# Results, 1990 ARRL June VHF QSO Party 

# This was my first VHF contest, but it won't be my last! It was enjoyable, yet not as hectic as HF contesting.-K1NCD 

By Billy Lunt, KR1R and Warren C. Stankiewicz, NF1J<br>Contest Manager Assistant Contest Manager

We ought to keep in mind the goals and purposes (of) VHF/UHF contests. There are three major purposes: (1) to increase VHF and UHF activity, especially in underused bands; (2) to provide a framework for competition and recognition; and (3) to have fun." Nicely put by the editors of VHF-UHF Contesting!, a regular column in the ARRL's contest magazine, National Contest Journal. To best meet these objectives, a survey was conducted among the VHF contesters. Input on proposed rules changes was sought.
It's quite an act to fairly balance what are sometimes conflicting objectives. That's why the rules haven't been static, but have tried to keep pace with the fluid interests of VHFers. Dozens of rules changes have resulted in the past decade alone. The Contest Advisory Committee is reviewing suggestions that came from the survey. This could make the VHF contest program even more enjoyable for you-crafting the rules for the maximum enjoyment of the participants is the goal.
The weekend of June 9-11 saw much VHF contesting fun being practiced, as attested to by N2HXJ: "Good weather this June made operating QRP portable great fun!" Likewise, KM1H was "amazed at what QRP can do from a good hilltop." Pete, KT2B, an old hand at QRP portable work "heard a lot of new QRP portable stations this year." He added, "it's encouraging to see the upswing in activity." It can't get any better for WB8TGY: "The highlights were working VP9, C6A, and CO2 on 6 meters and 13 QSOs and six grids on 220 with only $21 / 2$ watts."

Six-meter DX is usually a component of the June contest. The "highlight of the contest was working C6AFR," according to WA3HMK. Seconding that is WB4U: ' $M y$ biggest thrill was working C6AFR on the first call through a pileup." Further echoed by N4JQQ: "It was a thrill to work C6AFR and I was glad to see that most ops stayed above 50.125 (for domestic QSOs)."

Conditions on 6 were about what could be expected. W3EP/1 noted "the scatter on 6 was above average and $\mathrm{E}_{\mathrm{S}}$ was evi-
dent for hours, but never solid or strong." VE3DVF experienced a "few double-skip openings to the West Coast." WA7KHO asked, "With meteors, $\mathrm{E}_{\mathrm{S}}$, tropo and aurora, what more could a person want?"

Scores were right up there in the ionosphere. Breaking the one-mil multioper-
ator barrier for the first time was the Mt Greylock Expeditionary Force, W2SZ/1, at 1.245 million points. This fantastic score topped other superlative efforts by K3YTL at $672 \mathrm{k}, \mathrm{K} 1 \mathrm{TR} / 3$ at 669 k and N6CA at 657k.

In the single-operator category, K2LNS

## Plaque Winners

## Single Operator

| Position Winner |  |
| :--- | :--- |
| 1st | WA2FGK (K2LNS,op) |
| 2nd | K5CM (N5CG,op) |
| 3rd | N2CEI |
| 4th | K2SMN |
| 5th | W1RIL |
| 6th | WZ8D |
| 7th | K1RZ |
| 8th | KA2DRO |
| 9th | VE3ASO |
| 10th | W91P/2 |


| Score | Donor |
| ---: | :--- |
| 240,384 | John Kanode, N4MM |
| 196,112 | Bald Knob VHF Contest Group |
| 127,397 | ARRL |
| 117,936 | Terry Netzley, W8NJR |
| 117,468 | Delaware Valley VHF Society |
| 116,844 | ARRL |
| 112,572 | Mt Greylock Expeditionary Force, W2SZ/1 |
| 108,096 | Paul Monroe, KA1LDV Memorial- -W1TKZ |
| 107,864 | Kenwood USA Corporation |
| 104,500 | Kenwood Employees Radio Club, WD6DJY |

## Multioperator

| Position Winner |  |  |
| :---: | :--- | :---: |
| 1st | W2SZ11 |  |
| 2nd | K3YTL |  |
| 3rd | K1TR/3 |  |
| 4th | N6CA |  |
| 5th | W3CCX |  |
| 6th | AA9D |  |
| 7th | N2WK |  |
| 8th | N2WM |  |
| 9th | KF6AJ |  |
| 10th | WBøDRL |  |


| Score | Donor |
| ---: | :--- |
| $1,245,371$ | MacTrack Software |
| 672,336 | ARRL |
| 669,900 | Angle Linear, N6CA |
| 657,540 | Don Wilke, WW8M |
| 432,196 | Mt Airy VHF Radio Club |
| 358,295 | Jon K Jones MD, NOøY |
| 322,065 | Mark Wilson, AA2Z |
| 232,366 | ARRL |
| 227,397 | Rochester VHF Group |
| 222,430 | W1XX (+ WB1AVA,K1GX,K1JX,KB9NM) |
|  | Contest Team |

## Score Donor

29,492 Jay, K2OVS, and Dick, K2RIW
24,354 Peter Putman, KT2B
23,436 Contest Committee-LIMARC
21,801 West Coast VHFer
10,728 ARRL

DX Single Operator

| Position Winner | Score | Donor |
| :--- | ---: | :--- |
| 1st G®MOS (WB4SLM,op) | 4,046 | W3EP, K9AKS, W9IP |
|  |  |  |
| DX Multioperator |  |  |
| Position Winner | Score | Donor |
| 1st C6AFR | 57,112 | Robert Carpenter, W3OTC |



Here's a look at K3IVO/8, set up at Bald Knob, West Virginia.
guided the WA2FGK station home first at 240k points. K5CM, operated by N5CG, was not far behind with 196k. Congratulations to the single-operator entrants in the top-ten box, which took over 100 k points to make. Each earns a handsome plaque.

WB2DNE/ 3 found a nice hill in eastern Pennsylvania on which to work QRP portable and came away the national winner at 29k points. WB2ELB, N1DJB and N6UII deserve special mention for their strong showings.

VHF contesting continues to be a fun activity that populates our precious spectrum. Next up is the VHF Sweepstakes, January 19-21, 1991. How about making it a club project to get your club aggregate score listed? Certificates go to winners in each club. Step up to the mike and volunteer to organize your club entry. See page 101 for details. The September 1990 VHF contest results will be in January 1991 QST. Happy contesting!-WIXX

## SOAPBOX

I tried out my home-brew 220 transceiver. I finally figured out how to put 432 through 3456 on a single mast (KH6CP/1). These were the best conditions I've seen in a while. My 6-meter score was almost equal to January's total score! (WA1LBK). Indoor antennas don't work too well on VHF, but I had fun anyhow (W9KDR/1). The conditions were good on 6 meters, but flat on the higher bands (W1AQ). The activity seemed to be down a bit, particularly on the higher bands. 6-meter $\mathrm{E}_{\mathrm{S}}$ helped, although this was not as good an opening compared to past years (W1AIM). This was my first time on 6 meters and my first time in this contest. The $\mathrm{E}_{\mathrm{S}}$ on 6 -meters was a real treat. 2 and 432 would have been more exciting if everybody had listened for us "up north" (WE1U). I heard good, courteous operating on 50 MHz (W1EXZ). I love radio, but when lightning hit the water tower 40 feet away from me, I considered stamp collecting. I had a good time despite that (N1DJB). I thought the contest went well (W3HHN). I caught the flu, started late and had extensive porcupine damage to the antennas, coax and masts. Slide Mountain is a great, but challenging location (WB2DST). This was my first VHF contest. Working for a cellular company allows me access to great sites and I'm sure that helped my score (WM2C). 2 meters was deader than a doornail (KG2H). This is always a nice contest,


Inside the operation of the Central Iowa Technical Society, WøRPK. Shown (l-r) are KøIQR, KØVM, WØRPK, NØJAS and WAØJFS.

