 dB over 9 signal from W2SZ/1 into Michigan. What else could one ask for in a VHF contest (WA8FTA)? Bouquets to the fellows who went mountaintopping and gave out some Oregon and Washington grid squares usually inhabited only by jackrabbits (K7HSJ).

FEEDBACK

Please note the following corrections to the results of the 1983 ARRL September VHF QSO Party, starting on page 81 of January 1984 QST. The logs of KA2BTD and N2BMN were omitted from the results. Their score lines should read: KA2BTD 13,850-262-50-ABCE and N2BMN 4530-138-30-ABCE, both of Northern New Jersey. The single-operator Division Leader for the Northwest Division should have been K7KOT with 5070 points instead of K7HRJ with 1995 points.

SCORES

Scores are listed by ARRL Section. Within each Section, single-operator, multiband scores are listed first, then single-operator, single-band scores starting with the lowest frequency, and then multioperator scores. From left to right, each line lists: call, score, QSOs, multipliers and bands operated (A — 50 MHz; B — 144 MHz; C — 220 MHz; D — 432 MHz; E — 1296 MHz; F — 2.3 GHz; G — 3.14 GHz; H — 5.7 GHz; I — 10 GHz; J — 24 GHz).

Among the single-operator stations, the overall Section winners and single-band winners are indicated by bold-faced type for the call sign of the Section winner and for the one letter(s) denoting the bands won. For example, in Connecticut, K1PXE is the overall Section winner as well as the single-band leader on 1296 MHz. K1FO is the single-band leader on 220 and 432 MHz, while W1QK took 50 MHz and K1GX won on 144 MHz.



WIVE

1

Connecticut

K1PXE	50,730-357-95-ABCE
K1FO	42,550-276-74-CDE
K1EM	36,004-378-89-ABCD
AA2Z1	22,400-294-70-ABCE
W1QK	18,939-321-59-AB
W1FAJ	5772-99-39-ABCD
AB1U	4288-119-32-BD
N1ABY	756-54-14-AB
WA1CVN	330-30-11-A
K1GX	10,148-236-43-B
K1DIH	4710-157-30-B
W1VD (+ K1JX, KA1GD, WA1STO)	487,416-1378-276-ABCE

Eastern Massachusetts

WA1JOF	22,425-212-89-BCDE
--------	--------------------

W1JR	21,329-158-77-ABCEDEF
WB1KFK	19,831-196-67-ABCE
K1KG	18,975-234-69-ABCD
KB1KM	12,208-183-56-ABD
W1QXT	11,342-147-53-BCDE
W1QXX	11,033-125-59-ABCD
WA1YKN	9694-159-51-BD
KA1DHO	8977-191-47-ABCE
K1SRZ	7626-125-41-ABCD
K1TP	7097-119-47-ABCD
W4XP	4788-104-36-ABCD
K1VZI	3250-90-25-ABCD
W1FM	972-42-18-ABD
KA1AMR	298-23-13-AB
K1DAT	1020-60-17-A
K5MA/1	2700-100-27-B
W1AX	2184-91-24-B
WA1VCU	1470-70-21-B
KA1FVG	1349-71-19-B
WA1AYS (+ AJ1E, KA1YQ, K1IO, N1BNC, WA2s JHR, NKL)	42,594-391-93-ABD
W1XIM (N2ME, W1XG, ops.)	21,125-211-85-BCDE

Maine

WA1AYT	4212-117-36-AB
K1TOL	10,904-186-58-A
W1PLX	2575-103-25-B
K1WHS (+ AF1T, K1MNS, KA1JLK, W1AIM, WA1NIE, WB1FGW)	135,468-651-189-ABCE

K1BZ (+ KA1OJ, N1ATN)	6450-109-43-BCDE
-----------------------	------------------

New Hampshire

WA1OUB	60,180-510-118-AB
W1EJ	32,310-246-90-ABCE
AC1J	13,862-215-54-ABCD
W1JSM	2201-66-31-BD
KB1MZ	1846-57-28-ABCD
KA1CDZ	1752-73-24-AB
W1IUN	2088-87-24-B
K1TR (+ K1BA, K3WM, N1s AFO, BYC, WA1s PBU, QWF, VFJ)	117,936-642-144-ABCE