Division Leaders
Single Operator

| Division | Call | Score |
| :--- | :--- | ---: |
| Atlantic | WA2FGK | 240,384 |
|  | (K2LNS,op) |  |
| Canada | VE3ASO | 107,864 |
| Central | W9UD | 42,313 |
| Dakota | WA@BWE | 50,570 |
| Delta | KC4YO | 85,312 |
| Great Lakes | WZ8D | 116,844 |
| Hudson | N2CEI | 127,397 |
| Midwest | N®LL | 61,854 |
| New England | W1RIL | 117,468 |
| Northwestern | NU7Z | 27,639 |
| Pacific | W6RXQ | 30,300 |
| Rocky Mountain | W2CRS | 33,110 |
| Roanoke | K2UOP/4 | 83,268 |
| Southeastern | WD4MGB | 55,926 |
| Southwestern | W6CPL | 60,720 |
| West Gulf | K5CM | 196,112 |
|  | (N5CG,op) |  |

Multioperator

| Division | Call | Score |
| :--- | :--- | ---: |
| Atlantic | K3YTL | 694,590 |
| Canada | VE3BQN | 32,034 |
| Central | AA9D | 366,715 |
| Dakota | *WB0GGM | 110,714 |
| Delta | W4BFB | 122,337 |
| Great Lakes | WW8M | 197,559 |
| Hudson | N2WM | 232,366 |
| Midwest | WB0DRL | 222,430 |
| New England | *W2SZ/1 | $1,245,371$ |
| Northwestern | K7CW | 22,869 |
| Pacific | N6EGN | 25,915 |
| Rocky Mountain | WØKEA | 31,309 |
| Roanoke | K3LNZ/8 | 176,076 |
| Southeastern | KM4LK | 38,280 |
| Southwestern | N6CA | 657,540 |
| West Gulf | WQ5S | 55,500 |

*new Division record
even though there was no real propagation, especially on 2 and 432 (K2KM). Conditions were poor on 2, although 6 had some skip. It was a disappointing contest (WA2SLY). For a mere $41 / 2$ hours' operating time, this wasn't a shabby effort (WG2I). The conditions were good, but I couldn't fit in the operating time (AK2F). Contesters are never happy. We were hoping 6 meters would open and when it did, we complained that the activity on the higher bands had dropped off (N2WM). Activity was definitely down and has been for more than a year now. 6-meters being open was the real event of this contest (K2SMN). Band conditions were flat and I experienced problems with my computerized logging (W2CNS). I solemnly swear to computer log, and nothing but computer log. This was my first time over the 100 k barrier and it was amazing to finally run with the big boys (KA2RDO). 6 meters was interesting, but there was no DX except for the C6s. My Drake TR-6 blew up during the $\mathrm{E}_{\mathrm{S}}$ opening and it took me an hour to fix it (WA2BPE). 10 watts on VHF is a real killer. You have to rely on CW and a lot of persistence! I was happy to work eight stations on 1296 while running only $21 / 2$ watts. Many attempts took several minutes to allow for QSB peaking (WB2ELB). This was my first VHF contest and it was more fun than I expected. Next time I'll leave the amp behind and operate QRP. I enjoyed the weekend backpacking, but wished the lightning hadn't chased me away from the mountaintop Saturday evening (NIGZZ/2). 6 meters was popping-you never knew where the next grid would come from (K2LNS). Having more power and a better antenna system helped me, but 2 meters was no better than January (N3HBZ). It was too much

Multioperator QSO Leaders By Band

| 50 MHz |  | 144 MHz |  | 220 MHz |  | 432 MHz |  | 902 MHz |  | 1296 MHz |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K1TR/3 | 527 | W2SZ/1 | 656 | N6CA | 420 | W2SZ/1 | 297 | W2SZ11 | 51 | W2SZ11 | 89 |
| W2SZ/1 | 485 | K1TR/3 | 569 | W2SZ11 | 171 | N6CA | 255 | K3YTL | 34 | K3YTL | 60 |
| C6AFR | 444 | K3YTL | 506 | K1TR/3 | 125 | K3YTL | 179 | W3CCX | 28 | N6CA | 53 |
| K3YTL | 391 | N6CA | 477 | K3YTL | 102 | K1TR/3 | 163 | K1TR/3 | 27 | K1TR/3 | 47 |
| WB0DRL | 367 | N2WM | 364 | W3CCX | 92 | N2WK | 134 | W1XX | 20 | W3CCX | 43 |
| W3CCX | 351 | N2WK | 334 | N2WK | 90 | AA9D | 125 | N2WM | 16 | N2GHR | 43 |
| WøUC/9 | 335 | W1XX | 277 | N2WM | 68 | W3CCX | 107 | KF6AJ | 13 | W1XX | 39 |
| N6CA | 331 | K2XR | 256 | W1XX | 64 | W1XX | 101 | N2GHR | 13 | K2XR | 33 |
| WORPK | 323 | KF6AJ | 243 | KF6AJ | 62 | KF6AJ | 98 | N6CA | 12 | WW8M | 30 |
| KF6AJ | 299 | AA9D | 240 | AA9D | 56 | WW8M | 96 | N2WK | 12 | N2WM | 29 |
| AB21 | 296 | W3KWH | 233 |  |  | N2WM | 91 | W3KWH | 11 | N2WK | 28 |
| WBØGGM | 293 | W3CCX | 228 |  |  | K3LNZ/8 | 88 | WW8M | 10 | KF6AJ | 28 |
| N2WK | 285 | K3LNZ/8 | 218 |  |  | K2XR | 80 | K3LNZ18 | 9 | AB21 | 28 |
| VE3BQN | 281 | N4HB | 212 |  |  | N2GHR | 80 | AA9D | 6 | AA9D | 27 |
| AA9D | 278 | NM8X | 208 |  |  | N4HB | 75 | NM8X | 6 | N4HB | 26 |

Multioperator Multiplier Leaders By Band

| 50 MHz |  | 144 MHz |  | 220 MHz |  | 432 MHz |  | 902 MHz |  | 1296 MHz |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WBODRL | 158 | AA9D | 85 | W3CCX | 39 | AA9D | 60 | W3CCX | 19 | W2SZ11 | 29 |
| W0UC/9 | 150 | W4BFB | 73 | AA9D | 37 | WW8M | 48 | W2SZ/1 | 18 | K3YTL | 23 |
| K1TR/3 | 148 | K3YTL | 66 | W2SZ/1 | 36 | W2SZ/1 | 45 | K3YTL | 16 | AA9D | 23 |
| W3CCX | 135 | N4EQT | 65 | K1TR/3 | 35 | K3YTL | 42 | K1TR/3 | 13 | N6CA | 22 |
| AA9D | 133 | NM8X | 64 | K3YTL | 32 | W3CCX | 41 | W1XX | 12 | K1TR/3 | 21 |
| K3YTL | 132 | WBODRL | 60 | N2WK | 29 | K1TR/3 | 39 | W3KWH | 11 | W3CCX | 21 |
| W2SZ/1 | 125 | W3CCX | 57 | N2WM | 29 | WBODRL | 37 | N2WK | 10 | W3KWH | 18 |
| W0RPK | 125 | W3KWH | 56 | N6CA | 27 | K3LNZ/8 | 36 | N2WM | 10 | K2XR | 18 |
| WB0GGM | 117 | K1TR/3 | 55 | KF6AJ | 27 | W4BFB | 33 | K3LNZ/8 | 8 | N2WK | 17 |
| N2WK | 115 | K3LNZ/8 | 55 | W3KWH | 27 | N6CA | 32 | N2GHR | 8 | W1XX | 17 |
| KF6AJ | 114 | N8FWL | 53 | WW8M | 26 | N2WM | 32 | N6CA | 7 | N2GHR | 17 |
| VE3BQN | 114 | W2SZ/1 | 52 | K3LNZ/8 | 24 | KF6AJ | 30 | WW8M | 7 | WW8M | 16 |
| N4EQT | 111 | WOUC/9 | 52 | AB2I | 24 | W3KWH | 30 | AA9D | 6 | N4HB | 16 |
| W3KWH | 109 | N4RFV | 48 | WB0DRL | 23 | W1XX | 30 | KF6AJ | 6 | N2WM | 15 |
| AB2I | 106 | NS4W | 47 | W1XX | 23 | K2XR | 29 | NM8X | 5 | AB2I | 15 |

work hauling antennas and equipment to the top of the fire tower ( 100 feet), but I was able to work everyone I heard. I was awakened in the middle of the night by $50-\mathrm{mi} / \mathrm{hr}$ winds howling through the tower structure (N3FTI). I tried a new location this year, only to be eaten alive by gypsy moth caterpillars. I managed to work $\emptyset$-land off the bottom of the 6-meter Yagi after it fell over. The gypsy moths drove me crazy! (N3EXA). The opening on Saturday was heaven-sent! I worked many good grids, but no double-hop (KA3AFY). I couldn't believe I worked FN43 with only 25 watts! I almost reached my goal of 10 grids. I can hardly wait for the next one! (KA3VGD). It was another enjoyable contest! (WA3USG). Conditions were only mediocre, with 6 -meter $\mathrm{E}_{\mathrm{S}}$ limited here. There were only a little more than 100 grids available to the serious 6 -meter operator. There were lots of mountaintoppers, but activity was definitely down (W3ZZ). Hearing all those grids on 6 meters made my mouth water (WA3FAE). 6 meters held a lot of surprises (W3MSN). I had to stay home and run single-op instead of mountaintopping. Somehow, it just wasn't the same (K4AEK). It was different operating in EM74, as opposed to FN13. (KA2KQM/4). Band conditions were poor Saturday evening and Sunday (KJ4SO). The band was flat here for the entire contest (NK4Q). Murphy stayed home this year and the weather was good. I had great fun (WA4DOU). I enjoyed the opening (WB4JEM). My 2-meter rig blew up, but 6 meters made up for it (WA4JNE). I enjoyed the substantial CW operation during the contest. At times, I had a pileup on 6 -meter CW! We had little $\mathrm{E}_{\mathrm{S}}$ from west of the Mississippi (WB2PMP/4). This wasn't too bad an effort for low power and a dipole cut for another band (WB5MAC). I had the most 6-meter QSOs since 1980. I thought this one was a blast, even though conditions were never much above normal (KK4NO). A storm came up after midnight, with winds estimated at $40-50 \mathrm{mi} / \mathrm{h}$ and enough marblesized hail to cover the grass on the mountaintop (WB4PCS). If not for the good 6-meter $\mathrm{E}_{\mathrm{S}}$, it would have been a slow contest (WD4GXN). The 1296 receiver went dead on me, but look out for next time! Operating mountain QRP is fun! (KM4MP) This was only half the score I had in January (N4BG). Conditions were poor-there was


QRP Portable operator Dennis, N3HKX, worked 129 stations on 2 meters with this simple set up.
no $\mathrm{E}_{\mathrm{S}}$, Ms, Au or ducting! (K5YY). 6 meters saved the contest Sunday, but there was too much QRM on 2 meters (KG5UE). The night before the contest is not a good time to learn that your buried coax for 144 and 432 had been cut by the local cable company. I'm glad 6 was open (WN2E). This was only a half-hearted effort, as I spent most of my time hunting new grids on 6 meters. I found five, bringing me to 671 (W5FF). Conditions were good the first two hours and the last $21 / 2$ hours. This was my best score in a VHF contest (KY5N). I enjoyed being
the recipient of 6- and 2-meter pileups (WB5VYE). This was my best score and there were no band openings! (W5UGO) Conditions were the worst l've seen in 12 years (W5NZS). This was my first QRP portable effort. Maybe next time the heat index won't be over $104^{\circ}$ (WD5AGO). I wonder what it would have been like if the band had held up during the entire weekend? (W5OZI). Our operating on a public beach was bound to attract attention, but most people just wanted to know if we were with the Army (KE5CO). Band conditions were poor for the second year in the row. I had time to watch the prairie dogs, pheasants and meadowlarks (W5AL). Thank heaven for the 6 -meter opening to Texas and Colorado Sunday morning. I especially enjoyed the duct to Oregon. My overall score was lower than last year, despite my having worked $10 \%$ more grids (WB6PFJ). I had more fun baby-sitting the first day (N6RPM). This is my first VHF contest! (WB6HYH). I worked more local stations than I've ever worked in a VHF contest (KH6HME). This was my first time on 6 meters since 1957 (WB6WCW). The excellent weather for which southern California is usually famous abandoned us this year. A storm put our microwave stations inside a black hole all weekend. Multiple equipment failures, blown trailer tires and illness added to the mound of evidence that Murphy was definitely here! (N6CA). It was nice to QSO old friends and to find new hams out mountaintopping (K6GSS). We oper ated from the top of Loma Prieta, el 3791 feet, and nearly got blown off the top of the mountain both nights. When it was slow, we got to know the local bugs well! We had a great time and look forward to doing it again next year (WA2YWP). Rain, rain, rain! This never happens in southern California in June! Perhaps we'll have better luck in September (W6OYJ). I wish there'd been more life on CW. (WB9MII). There were some nice 6-meter openings. Next year will be better! (N7FJM). Last year I wondered if things could get worse and now I can say "Yes" (WA7JTM). We had weird openings on 6 to the Pacific Northwest, but there were no good openings to any eastern parts of the US (WA6IJZ). Conditions were poor Saturday, but a weak aurora in the evening helped (W7IDZ). We got snow both days and froze. A good aurora Saturday got us K1LL/Ø on 2 meters (K7CW). 6 was dead until the


John, KC4UIK, enjoys the sun as he operates QRP portable from grid FM18 on South Mountain, Maryland.
last four hours of the contest (W7LQN). It was better than last year! (W7ABX). Game 3 of the NBA finals was a distraction here in Oregon (N7DB). Where else but on 6 meters can a QRP station with tiny antennas create a pileup? (WA7TUX). Conditions for tropo were wiped out by tropical storm Boris, but the daytime meteor shower was spectacular (WA6PZL). We have the worst VHF conditions
in the country and still have fun (WM7A). Our thanks go to W7YOZ for providing encouragement and the extra gear to make our first expedition a great experience. Everything worked and we had a lot of fun (N7MWV). At least I worked some new grid squares (N8CCC). One word describes the band conditions: Yuck! (WB8JAY). There wasn't as much activity as in past years, but the weather was excellent (W8OUD). I thought band conditions were slightly better this year (W3MMM). The band was wide open on the 7th and 13th (W8HBG). Either there was a shortage of contest operators or the stormy weather that surrounded us Saturday and most of Sunday morning affected us more than we anticipated (N8FWL). I've never seen conditions as flat as they were on UHF (K8MO). It was like a winter contest in Siberia! (N8JTB). I finished off my 6-meter WAS! (WB9QIU). I lost interest in this one ( N 8 FEH ). The bands were not in great shape during the contest and the fishing at the lake wasn't great, either (N8FUJ). Some visitors at my location thought I was trying to locate wild animals with radio collars (K8OSF). Some stations we've worked in past contests were not to be found this year (WW8M). Activity was sparse-perhaps the weather was to blame (W9JGV). Conditions were poor on all bands, given the short period I had to operate (WB8YFE). I picked up 17 new grids on 6 meters (WA9LZM). I found that 25 watts, a small antenna, poor location and a broken rotator make for rough going (N9JR). It seems like the better prepared I am, the worse the conditions are (KDØSU) We were lucky-we finished packing up and reached the paved highway just ahead of a big thunderstorm (WØIA). I was glad to work Bermuda and the UN on 6 meters (KøDAS). The local activity gets thinner every contest (KB0BT). I wish 2 and 432 would have had better openings (NØFQW). This may have been my first VHF/UHF contest, but it won't be my last! (WA0X). I camped out on a small 'hill," which is hard to do-North Dakota doesn't have any hills (KE9QT). I worked California for the first time in 10 years on VHF. 6 meters being open gave low-power stations some good opportunities (VE2FUT). Southern stations should understand the "north"' concept (VE3KDH). There didn't seem to be any enhanced propagation on 144 or 432 MHz


Dick, WA2AAU, operates one of the microwave stations on Mt Greylock at W2SZ/1.
(VE3DVF). It got so cold Saturday night that I had no problem sending dits at 60 WPM (VE3BFM). This was my first real attempt at a VHF contest. I had a lot of fun and am looking forward to September (VE6TA). There's more to these bands than FM and repeaters (VE6KC). Beautiful beaches, nice weather, a rare grid square (FL16), good 6-meter conditions and a great group made for a fun contest (C6AFR). It sure is different operating with no kilowatt and single Yagis (GøMOS). The contest started at 1800 and the storm hit at 1810 . We couldn't hear the radios during the hail. The great 6-meter openings Sunday made it all worth it (VE3WHY). I was pleased to have a 50 MHz opening to JA and DU3, but I was disappointed by the continued ignorance of grid squares by the JA stations (VS6BG).