Rhode Island

K1DS	1794-78-23-B
K9SB/1	1518-66-23-B

Vermont

K1LPS	33,820-236-95-ABCE
WA1JGK	408-34-12-A
WA1ZDJ	2025-75-27-B
WA1TSH	11,178-127-44-D
W1TKZ (K1s TK, UR, N1CPE, N2AWG, W1EGE, W1GCI, WA1s YOJ, ZLO, WA2TIF, WB1BUM, VE3CGL, ops.)	327,864-1135-228-ABCE

Western Massachusetts

K1B5W	15,399-218-59-ABCD
-------	--------------------

N1PF	1448-51-23-ABD
WA3EEC	1300-85-20-AB
WA1UZX	3416-122-28-B
K1JG	140-14-10-B
W2SZ/1 (KA1s DZY, KVF, WA1UGE, WB1EYL, K1s DH, RQ, AB2I, NF2B, K2MM, W2ARQ, KA2QHF, WA2s AAU, SPL, ZPO, WB2s JLR, KMY, PKO, AK4L, WA8USA, ops.)	660,951-1534-309-ABCEFGHIJ
W1NY (AC1T, KA1KPH, W1KK, ops.)	29,346-360-73-ABD

New York City & Long Island

N2BFJ	41,850-316-98-ABCD
W2WW	11,500-184-50-BCD
WA2SLY	5805-135-43-AB
WA2EUS	912-46-18-BD
KE2N	5285-151-35-B
KA2BPP	1449-69-21-B
WB2PWR (+ opr.)	7320-183-40-AB

Northern New Jersey

WA2FGK (K2LNS, opr.)	71,272-465-118-ABCE
WB2WJK	53,872-401-104-ABCE
KA2BTD	44,264-366-88-ABCE
N2CEI	27,370-313-85-ABCD
WB2WIH	14,364-189-59-ABCD
KT2B	13,821-184-51-BCDE
WA2UDT	6536-152-43-ABD
N2EOC	5880-98-30-CD
K4BNC	1472-64-23-AB
WB2MBM	96-12-8-A
WB2CQJ	14,580-330-48-B
KA2IVS	2457-117-21-B
WA2ALM	2000-100-20-B
WB2BPM	1584-88-18-B
N3AHF	945-35-27-B
WB2MHE	230-23-10-B
WA2SNA (K2BJG, KA2s NDZ, VLP, N2s AAZ, BTJ, GJ, W2WCE, WA2JSW, WB2RFB, ops.)	75,816-478-117-ABCE

2

Eastern New York

W1XXJ2	83,640-557-123-ABCD
WA2TEO	57,673-437-107-ABCEDEF
W2AWX	6762-114-46-ABCD
N2BJ	5678-132-34-BCD
K2EK	4530-151-30-A
KA2JUV	3960-120-33-B
N9KC/2	2044-73-28-B
WB2TUT	910-65-14-B
NB2R	340-34-10-B
WA2RUW	196-14-7-C
W2DMC (K2s MME, SK, KA2JCX, N2s BJ, DLL, DVX, WA2s EHI, MEE, WABMAZ, WB2s IYG, NEC, ops.)	85,215-578-115-ABCE
KA2Q (+ W2YJO, WA2NKP)	602-38-14-BD

WA2FXB (+ N2s AAM, DWA, DXF, WA1PDK,
WA2s CRF, GEZ, PJJ, RYC, VKH,
WB2s KBI, NTP, QBT)
69,732- 486-117-ABCD
N2WM (+ N2s CJS, ERH, EHV, WA3WUD)
30,360- 345- 88-AB
W2LI (KA2IRQ, KC2RX, W2DQA,
WB2ZMU, oprs.)
3960- 158- 25-B