Single Operator QSO Leaders By Band

| 50 MHz |  | 144 MHz |  | 220 MHz |  | 432 MHz |  | 902 MHz |  | 1296 MHz |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WD4MGB | 440 | WA3HMK | 389 | N6UII | 145 | K1FO | 100 | N2CEI | 25 | WA4VHF | 48 |
| K5CM | 410 | N3KZ | 323 | (DM04) |  | WA2FGK | 89 | WA2FGK | 24 | W1RIL | 45 |
| (N5CG,op) |  | (N3HBZ,op) |  | AA6TT | 74 | (K2LNS,op) |  | (K2LNS,op) |  | WA2FGK | 39 |
| WB4JEM | 364 | WB2QOQ | 272 | W6CPL | 71 | WB3ESS | 85 | W1RIL | 21 | (K2LNS,op) |  |
| WA2FGK | 290 | N3FUJ | 223 | N2BJ | 56 | WB2VPH | 74 | K9MK/5 | 20 | K2SMN | 38 |
| (K2LNS, op) |  | WA4VWV | 223 | N2CEI | 55 | N2BJ | 73 | N1DPM | 18 | N1DPM | 31 |
| WA1OUB | 278 | KM1H | 216 | WA2FGK | 52 | K4QIF | 70 | K2SMN | 16 | N5WS | 28 |
| K2RTH | 277 | K5MA/1 | 204 | (K2LNS, op) |  | K1RZ | 69 | N5WS | 14 | AA6TT | 26 |
| WN2E | 245 | NA1S | 199 | K6MEP | 44 | K9MK/5 | 66 | WA1MBA | 14 | K4QIF | 25 |
| W91P/2 | 243 | W3EP/1 | 192 | WB2VPH | 43 | W2CNS | 65 | N2BJ | 13 | K1RZ | 24 |
| NY1E | 238 | VE3KDH | 176 | WZ8D | 43 | KB11 | 64 | K2UOP/4 | 10 | K9MK/5 | 23 |
| KC4YO | 234 | K1RZ | 174 | W1RIL | 42 | WZ8D | 64 | VE3ASO | 9 | K2UOP/4 | 21 |
| W400 | 228 | K9MK/5 | 174 | N1DPM | 42 | KA2RDO | 62 | WB1FKF | 9 | N2BJ | 19 |
| KA2RDO | 227 | K3ZO | 170 | K2SMN | 42 | K2SMN | 60 | KT2B | 7 | W2CNS | 18 |
| KA@JGH | 224 | N2BJ | 168 | WA8NJR | 37 | W2HRW | 60 | W6CPL | 5 | W3ZZ | 18 |
| WB2PMP/4 | 220 | WA1VRH | 161 | K1RZ | 36 | WA8NJR | 58 | KB8ZW | 4 | W6CPL | 17 |
| W3WFM | 218 |  |  | WA8TJL | 35 |  |  |  |  |  |  |

## Single Operator Multiplier Leaders By Band

| 50 MHz |  | 144 MHz |  | 220 MHz |  | 432 MHz |  | 902 Mr |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| K5CM | 171 | WA4VWV | 55 | WZ8D | 29 | WZ8D | 35 | WA2FG |
| (N5CG,op) |  | WA3HMK | 55 | WA2FGK | 26 | WA2FGK | 31 | (K2LNS |
| WA10UB | 134 | KA3RWP | 51 | (K2LNS,op) |  | (K2LNS, op) |  | N2CEI |
| W91P/2 | 127 | KE8FD | 50 | K5CM | 23 | K2SMN | 29 | N1DPM |
| WA2FGK | 124 | WG8Q | 49 | (N5CG,op) |  | W5UGO | 29 | K2SMN |
| (K2LNS,op) |  | KC4YO | 47 | K2SMN | 23 | K1FO | 29 | W1RIL |
| KA2RDO | 114 | WZ8D | 46 | WA8TJL | 23 | N5WS | 28 | K9MK/5 |
| N5JHV | 105 | K5CM | 45 | K5SW | 22 | K5CM | 27 | K2UOP |
| WZ8D | 104 | (N5CG,op) |  | VE3KDH | 22 | (N5CG,op) |  | N5WS |
| WD4MGB | 103 | K1RZ | 44 | KA2RDO | 21 | K1RZ | 27 | VE3AS |
| WB4JEM | 99 | VE3KDH | 44 | W2CNS | 20 | W2CNS | 26 | N2BJ |
| WD5K | 99 | N5WS | 42 | KB8ZW | 20 | WA8NJR | 26 | WA1MB |
| N2CEI | 98 | KFøAU | 42 | N2CEI | 19 | WA8TJL | 26 | KT2B |
| W2CNS | 96 | WA8NJR | 41 | K1RZ | 19 | NøFQW | 26 | W6CPL |
| VE3ASO | 93 | WA8TJL | 41 | W91P/2 | 19 | KA2RDO | 25 | KB8ZW |
| NOLL | 93 | N13B | 41 | N1DPM | 19 | VE3ASO | 25 | WB1FK |
| KA@JGH | 92 |  |  | VE3ASO | 18 | K9MK/5 | 25 |  |

## Scores

Scores are listed by ARRL/CRRL Sections. Within each Section, single-operator scores are listed first and then multioperator scores. From left to right, each line lists: call sign, score, QSOs, multipliers and bands worked $(A=50 \mathrm{MHz}, \mathrm{B}=144 \mathrm{MHz}, \mathrm{C}=220 \mathrm{MHz}, \mathrm{D}=432 \mathrm{MHz}, 9=902 \mathrm{MHz}, \mathrm{E}=1296 \mathrm{MHz}, \mathrm{F}=2.3$ $\mathrm{GHz}, \mathrm{G}=3.4 \mathrm{GHz}, \mathrm{H}=5.7 \mathrm{GHz}, \mathrm{I}=10 \mathrm{GHz}, \mathrm{J}=24 \mathrm{GHz}, \mathrm{K}=48 \mathrm{GHz}, \mathrm{L}=$ Light). An asterisk before the call sign denotes a QRP-Portable station. Among single-operator stations, single-band winners are noted with band letter(s) in boldface print indicating the band won.

| Connecticut |  |  |
| :---: | :---: | :---: |
| W3EP/1 | 55,341-405-120 | 129-ABD |
| WA1VRH | 26,790-282- | 95-AB |
| *KH6CP/1 | 6,348- 95- | 46-ABCD9EF |
| K1FO | 5,800-100- | 29-D |
| NA1S | 5,572-199- | 28-B |
| W1WHL | 4,550-91- | 50-A |
| N1ABY | 2,278-67- | 34-A |
| KB1I | 2,176-64- | 17-D |
| K1BY | 560-40- | 14-B |
| K1WVX | 462- 42 - | 11-B |
| *K1NCD | 28-7. | 4-B |
| KF6AJ (+ WA2TEO) |  |  |
|  | 227,397-745- | 229-ABCD9EF |
| W1XX ( $+\underset{\text { K1s GX,JX,WB1AVA,NJ2L) }}{208,426-751-197-\text { ABCD9EF }}$ |  |  |
|  |  |  |
| Eastern Massachusetts |  |  |
| W1CWU | 22,046-258- | 73-ABD |
| WA1LBK | 18,408-200- | 78-ABCD |
| W1GXT | 17,152-210- | 64-ABCDE |
| N1BWT | 16,353-195- | 69-ABCD |
| WB1FKF | 14,514-140- | 59-ABCD9EFG |
| KX1C | 10,620-190- | 45-ABCD |
| K5MA1 | 5,508-204- | 27-B |
| AA1O | 4,248-101- | 36-ABD |
| WC1B | 2,850-75- | 38-AB |
| NZ1D | 2,730-77. | 35-ABC |
| W1ZNY | 1,110-74- | 15-B |
| K1VZI | 1,003-50- | 17-ABCDE |
| Maine |  |  |
| NY1E | 20,706-238- | 87-A |
| KA1ZX | 5,208- 93- | 56-A |
| WB1APD | 1,519-49- | 31-AB |
| W1PLX | 406-29- | 14-B |
| W9KDR/1 | 18-6- | 3-B |
| K1JW (+ KA1s IOD,VUB) |  |  |
|  | 612-53- | 9-BD |
| New Hampshire |  |  |
| waioub | 49,704-303- | 152-ABE |
| AC1J | 22,910-238- | 79 ABCD |
| *KA1LMR | 7,395-133- | 51-ABCD |
| KA1CDZ | 7,296-128- | 48- ABCDE |
| KM1H | 4,968-216- | 23-B |
| WA1T | 4,185- 91. | 45-ABD |
| WB1HBB | 1,554-111- | 14-B |
| KA1FB | 525-35- | 15-B |
| N1FDX ( + | WB1FLD) |  |
|  | 854 61- | 14-B |
| Rhode Island |  |  |
| WA1GYL *KA1FVG | $\begin{array}{ll} 2,700-98 \\ 1,065-71- \end{array}$ | $\begin{aligned} & 25-A B D \\ & 15-B \end{aligned}$ |
| W1AQ (K1s AGA,CH,DS,LM,KM1X,N1s GOP,GYU,NO1U,NZ1P,WA1AHK, WA1VPC,ops) |  |  |
|  |  |  |
|  |  |  |
|  | 65,268-421- | 126- ABCDE |
| WA1HYN (+WA1RLV, WB1GMA) |  |  |
|  | 23,485-229-77-ABCD |  |
| Vermont |  |  |
| WiAIM | 11,534-126- | 79- ABCD |
| WE1U | 2,924 61- | 43-ABD |
| W1EXZ | 713-31- | 23-A |
| W1TKZ (AF1R,KC1SI,N1CPE,NT1M, WA2TIF,ops) |  |  |
|  |  |  |
|  | $\begin{aligned} & \text { ops) } \\ & 72,086-460-133-A B C D \end{aligned}$ |  |

## Western Massachusetts

 W1RIL $117,468-487-156$-ABCD9EFG N1DPM $91,260-388-156$ - ABCD9E $\begin{array}{lll}* \\ \text { N1DDJB } & 23,436-233 & 84-\mathrm{ABCD} \\ \text { K1FWF } & 16,492-217-76-\mathrm{AB}\end{array}$ $\begin{array}{lll}\text { K1FWF } & 16,492-217-76-A B \\ \text { K1ISW } & 16,031\end{array}$ $\begin{array}{llll}\text { K1ISW } & \text { 16,038- } & \text { 179- } & \text { 66-ABCDE } \\ \text { WA1MBA } & 12,816-151- & \text { 48-BD9EFG }\end{array}$ $\begin{array}{lcl}\text { WA1MBA } & \text { 12,816- } & \text { 151- } \\ \text { KA1BVM } & \text { 48-BD9EFG } \\ & 2,312-136- & 17-\mathrm{B}\end{array}$ $\begin{array}{lrll}\text { KA1BVM } & 2,312-136-17-B \\ \text { N1EJG } & 1,416-59- & \text { 24-A } \\ \text { K1JG } & 465- & 30- & 15-\text { BD }\end{array}$ $\begin{array}{lrll}\text { K1EG } & 465- & 30- & 15-B \\ \text { *KR1R } & 450- & 50- & 9 \\ \text { WA3EEC } & 448- & 26-16-A B C D \\ \text { WA1ZUH } & 252- & 21- & 12-B \\ \text { WA1LWC } & 120- & 12- & 5-C \\ \text { WA1WRM } & 84 & 12- & 7-A B\end{array}$ W2SZ11 (K1s DH,NKR KA1s DZV,FZY, KJ1K,N1FGY,WA1S UGE VPX,ZYV,ZMS WB1HIH,K2TR KA2S FWN,LIV,NKO, UWD,KB2s EBE,HQ,IAL,N2s BNY,DCM GXH,HUC,HPA,JNT,W2S ARQ,JVF, WA2s AAU,SCA,SPL,WB2s JSJ,KLD,KMY,WF2B,WM2Y,WO2V,WS2B,WT2F, KD3NC,WA3INC,AK4L,N8AFM, WABUSA, ops)

1,245,371-1992-359-ABCD9EFGHIJ

Eastern New York
N2B.J 71,592-435-114-ABCD9E WA2FUZ 19,400-162- 97-ABCDE W3HHN 6,545-119- 55-A $\begin{array}{llll}* \text { WB2DST } & 4,756-81- & \text { 41-ABCDE }\end{array}$ $\begin{array}{llll}\text { KB2FTX } & 3,750- & 75- & 50-\mathrm{AB} \\ \text { WA2ALV } & 2,025- & 56- & 27-\mathrm{ABCD}\end{array}$ $\begin{array}{llll}\text { WA2ALV } & 2,025- & 56- & 27-A B C D \\ \text { WM2C } & 1,496- & 88-17-\mathrm{B}\end{array}$

| KA2MCU (FN32) |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  | $9-$ | 5-ABCD |
| KA2MCU (FN22) |  |  |  |
|  | 4 |  | 2-AB |
| AB21 ( + AB2J,KC2JS, W2AWX, WA2IID, |  |  |  |
| WB2CWA,WN2Y) |  |  |  |
|  | 150,282. |  | 98-ABCDE |
| N2HWV (+ WA2s KPF,ZNU,WD2U) |  |  |  |
| 930-62-15-AB |  |  |  |
| NYC-Long Island |  |  |  |
| K2KM | 6,486- | 115- | 47-ABD |
| WA2EIO | 5,548- | 101- | 38-BDE |
| WA2SLY | 5,520- | 138- | 40-AB |
| N2KFC | 2,472- | 103- | 24-B |
| WG21 | 630 | 45- | 14-B |
| WV2C | $403-$ |  | 13-B |
| N2GHR (K2VL,N2BFJ,WA2VNU, WB2YZV,ops) |  |  |  |
| 152,352-580-184-ABCD9E |  |  |  |
| Northern New Jersey |  |  |  |
| N2CEI | 127,397- | 474 | 191-ABCD9EFG |
| K4BNC | 18,190- | 182- | 85-ABD |
| WB2000 | 10,608- | 272. | 39-B |
| WARUDT | 10,500- | 133- | 70-ABCD |
| AK2F | 8,883- | 175- | 47-ABCD |
| N2CKH | 4,992. | 104 | 48-A |
| *KE2SO | 795 | 53 | 15-B |
| N2WM (+K2BJG,N2s AAZ,HMM,WM, NV2D,WA2VPK,WB2RFB,WE2Z) 232,366-793-223-ABCD9E |  |  |  |
| K2XR (K2s JWE, OWR,KA2ING,WA2VUN, WB2RFV, ops) |  |  |  |
| 170,996-671-197-ABCD |  |  |  |


| *кт2B | 3,720-72- | 30-BD9E |
| :---: | :---: | :---: |
| *N3EXA | 2,627-60- | 37-AC |
| *N3HKX | 2,580-129- | 20-B |
| KA3AFY | 2,442- 66- | 37-A |
| WA3LFY | 1,170-65- | 18-B |
| WB3DNI (FNOO) |  |  |
|  | 280-10- | 10- ABCDSEFGH |
| KA3VGD | 270-30- | $9-\mathrm{B}$ |
| WB3DN1 (FN01) |  |  |
|  | 132-6- | 6-9EFGHI |
| WB3DNI (FM19) |  |  |
|  | 112-7- | 7-ABCD9EF |
| WB3DNI (FN10) |  |  |
|  | $33-3$ | 3-EFG |
| W3IIT (FN | 20) 32- 5- | $4 . A C$ |
| K3YTL (WA1MKE,NA2T,K3MKZ,KA3s |  |  |
| EEO,UX | W,N3DAP,WA3s | s JWP,JWV, |
| NVS, YON,WB3s FAA,FYT,IWZ,ops) |  |  |
|  | 672,336-1337-3 | 336-ABCD9EFGHW |
| NR1E,WA1PBU,K3II,KM3T,K5ZD) |  | 1GD,N1AFQ, |
|  | 669,900-1492-330 | $330-A B C D 9 E F G H I J$ |
| W2EA (+ W2ORA) |  |  |
|  | 25,149-279- | 83-ABD |
| W3HZU (KA3TAH,KB3CU,N3s GKP,GPF, |  |  |
| NO3C,W | W3HMS,W3SST, |  |
| WA3USG,ops) |  |  |
|  | 20,046-225- | 78-ABD |
| K3UZY (+N3AHF) |  |  |
|  | 5,796-138- | 42-B |
| NZ3W (+K3s IJ,NYX,N3s GRD,HHG) |  |  |
|  | 2,697-87- | $31-A B$ |
| Maryland-DC |  |  |
| K1RZ | 112,572-483- | 177- ABCDE |
| W3z7 | 69,204-349- | 146-ABCDE |
| K3ZO | 41,650-350- | 119-AB |
| K4JSI | 31,490-263- | 94-ABCD |
| W3WFM | 19,402-218- | 89-A |
| K3AKR | 19,256-197- | 83-ABCD |
| W3IFM | 10,934 154- | 71-A |
| WA3FAE | 6,118-158- | 38-ABCD |
| WA4VHF | 2,880- 48- | $20-E$ |
| K3YDX | 1,957-103- | 19-B |
| W3MSN | 1,008- 41- | 21-ABD |
| W3LMC | 440- $40-$ | 11-B |
| *KC4IUK/3 (FM19) |  |  |
|  | $65-13$ | 5-B |
| *KL7GLK | 16- 2. | 2-G.J |
| WI2T (+KA3QPG) |  |  |
|  | 378-27. | $14 . A B$ |