Southern New Jersey

W2EIF 25,128- 234- 72-ABCE
KA2JKI 24,492- 222- 78-ABCE
W2HRW 20,864- 298- 84-ABD
WB2YEH 15,540- 169- 80-ABCE
KS2T 8346- 110- 30-ABCD
K3GYS 3810- 94- 34-ABCE
NC2V 4080- 116- 35-B
KA2MIV 484- 44- 11-B
NF2P 1968- 41- 16-E
WB2RVX (+ N2SB, WA2VYA, WB2NPE,
WB2ZAR)
228,732- 871-196-ABCE
K2BWR (+ K2ZRU)
40,875- 245-109-ABCE

Western New York

WBP2 40,252- 347-116-ABCE
K2GK 29,018- 221- 93-ABCE
WA2SZY 5292- 102- 42-BD
NA20 2720- 67- 32-BD
KC2JO 2074- 54- 34-ABD
WB2JFL 1275- 51- 25-AB
WB2MKN 972- 36- 27-AB
WB2WBT 824- 44- 21-A
K2LWR 23,014- 311- 74-B
N2BKS 3900- 100- 39-B
K2JIK 3074- 106- 29-B
WB2ODH 2541- 77- 33-B
WA2CBU 2088- 72- 29-B
WB2NJD 1920- 64- 30-B
K2KWK 578- 34- 17-B
K1U2 56- 8- 7-B
WB2QCJ 1540- 35- 22-C
WB2EY 930- 31- 15-C
K2QR 758- 27- 14-D
N2WK (+ KA2MRP, KC2J, WA2s LAQ, MOP)
27,918- 230- 99-ABCD
WB2ELB (+ KA1YE)
13,984- 162- 76-ABD
K2IQ (NA2s, WB2SZY, oprs.)
1380- 60- 23-B

3

Delaware

KACHEZ 18,200- 231- 65-ABCD
K3SXA 1950- 64- 25-BD
K3JY 588- 42- 14-B
AC3T (+ KA3B, N3DIP)
21,733- 284- 67-ABC
K3QBD (K3ONO, KA3KHZ, KC3AM, KQ5G,
K8MP, W3s LOE, URR, WA3s HDS,
TNP, oprs.)
3611- 157- 23-B

Eastern Pennsylvania

WA2OMY3 85,386- 499-133-ABCE
K3HP 50,256- 398- 95-ABCE
WB3JYO 42,282- 406- 81-ABCE
WB3LNU 19,435- 243- 65-ABD
KA3HTY 11,308- 200- 44-BCD
N3BHS 10,450- 174- 50-ABCD
KB3HE 9696- 173- 48-ABCD
N3CX 6566- 663- 44-BCDE
W3CL 6318- 123- 39-ABCD
KA3MHE 2688- 91- 28-ABC
WA3EYD 1102- 48- 19-ABC
AA3W 840- 29- 20-BC
WA3QDM 12,518- 298- 42-B
K3IWK 8808- 184- 37-B
AK3M 2070- 90- 23-B
N3C0I 209- 19- 11-B
W3GPY 4480- 80- 28-C
K3LDD (N3DQZ, opr.)
6292- 121- 26-D
WA3JUF 858- 26- 11-E
K3YTL (K3MKZ, KA3EEO, N3s AVZ,
CXB, DAP, WA3s JWP, JVV, NVS, YON,
WB3s CAI, FAA, FKQ, oprs.)
308,256-1031-228-ABCE
W3SJI (K3YD, KF3Y, KQ3P, KQ3R, N3s
AIN, DPN, JD, WB3EOD, oprs.)
201,292- 780-196-ABCE
W3LP (W3s GFN, JUJ, UH, WA3CUQ, oprs.)
51,834- 373-106-ABCD
WB3FNZ (+ KB3XB)
8970- 195- 46-B
KM3E (K3s EEL, SQO, N3COT,
WB3FET, oprs.)
6968- 123- 52-ABD

Maryland & D.C.