## Western Pennsylvania

KA3RWP $\quad 40,576-282-128-$ ABD
N3B $\quad 5,330-130-41-\mathrm{B}$
W3CCX (WA1YHO,N2SB,WB2YEH,
WC2K,K3ESJ,N3s CX,EVV,WA3S AXV,
FFC,JUF,NUF,YUE,WB3YO,WBRSJ,ops FFC,JUF,NUF,YUE,WB3JYO,WBRSJ,OPS) 432,196-875-334- ABCD9EFGHNL
W3KWH (N2CJJ,A13V,K3TP,KA3KSD, N3EQP,NW3C,WA3TTS,WB3EML,NI8O, WD8BHO,ops)


## 4

## Alabama

$\begin{array}{lrlll}\text { WB8RDY } & 13,464-187- & 72-A B \\ \text { W4CYC } & 8,215-155- & 53-A\end{array}$ $\begin{array}{llll}\text { W4CYC } & 8,215-155- & 53-A\end{array}$ $\begin{array}{lrrr}\text { KB4KKG } & 532- & 28- & 19-A \\ \text { WA4VUG } & 63 & 9 & 7-\mathrm{B}\end{array}$ KM4LK $(+$ KB40OW,N4SMX,WA4COG)
$38,280-314-116-$ ABD

| Georgia |  |  |  |
| :---: | :---: | :---: | :---: |
| K4AEK | 2,325- | 75- | 31. AB |
| KA2KOM/4 | 2,244 | 60- | 33-BD |
| KB4BKV | 836 | 40- | 19-BD |
| AK4T | 130- | 13- | 10-A |
| WS4F (+ AA4GA) |  |  |  |
|  | 36,252- |  | 106-AB |
| N4ORP (+WW4T) |  |  |  |
|  | 10,656- | 110 | 72-AB |

3

## Delaware

K4CHE $\quad 39,345-278-129-\mathrm{ABCD}$
KB3LE $\quad 3,420-94-30-\mathrm{BD}$
AC3T (KA3B,op)
2,850-114-25-B
Eastern Pennsyivania
WA2FGK (K2LNS,op)

| 'WB2DNE/3 | 240,384-630- 256-ABCD9EF |  | North Carolina |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 29,492-225- | 101-ABDE | N4DT | 32,274 | 225- | 99-ABCD9EFI |
| KZ3X | 24,072-215- | 102-ABD | N4DT | 32,274 |  |  |
| WA3HMK | 21,395-389- | 55-B | KJ4SO | 10,295- | 111- | 71. ABDE |
| N3KZ ( N 3 r | HBZ,op) |  | N2GJP | 8,107- | 108 | 67. ABCD |
|  | 12,920-323- | 40-B | NK40 | 2,464 | 57 | 25-B |
| *N3FTI | 9,381-165- | $53-\mathrm{ABD}$ | NK4S | 1,425- | 24. | 25-8 |
| N3FUJ | 8,773-253- | 31-BC |  |  | 24 | 17- |
| WB3ESS | 3,910-85- | 23-D | W3IIT (FM14) |  |  |  |



| Mississippi |  |  |  |
| :---: | :---: | :---: | :---: |
| W5RCI | 27,730- |  | 118-ABCD |
| WN2E | 20,580- | 245- | 84-A |
| N5JYX | 11,205- | 109 | 83-ABCD |
| WD5CCA | 2,698- | 71- | 38-AB |
| K5UR (EM52 | 52) 42- | 7. | 6-B |
| K5UR (EM5 | 51) 25 | 5 | 5-B |
| K5UR (EM4 | 4) 4 | 2. | 2-B |
| New Mexico |  |  |  |
| N5JHV | 25,168- | 206- | 121-ABD |
| KN5S | 19,425- | $183-$ | 105-ABD |
| W5FF | 6,860- | 98. | 70-AB |
| N5EPA | 4,750- | 94. | 50-ABD |
| KA5EBL | 4,717- | 80. | 53-ABD |
| K5MAT | 3,649- | 76- | 41-ABCD |
| N5MXU | 2,925- | 75- | 39-AB |
| W5IXR | 1,888- | 56. | 32-ABC |

## North Texas

K9MKJ5 97,244-452-161 ABD9 N5WS $\quad 71,610-325-154$ - ABD9E $\begin{array}{ll}\text { N5BHZ } & 33,900-248-113-\text { ABDE } \\ \text { AA5IB } & 21,600-184\end{array}$ $\begin{array}{llll}\text { AA5IB } & 21,600-184-96-A B D \\ \text { WD5K } & 20,592-208-99-A\end{array}$ $\begin{array}{lll}\text { KY5N } & 17,290-190-91-A B \\ \text { N5UD } & 16,530-190-87-A\end{array}$ $\begin{array}{lrl}\text { N5UD } & 16,530-190-87-A \\ \text { AA5C } & 3,128-63-34-A B D 9 E\end{array}$ WQ5S ( + AA5AM,N5LRM)

55,500-287-148-ABCDE WB5VYE/5 (EM21) 5,456 - $80-44$ Z 44 ABCD9E WB5VYE/5 (EM04) (+ WA5ZKO) WB5VYE/5 (EM22) (+ WA5ZKO) WB5VYE/5 (EMMO3) (+ WA5ZKO) K5BZH (+ WD5DCZ) WB5VYE/5 (EM11) (+ WA5ZKO) WB5VYE/5 (EMO2) (+ WA5ZKO) WB5VYE/5 940-31-20-ABCD9E WB5VYE/5 (EM12) (+ WA5ZKO) WB5VYE/5 (EM01) (+ WA5ZKO) WB5VYE/5 (EM13) (+ WA5ZKO)

## Oklahoma

K5CM (N5CG,op)

| K5SW | 31,598- | 86 | 122-ABCD |
| :---: | :---: | :---: | :---: |
| N5OSK (EM25) |  |  |  |
|  | 28,951- | 195- | 131-ABD |
| W5UGO | 11,968- | 131- | 68-BD |
| -WD5AGO | 4,428- | 72. | 41-ABDE |
| W5NZS | 3,760- | 72- | 40-ABCD |
| KF5GP | 2,448- | 68 - | 36-AB |
| KB5FNE | 684 | 36- | 19-B |
| N5OSK (EM24) |  |  |  |
|  | 350- | 25. | 14-B |
| South Texas |  |  |  |
| W5OZI | 9,163- | 119 | 77. A |
| W3XO/5 | 4,980- | 83- | 60-A |
| KA5TJI | 1,518- | 69 | 22-B |
| WA9YLB/5 | 960 | 48. | 20-B |
| KC5FP | 300 | 20. | 15-A |
| KE5CO (+ WB5N) |  |  |  |
|  | 22,204 | 210- | 91-ABDE |


| West Texas |  |  |
| :---: | :---: | :---: |
| W8CM | 37,536-248- | 136-ABD |
|  |  |  |
| 6 |  |  |
| East Bay |  |  |
| WA6LHD | 2,726-94- | 29-B |
| WB6PFJ (+ WB6LRU) |  |  |
|  | 24,486-285- | 66-ABCD |
| W6QT (+ W6TKT) |  |  |
|  | 1,349-48- | 19-BDI |
| Los Angeles |  |  |
| W6CPL | 60,720-355- | 110-ABCD9EF |
| AA6TT | 48,204-435- | 78-ABCDE |
| *N6UII (DM04) |  |  |
|  | 21,801-341- | 39- BCDE |
| WA6BIL | 4,590-135- | 34-AB |
| N6RPM | 1,806-65- | 21-ABDE |
| W61FF | 850-55- | $10-B C D$ |
| KI7F/6 | 497- 71- | 7-B |
| -N6UII (DM14) |  |  |
|  | 95- 10 | 5-BCDE |
| *N6UII (DM13) |  |  |
|  | 72-8- | 4 - CDE |
| *N6UII (DM03) |  |  |
|  | 42-6- | 3-CDE |
| K16X (DM04) (+N6TG) |  |  |


| Orange |  |  |
| :---: | :---: | :---: |
| WB6FCS | 18,183-179- | 87-ABCD |
| KG1BY | 11,118-161- | 51-ABCD |
| N6NJI | 6,213-100- | 57-ABCD |
| K16FF | 3,220-140- | 23-B |
| WB6HYH | 2,040-60- | 34 A |
| W6XD | 1,173-51- | $23-A B$ |
| N6TG ( + K16X) |  |  |
|  | 322-21- | 14. ABD |
| 16X (D | ( + N6TG) |  |

Pacific
KH6MME
585- 53- $\quad 9$-ABCD
Santa Barbara
K6MEP $\quad 50,268-339-118$-ABCDEI $\begin{array}{lrrr}\text { WB6AAG } & 12,512-174 & 68-A B D \\ \text { WABFIT } & 1,428-51- & 28-A B\end{array}$ $\begin{array}{lrlc}\text { WWAGFIT } & 1,428- & 51- & 28-\mathrm{AB} \\ \text { WBGWCW } & 350- & 25- & 14-\mathrm{A} \\ \text { KGVMN } & 264 & 30- & 8-\mathrm{BC}\end{array}$ $\begin{array}{lrcc}\text { K6VMN } & 264-30-18-B C \\ \text { AA4Q/6 } & 91-13-7-B \\ \text { N6CA } & \text { WB2WIK,AA6VX,AE6E,K6s }\end{array}$ N6CA (WB2WIK,AA6VX,AE6E,K6s AWO, QFD,URH,VI,XCO,WGS OSM,YLZ,WA6s CDR,CGR,ITE,MEM,RAY,RIK,TMJ, ZOU,Ops)
657,540-1592-260-ABCDSEFGML.
Santa Clara Valley

| Werxa | 30,300- | 224 | 100-ABCDEFI |
| :---: | :---: | :---: | :---: |
| KGGSS | 9,072- | 133 | 63-ABC |
| K6FV | 8,001- | 121- | 63- ABC |
| WAGHRK | 7,696- | 130 | 52-ABD |
| W6RCW | 1,452- | 44. | $33-\mathrm{A}$ |
| *KC3KXF (C) | CM96) |  |  |
|  | 1,083- | 41- | $19-\mathrm{BD}$ |
| *KC8KXX ( | CM86) |  |  |
|  | 364 | 20. | $14-\mathrm{BD}$ |
| WB2UaT | 90. | 15- | 6-A |
| *KB6TDU | 80. | 8 - | 5-C |
| *KC6KXF ( | CM97) |  |  |
|  | $50-$ | 8. | 5-BD |
| WA2YWP ( | + N6URL) |  |  |
|  | 20,064 | 204 | 76-ABCD |
| San Dieg |  |  |  |
| *KB6MEG | 4,216- | $91-$ | 34 ABCD |
| WA5BNH | 3,724 | 87. | 28-BCDE |
| WB6DTA | 2,664 | 63 | 36-ABD |
| Weors | 2,090- | 73. | 22 - BCDI |
| WB6AXW | 1,752. | 57. | 24 ABC |
| K6AQ | 1,647- | 52. | 27-AC |
| K6CM | 884 | 68. | 13-B |
| K16SG | 500 | 41. | 10-BC |
| WBSMII | 60 | 15. | 4-B |

## San Francisco


San Joaquin Valley
WBAAYE 11,580 - 146 - 60 ABCD $\begin{array}{llll}\text { KGYK } & 2,210 & 64 & 26-B C D\end{array}$ KGLMN (DMOS)
K6LMN (CM96) $264 \quad 14 \quad 11-\mathrm{BCD9E}$
K\&LMN (CM97)
K6LMN (DMO6)
195- 15- 13-AB
KGLMN (CM95) 75- 7- 5-BCD9E
KELMN (DMO4)

24,357-252-60-ABCDE
DSE,JAB,JNV,NGs PLE,WT)
KI6X (DMOS) ${ }^{2,904} 84-24-\mathrm{ABCD}$
$\begin{array}{cccc}15- & 5-\quad 3-B\end{array}$
Sacramento Valley
N6PYI 13,992-174-66-ABCD
N6PYF
KGLMN (CM98) 36 15- $\quad 8$ B-
$\begin{array}{llll}\text { KBLMN (CMB9) } & 4 & 2 & 2-B\end{array}$
KGLMN (CNBO) 1-1. 1 1-B
NGEGN ( + K6AAW,W6s HBU,JEX,WB6FJE,
KATDGL)
WB6RHC ( + KB6CNI,N6s BCU) 18,881-193-79-ABCD

7


Artzon
$\begin{array}{llll}\text { N7FJM } & 3,276- & 72- & 42-A B D \\ \text { K1SC } & 3,116- & 76- & 41-A B \\ \text { KFIJS } & 375- & 25- & 15-A\end{array}$
$\begin{array}{lllll}\text { KFFJS } & 375-25-15-A\end{array}$
WA7JTM ( + N7AMA, WW7B)
W7GZ (+KB7Cl)
WAGWZT (+N6RMJ) $\quad \begin{gathered}164 \\ (+58-\text { ABDW }\end{gathered}$
Eastem W
KA7BZI
N7AUN
W7DZ
W7FHI
N7JGO
K7CW ( + K7


Montana
$\begin{array}{lclll}\text { WATKHO } & 12,800 & 153- & 80-A B D \\ \text { WTKNT } & 8,978-134 & 67-A\end{array}$
WTHAH (+ WA7PDC)

## Nevada

W7LQV 5,546-105- 47-ABD $\begin{array}{lrll}\text { KTICW } & 3,871- & 79 & 49-A \\ \text { K7NV } & 2,170 & 62 & 35-A B \\ \text { NREE } & 832 & 32 & 26-A B\end{array}$ W7ABX ${ }^{780}$ NW7O (KB7IRF, W7TVF)

14,842-167- 82-ABDEI


Oregon
$\begin{array}{llll}\text { KE7CX } & 24,479-216- & \text { 91-ABCD9E } \\ \text { WA3RMX } & 11,016-134-54-\text { ABCDSEFGHUK }\end{array}$
 $\begin{array}{lllll}\text { WD4ECK77 } & 1,674 & 49-27-\text { BD } \\ \text { N7DB } & 1,541 & 67 & 2-A B\end{array}$
$\begin{array}{lrll}\text { NTOB } & 1,541- & 67- & 23-\text { AB } \\ \text { WTTYR } & 660 & 32- & 12-\text { ABCDE }\end{array}$
$\begin{array}{llll}\text { KI7Z (CN94) } & 441- & 35- & 9-\mathrm{BD} \\ \text { KIZ } \\ \text { KI7Z (CNN85) } & 440 & 40- & 8-\mathrm{BD} \\ \text { KD7 } & 296- & 28- & 8-\mathrm{BD}\end{array}$
KD7LA $(+$ W7JXU
$11,968-156-\quad$ 64-ABCDE

Utah
NJ7A $\quad$ 2,775- $68-37-$ ABD
$\begin{array}{llll}\text { KBEES } & 2,346- & 69 & 34-\mathrm{AB} \\ \text { WATTUX } & 2,278- & 62 & 34-\mathrm{ABD}\end{array}$
$\begin{array}{lrrr}\text { WAAGPM } & 150 & 15-10-A B \\ \text { WA7PIB } & 70 & 10-70 & 7-B\end{array}$
WABPZIT (+N6s ENU,HBI)
WB7REL ( + N7LPP)
693- $33-21$
$\begin{array}{cc}322-21-14 & \text { ABD } \\ \text { WBTVLI } \\ (\mathrm{DN} 30)(+ \text { WA7PXD } \\ 180-15-12-A B\end{array}$