W3IP 47,700- 325-106-ABCE
W3ZZ 38,887- 321- 97-ABCD
W3X0 20,904- 211- 78-ABCD
K3AKR 19,276- 193- 79-ABCD
WA3UJE 8316- 165- 44-BCD
N3API 1215- 45- 27-AB
W3MSN 902- 36- 22-ABD
W3IFM 1978- 76- 26-A
K3ZO 12,173- 259- 47-B
K3TC 8323- 203- 41-B
WB3BGU 1474- 67- 22-B
KA3CHM 420- 30- 14-B
WB3LJK (+ K3ONW)
80,858- 373-126-ABCD
W3PGA (K3PHH, KA3GWD, KB3EWL,
KB3EL, KQ3K, W3JDF, WB3s
AXP, BIT, oprs.)
4158- 99- 42-AB

Western Pennsylvania

WA3FYJ 46,138- 337-118-ABD
W3HDH 1305- 45- 29-A
W3KJM 459- 27- 17-A
KB3L 551- 29- 19-B
K1PLR 398- 33- 12-B
W3GNR (KA3DWR, WA3JBV oprs.)
6260- 90- 50-AC
W3KWH (W3IOH, WB3EML, WNSYAW oprs.)
6206- 96- 58-ABD
KR3C (+ WA3BOW)
2980- 55- 40-AD

4

Alabama

WB4NJG 12,040- 140- 86-AB
WA4COG 3655- 71- 43-BC
WB4GFO 2720- 68- 40-B
WA4UGV 54- 9- 6-B
WB4VHF (+ WA4AUX)
396- 22- 18-A

Georgia

WA4NJP 32,125- 221-125-ABCE
WS4F 7684- 85- 68-ABCE
W4ISS 3024- 51- 42-BD
W4VHH 1800- 36- 30-BDE
WB4WKE 1180- 40- 29-A
AK4T 25- 5- 5-A
WB4RUA 130- 13- 10-B

Kentucky

K4C6G 25,296- 195-102-ABCD
WB4NXY 13,122- 138- 81-ABD
NA4KM 5088- 96- 53-AB
NA4JI 108- 12- 9-B

North Carolina

K4CAW 21,409- 212- 79-BD
N2CJP 1755- 82- 27-ABD
WD4ODS 2262- 58- 39-A
WB4NMA (K4MSK, N3AHI, N4HSM,
NT4T, WB4SLM, WD4s IIS, JGV,
MBK oprs.)
351,237- 999-291-ABCE
N4DT (+ A4JN, K4ADI, KB4DVN,
K4JX, NE4G, WB4CTW, WD4GYN, WQ4V)
271,431- 912-243-ABCE
W4BFB (K4TP, KA4WYC, KE4YY, KF4ND,
K5AS, KU4V, N4s JEV, JIU, SJE,
W4As ICM, UNZ, VCC, WB4PCS, oprs.)
19,840- 203- 80-ABD
W4CQ (K4CQG, WA4TJ, W4As ETF, MCI,
WD4LGN oprs.)
6360- 111- 53-ABD

Northern Florida

W4ODW 8379- 95- 63-ABCE
WD4FAB 912- 37- 24-ABD
W4ZGS 777- 37- 21-AB
W4HJW 494- 26- 19-A

South Carolina

WA4LDU 2580- 51- 43-ABD
KA4KE 256- 16- 16-ABD

Southern Florida

N4EJW 2176- 64- 34-AB
K1FJM/4 805- 35- 23-AB

Tennessee

WA4QBE 2457- 63- 39-AB
N4HW 2331- 48- 37-BDF
W4HHK 1686- 47- 32-BF
WA4HGN 1456- 52- 28-BDF
WD4DGF (+ N4VC)
16,898- 155- 96-ABC