| Western Washington |  |  |
| :---: | :---: | :---: |
| NU7Z | 27,639-256- | 83- ABCDE |
| WM7A | 17,236-252- | $62.4 B D$ |
| W7YOZ | 16,758-173- | 63- ABCD9EFL |
| N3EG | 10,920-162- | 60-ABCD |
| W7F | 10,224-142- | 72-AB |
| KD0GT/7 | 6,480-111- | 45-ABCDE |
| WTZSL | 2,088-61- | $29 . A B C D$ |
| K7ND | 88434 | 13-D |
| *W7HDD | 742- $28-$ | 14-BCDEF |
| KB710G | 464 58- | 8 - ${ }^{\text {B }}$ |
| KATHLB | 462-33- | 14 AB |
| W1PRT | 80-16- | 5-B |
| WB7PEK (+ KA7IC) |  |  |
|  | 16,320-188- | 68- ABCDE |
| N7MWV (+N7MWU) |  |  |
|  | 768- 47- | 12-BCDE |
| Wyoming |  |  |
| KD9GS (+ Wes KJY,Sil) |  |  |
|  | 7,592-118- | 52-ABDE |
| 8 |  |  |
| Michigan |  |  |
| KBMD | 24,510-191- | 95-ABCD9E |
| WB8TGY | 19,671-191- | 83- ABCDEF |
| WG8Q | 7,840-160- | 49-B |
| KU8U | 7,535-108- | 55-ABD |
| N8JTB | 5,940-121- | 45-ABD |
| N8CGY | 3,738-89 | 42-AB |
| WB9OIU | 2,480-62- | 40-A |
| КК78 | 1,680-33- | 21-ABD9EFG |
| N8FEH | 1,595-55- | $29-8$ |
| N8FU | 720-35- | 18-BD |


| *K80SF (EN57) |  |  |  |
| :---: | :---: | :---: | :---: |
|  | 176 | 8 | 8. ABD9EFGH |
| *K8OSF (EN56) |  |  |  |
| 114 |  | 6 | 6 - B9EFGH |
| *K8OSF (EN67) $40-$ |  | 6 | 5-BE |
| WWBM (+ KC8Z,N8s ERM,KSR,NE81) |  |  |  |
|  |  |  |  |
| NM8X ( + AC8W, N8s COA, FGB,L |  |  |  |
| NR8S,WABYAN,VE3CKU) |  |  |  |
|  | 132,719- | 509 | 211-ABCD9E |
| ISC,KB8s AFS,CJX,KN8, ${ }^{\text {a }}$, ${ }^{\text {,N8s }}$ |  |  |  |
| CUF,IMF,IMO,IRT,JGM,JTV,LUG,NY8D, WABTON,WB8VC, ops) |  |  |  |
|  |  |  |  |
|  | 26,750- | 224 | 107-ABC |
| Ohio |  |  |  |
| WZ8D | 116,844 | 439 | 214-ABCD |
| WABNJR | 84,943- | 386 | 173- ABCDE |
| WABTJL | 60,473- | 286 | 163- ABCDE |
| KB8ZW | 56,610- | 272 | 153-ABCD9E |
| KE8FD | 31,000- | 202- | 125-ABCD |
| K8D1O | 23,460- | 178- | 102-ABCD |
| WB8TDG | 15,308- | 144 | 86-ABCD |
| N8CCC | 8,450- | 114 | 65-ABCD |
| WBELAY | 7,316- | 103 | 59 ABD |
| *W8FK | 4,050- | 75. | 54 A |
| K8NI | 3,485- | 79. | 41-ABD |
| WD8DCX | 2,592- | 65. | 32-ABD |
| W80UD | 2,079 | 63. | $33-8$ |
| W3MMM | 1,566- | 54 | $29-\mathrm{B}$ |
| K8KR | 1,518- | 68 | 23-B |
| K8MR | 1,300- | 52. | 25-B |
| W8HBG | 938 | 55. | 14-BD |
| K3ZAP | $935-$ | 41. | 17-ABCD |
| N8AXA | 540 | 26 | 18-ABCD |
| W8XT | 100. | 17. | 4 ABCD |

West Virginia
WDASK 20,832-155- 93-ABCD9E $\begin{array}{llll}\text { W8TN } & 6,510-93-62-A B D \\ \text { WBBBEL } & 4,004 & 77 & 52-A\end{array}$ WB8BEL 4,
K3LNZ/8 (K3s DUA,ICH, WA3s EDQ,NZ1,OYW,W4PSJ,ops NBFWL (+WF1G,KABOTX,KB8s ECQ GDU,ICR,N8S JPX KUR,KW,WBBCNN WU日Q) 46,596-298-132-ABCD K3VO/8 (N3DCI,NS3V,NT3Z,W3s EKT, IP,WA3s KZR,TIO,WB3EVS,WB6VGI, WB8WRI,ops)

42,372-238-132-ABCD9E


| Illinois |  |  |
| :---: | :---: | :---: |
| W9UD | 42,313-250- | 131-ABCD |
| WABFTA | 18,768-204 | 92-A |
| NCOF | 11,523-123- | 69 ABCD |
| N9BJG | 5,760-85- | 64 ABD |
| W9JGV | 4,040-101- | 40-B |
| WB9GKA | 3,525-66- | 47- ABD |
| N9HET | 3,072-96- | 32 |
| WB9MXX | 276- $23-$ | 12- |
| WASWXC | 216-23- | 9 - |
| AA9D (+ AF8Z,K9s AKS,PW,RO,KA9CK1, N9s EDT,KC,NN9K,W9W,WA9NRB, WBOSNR,WCOM) |  |  |
|  |  |  |
|  |  |  |
|  | 358,295-741- | 353-ABCD9EF |
| KB9CEQ ( + N9s IQV,JF) |  |  |
|  | 29,328-28 | 104 AB |

## Indiana

A4VWV 21,608-256-74-BCDE
$\begin{array}{llll}\text { ALNO } & 21,608-256-74-\mathrm{BCDE} \\ \text { WDSNS } & 14,091-159 & 77 \text {-ABD }\end{array}$
$\begin{array}{lrrr}\text { WD9WS } & 14,091-159 & 71-\mathrm{ABD} \\ \text { WB8YFE } & 4,788-76- & 57-\mathrm{ABD}\end{array}$
$\begin{array}{llll}\text { WB8YFE } & 4,788-76-57-A B D \\ \text { WFOM } & 4,320-108- & 40-B \\ \text { KC4KKg } & 4,212 & 81 & 52-A B\end{array}$
$\begin{array}{lrrr}\text { KC4KK99 } & 4,212-81- & 52-\mathrm{AB} \\ \text { W9MBL } & 540 & 27-20-A \\ \text { W9CSF } & \text { N6SYJ, K9s DTE } & 20\end{array}$
W9CSF (N6SYJ,K9s DZE,URA,KA9PGC
NA9N,NT9T,NY9B,WB9YHH,WD9BDW WDSEIX,0ps)
K9MRI ( + K9TVZ
W9YB (KA9CCP
15,023-154-83-ABCD
KASHKL 15,925-161- 91-ABD
$\begin{array}{llll}\text { WF9X } & 15,566-173-86-A B D\end{array}$
$\begin{array}{llll}\text { WF9X } & 15,566-173-86-A B D \\ \text { WAgLWJ } & 11,826-152-73-A B D\end{array}$
$\begin{array}{lrll}\text { WASLWJ } & 11,826-152- & 73-A B D \\ \text { WASLZM } & 6,100 & 100-61-A B\end{array}$
$\begin{array}{llll}\text { WA9HCZ } & 2,528- & 79 & 32-\mathrm{B} \\ \text { N900 } & 2,460 & 82- & 30-\mathrm{B} \\ \text { WA1UUM } & 2,010- & 67- & 30-\mathrm{B}\end{array}$
$\begin{array}{llll}\text { NAGNQ } & 2,010- & 67- & 30-\mathrm{B} \\ \text { N9G } & 1,475- & 58-\mathrm{BC} \\ \text { N9JR } & 1,288- & 52- & 23-\mathrm{BCD}\end{array}$

AKC,BSH)
165,130-590-245-ABCDE

## 0

Colorado
W2CRS 33,110-248-110-ABCDE
NOKV 27,573-233- 91-ABCDE


South Dakota
Weetr 11,926-127-89-ABD
VE
Martime- Newfoundland
VE1AHM 348-24-12-BD
VE1MUF (VE1s WL,XH,ops)

Quebec
VE2FUT 12,705-143-77-ABCD
VE2UMS (VE2s BAP,BBW,DRW,MFJ,ops)
460- 46- 10 -
Ontario
VE3ASO 107,864-411-194-ABCD9EFI
VE3KDH $\quad 30,420-257-90-\mathrm{BCD}$
VE3FGU 28,060-244-115-AB
VE3EYR $12,705-141-77$ - ABCD
VEEWCB $\quad 9,108-136-66$ - ABE
VE3SMA $\quad 8,352-117-58$-ABDI
VE3DVF 8.142-110-69-ABD
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