Virginia

W3IPI 28,593- 235- 81-ABCE
K2UOP/4 26,675- 226- 97-ABCE
WD4GXN 25,578- 225- 96-ABD
K4HWG 22,338- 256- 73-ABD
N4MM 12,033- 191- 63-AB
WA4MMP 10,530- 143- 95-ABD
WA4SBC 9440- 142- 59-ABCD
K4JIS 7938- 124- 49-ABCD
W4DO 6900- 150- 46-AB
K4FTO 6528- 119- 48-ABD
KX4V 832- 32- 26-AB
KC4YN 640- 40- 16-AB
W4CCK 3367- 91- 37-A
KB4CMF 825- 55- 15-B
N4KEQ 288- 32- 9-8
AB4L 3186- 59- 27-D

5

Arkansas

K5YY 3690- 74- 45-BD
WB5JAR 1170- 39- 30-AB
WD5AGO 630- 30- 21-A
WA5WJF5 1440- 36- 20-D
N5DL (+ AD5M, KA5NTT, KD5WD, N15A,
WA5OOE, WD5s CAN, CAP)
32,798- 215-129-ABCD

Louisiana

WB5LBT 4002- 87- 46-ABCD
W5EW 168- 14- 12-B
KB5PX (+ K5SM, N5AMA)
12,710- 134- 82-ABCD
N5BHO (+ W5EW)
10,640- 120- 76-ABCD

Mississippi

W5RCI 16,896- 134- 96-ABCE
NAJ5/5 3478- 59- 47-ABCE

New Mexico

W5FF 13,617- 153- 89-AB
KA5EEL 6798- 103- 86-AB
K5LS 4850- 90- 55-A
WB5TCO 12- 2- 2-D

Northern Texas

WA5VJB 36,290- 294- 95-ABCEI
KE5EP 23,310- 212- 90-ABDE
WB5KTC 22,368- 226- 96-ABD
K5IS 19,467- 164-103-ABCD
W5GG 14,198- 228- 62-BDE
K5DHU 5304- 70- 52-ABDE
WB5KYK 1063- 39- 27-AB
K5YN 490- 35- 14-AB
K5GV (+ KD5RO, W5ETG, WA5TKU,
WB5LUJ)
39,325- 254-121-ABCEDE

Oklahoma

W5NZS 23,100- 175-110-ABCE
K5SW 20,384- 157- 98-ABCD
WD5BKV 20,358- 188- 87-BD
K7CW 4224- 64- 44-BD
AA5V 3132- 69- 36-BD
WB5DSH 12,798- 158- 81-A
K5WE 805- 35- 23-A
NR5O 1560- 52- 30-B
K15P 1440- 48- 30-B

Southern Texas

WB5RUS 8142- 118- 69-AB
WA5IYX 1014- 39- 26-A
N5GQB 945- 45- 21-B
N5EAR 77- 11- 7-B
W5UWB (+ WA5TEB)
1474- 49- 22-ABDE

6

East Bay

WA6LHD 1872- 70- 24-BC
KN5S 279- 31- 9-A

Los Angeles

WB6DTA 3200- 89- 32-ABCE
Orange

Orange

K6IBY 1058- 31- 23-ABCD
WB6AJZ6 360- 28- 12-BD
K6PHE 297- 27- 11-A
N6ENU (+ WA6s OTU, PZL, WB6CIA)
27,630- 284- 90-ABCD

Santa Barbara

WD6BCN 478- 28- 17-AB
KA6YRV 7- 7- 1-B
K6MEP (K6VMN, KH6N, N6HBI,
WA6s DJS, FPX oprs.)
22,387- 281- 61-ABCD

Santa Clara Valley

WB6RX 12,938- 205- 49-ABCE
K6RNG 420- 42- 10-AB
K6GSS 4600- 230- 20-B
K6C 440- 40- 10-B
WB6KBZ (+ KA6IT, NU6S, WA6AZP)
37,051- 416- 67-ABCE

San Diego

WA6TBO 224- 32- 7-B
N6DG (+ WA6BNH, WD6FHS)
2635- 29- 21-BCD

San Francisco

WA6LLY 660- 44- 15-ABD

San Joaquin Valley

NR6E 3000- 100- 25-ABDE
WA6SLF 105- 12- 7-BC
WB6DP 80- 10- 8-AB

Sacramento Valley

W6YKM (K6RNS, KF6GJ oprs.)
14,500- 237- 50-ABCE

7

Arizona

K6LMN/7 5562- 97- 54-ABCD
K7NN 1650- 51- 30-ABD
N7BUP 240- 24- 10-AB
W7DTL (+ KD7DR, W7LHA, WB7NSN)
16,038- 206- 66-ABCD
WA7JTM (+ NTAMA)
5780- 128- 45-AB

Idaho

WB7NEZ 126- 21- 6-ABC
N7AUV 9- 3- 3-B

Nevada

K7ICW 1638- 63- 41-AB
KC7QY 406- 24- 17-AB

Oregon

K7HSJ 3192- 94- 24-ABCE
W7UDM 1026- 54- 19-ABCD
WA7IQH 60- 8- 6-ABD
W7JXU 198- 18- 11-A
K8VIZ 90- 15- 6-B
W7SAA (KA7QQU, KB7CW, KD7WA,
N7DOO, WA7ZAJ oprs.)
4810- 107- 37-ABCD

Utah

WD6AUP/7 (+ K6PVS, WA7JUO)
3388- 94- 28-ABDEI

Washington

WB7UUP 7667- 145- 41-ABCE
W7ZSL 360- 33- 10-ABC
W7ERH 153- 15- 9-ABCD
W7KQU 493- 29- 17-A
W7IDZ 80- 6- 6-A
N7FKQ 378- 54- 7-B
N7FX (+ K7ND)
12,300- 208- 50-ABCE
WB7PK (+ KA7ICT)
3564- 83- 33-ABCE

Wyoming

WA7KYM 216- 18- 8-BCD

8

Michigan

WB8FTA 16,974- 194- 82-ABD
WB8CAP 3072- 98- 32-BD
KB8ZF 104- 8- 8-ABCE
WB8QOI 270- 18- 15-A
N8CKH 6182- 144- 43-B
N8DEJ 6108- 142- 43-B

Ohio

WB8LC 37,620- 304-110-ABCD
K8DIO 18,105- 159- 85-BCD
WB8CTX 10,920- 167- 80-ABD
K8TL 9640- 115- 80-BDE
K8WW 9310- 85- 49-DE
N8BJN 1856- 53- 29-BC
N8CCC 1232- 52- 22-ABCD
WB8TCZ 756- 32- 21-BD
WB8SVV 858- 39- 22-A
N8BPB 12- 4- 3-A
WB8BG 3080- 90- 34-B
WB8JR 2555- 73- 35-B
WB8CT 180- 16- 10-B
WB8Y (K8s AL, ICX, N8s BCOZ, EKA, FXL,
WSU, WB8P, WA8FHF, WB8s
DQE, ERB, WB8YDZ, WD8KPI oprs.)
192,720- 648-240-ABCE
K8CQA (+ N8FV, WB8s JAY, TEI)
15,222- 169- 86-ABD

West Virginia

N8FCJ 99,528- 542-156-ABD
WB8LSC 5565- 82- 53-ABD
N8DKL 1462- 43- 34-AB
WB8DRR 3520- 80- 44-B

9

Illinois

WB9MSV 35,328- 272-103-ABCD
WA9BTY 12,222- 191- 63-ABD
KR9K 9487- 150- 53-ABCD
WB9SNR 7097- 73- 47-CDE
WB9D 6324- 63- 68-ABCD
WB9JWA 6120- 114- 51-BD
A9D 4636- 118- 38-BCD
KC9NV 2980- 71- 37-BD
WB9VI 2800- 75- 35-ABD
KA9MGR 2035- 55- 37-A
K9AKS 11,712- 192- 61-B
N5AFL/9 8940- 149- 60-B
KB9OC 8084- 188- 43-B
WB9FSA 7701- 51- 51-B
KA9LDS 6016- 128- 47-B
N9AQ 4329- 111- 39-B
N9DMT 3096- 96- 36-B
WB9ARK 2573- 83- 31-B
WB9GOJ 1820- 70- 28-B
KA9QIK 798- 42- 19-B
KA9CLP 44- 11- 4-B

Indiana

WB9NTL 17,876- 191- 82-ABCD
KA9HPK/9 14,018- 131- 86-ABCD
W3EP/9 13,050- 174- 75-AB
KA9OKH 5123- 96- 47-BD
K9DZS 3288- 79- 41-ABD
WB9TT9 2482- 51- 34-BD
KB9RI (+ K9TVZ, WH9E)
51,680- 332-140-ABCD
KA9MRI/9 (+ KF4ST)
24,206- 201- 98-ABCD

Wisconsin

WA1ED 7176- 115- 52-BCD
W9YCV 1612- 56- 28-BD
N9TD 817- 36- 19-BD
N9DWL 588- 26- 21-A
KA9HKL 3264- 96- 34-B
N9EE 1472- 64- 23-B
K9GDF 12- 4- 3-B
N9DIJ 12- 4- 3-B
WBUC/9 (+ K9s FVF, GJX, VE3FIB)
38,086- 252-137-ABCD
K1TMM (+ KA9RFR, KB9DZ, KC9BY,
KD9GS, N9KS)
9184- 164- 56-AB

9

Colorado

KA8MQA 15,975- 187- 75-ABCD
WA8ERR/9 11,550- 158- 66-ABD
WB9KJY 1022- 49- 14-BCD
KC7QJ 350- 27- 10-ABD
WBET 17,388- 189- 92-A
WBZLL 4808- 96- 47-A
WBKEA 203- 29- 7-B
WBKA (KA8s DXM, OPT, KR8U, W1XE,
WBJF, oprs.)
12,444- 175- 61-ABCD

Iowa

WB8ZKG 19,303- 199- 97-AB
KB8AS 18,444- 163- 87-ABCD
WB8SWD 12,716- 161- 68-BD
WB8YVW 9576- 131- 57-BD
KB8Q 6780- 83- 80-ABD
N8CH 2548- 88- 28-BC
WB8CB 756- 36- 21-AB
NBKRT 2888- 78- 38-B
WB8AP 1386- 33- 21-D

Kansas

WB8QH 3888- 81- 48-AB
WB8SW 1701- 55- 27-BD
WB8CFQ 1120- 40- 28-AB
KB8PC 805- 35- 23-B
N8LL (+ KB8DW, KF8M, KX8B, WA8PWE)
84,800- 423-200-ABCEI
WB8DRL (+ NB8U, WA8TKJ)
29,832- 234-113-ABD

Minnesota

WB8CQ 3320- 68- 40-ABD
K8CK 459- 26- 17-ABD
WB8PN 1656- 72- 23-B

Missouri

WB8NOK 35,712- 237-128-ABCD
WA8W 11,285- 154- 61-BD
WB8Y 8122- 113- 62-ABD
WB8P 7412- 96- 58-ABD
WB8PP 1860- 48- 31-BD
K8GB 1232- 46- 22-ABCD
WB8NIS 943- 40- 23-BC
K8T5Y 336- 24- 14-B
KB8TL (+ KD8EX)
44,759- 272-143-ABCD
KMA (+ WA7ADK)
2812- 74- 38-AB

Nebraska

K8US 12,410- 146- 85-AB
K8OR 8208- 106- 57-BCD
WB8DGF 4578- 86- 42-BD
KA8CRI 3686- 78- 47-AB
WB8MS 2080- 59- 32-BD
WB8AV 952- 33- 28-ABD
WB8GPM 2135- 61- 35-A
WB8VZ 345- 23- 15-B
WB8QM 80- 8- 5-D

South Dakota

WB8D 2849- 63- 37-BCDE

VE

Maritime — Newfoundland

VE1UT 16,992- 227- 59-BCD
VE1AHM 3267- 121- 27-B
VE1EPA 1430- 65- 22-B
VE1ADS 184- 23- 5-B

Quebec