# Results, 1995 ARRL 10-Meter Contest 

## "I felt like the Maytag repairman, waiting for the band to open"-WA2FVL.

It'stime to start looking ahead! Our peerless propagation prognosticators tell us we've finally hit the bottom, and that conditions can only go up from here. Let's hope so! By some accounts, these were perhaps the worst conditions in the history of the contest! Some operators probably were happy just to get out of their backyard!

This contest was more like a VHF than an HF contest. Almost all the propagation modes you'd expect to find in, say, the June VHF QSO Party were here, with the possible exception of moonbounce. We had E skip; we had meteor scatter; we had a little F. What did this all mean? Basically, the distances you could work, for the most part, were just a fraction of what you were used to.

Let's face it-it was rough going. Most of the signals you could hear most of the contest either came from locals, or were probably too weak to identify. As Lew, K4VX, said, "A big signal might peak at S2." The sporadic E we had, for the most part, showed up right at the end of the contest (naturally!). This was a contest where persevering meant hours of fruitless calling and tuning, waiting for some signal to show up somewhere that you hadn't already worked.

If you were able to work any decent DX, it was probably thanks to trans-equatorial propagation. This made for a lot hotter contest south of the border, and the folks in South America and South Africa made out like bandits, while the rest of us shivered in the December cold between contacts. There wasn't much of a reason to beam anywhere else that weekend!

In fact, it's pretty hard to find someone with a top score who wasn't from Argentina. Seven out of the top ten category winners were from there, with only ZS9F (Phone, High Power), and JR4GPA (Mixed-Mode, QRP) working their way to the top from outside South America.

In the US and Canada, we certainly would be remiss if we didn't congratulate Pete, N4ZC, for his outstanding job in the MixedMode, High Power class; the KY1H multioperator gang; or Jim, K1ZX, on High Power CW. It's the loud signals like these that "beacon" the propagation for the rest of us.

No matter whether conditions are good or bad, the big attraction of 10 has always been


Cort, K4JYO, reports that they used the contest to learn a lot about meteor scatter contacts. (I-r), K4JYO; Drew, K8YFM; and Alan, KB4NAI.
to get on and "see what's out there." Sometimes the action is a frantic free-for-all-but sometimes it's more like a scavenger hunt. Most folks just don't want to miss it either way! Check out what Jorge, CX8BBH, went through to make sure he was on in the sidebar "The CX8BBH Down-and-Dirty 10-Meter Contest Antenna Story."

This year marked the first time that ARRL Affiliated Club Competition has been included with the $10-$ Meter Contest. Did you remember to list your club on your summary sheet? There doesn't seem to be many HF contests the Frankford Radio Club can't win-once again they turned out the ops to win another gavel in the Unlimited Class. Florida Contest Group members took advantage of their close proximity to the equator to walk away with the first Medium Class honors. The Carolina DX Association rode the first-place coattails of Roger, N4ZC, to top honors in the Local Class competition.

As we said, things are looking up! The sunspot cycle can't stay at the bottom forever! If nothing else, the scores you're seeing now ought to be easy to top the next time around. So when December rolls around, make sure you get on the air and check it out!

## Backscatter

Even though conditions were terrible, it was exciting to experience the path openings! (N9LGP). Most signals were in or near the noise level, but it wasn't bad for the bottom of the solar cycle (K9OM).

"Europe, where are you?" Gerardo, LU1FZR, hunts for some multipliers.

This surely must be the very pits of the solar cycle (W3EP). It may have been a EME contest, the way I was getting out. Maybe we should move the contest to 20 next year? (NM1Q). Most of the time, I couldn't even hear the European beacons (G4OTY). I had a lot of fun despite the poor conditions (AA1AK). Ten meters sounded like 80; Europe and the US were very hard to work. At least I worked all my country's provinces (LU7DW). Alas, my scattered four hours of operating missed most of the openings (K8JLF). I never heard any N/T stations

Top Five, W/VE
Mixed Mode, QRP

| Mixed Mode, QRP |  | Phone Only, High |  |
| :---: | :---: | :---: | :---: |
| AA2U | 61,710 |  |  |
| WT3W | 31,164 | N2EOC | 87,928 |
| WA6FGV | 16,112 | K4VUD | 78,848 |
| KB2EEU | 3,740 | N3BB | 66,600 |
| WU7F | 3,248 | (AA5RB |  |
| Mixed Mode, Low |  | N8RA | 65,790 |
|  |  | KC4YM | 38,054 |
| NU4Y | 167,890 | CW Only, QRP |  |
| W3EP | 108,072 | AA1AK | 10,368 |
| K9LJN | 73,920 | K8LJQ | 5,796 |
| AA4GA | 73,472 | NM1K | 5,472 |
| K5KG | 67,176 | AB6GS | 1,560 |
| Mixed Mode, High |  | KD11A | 1,536 |
|  |  | CW Only, Low Power |  |
| N4ZC | 263,704 | KM9P | 101,680 |
| AC4NJ | 248,148 | AC10/4 | 82,784 |
| (WC4E,op) |  | WD4AHZ | 68,476 |
| K3ZO | 197,802 | W5HUQ | 56,000 |
| NC®P | 146,004 | WK2G | 38,700 |
| AB5YG | 121,030 | CW Only, High Power |  |
| Phone Only, QRP |  | K1ZX/4 | 150,960 |
| K6JCV | 36,244 | N4BP | 122,264 |
| K6HNZ | 24,436 | W3GN | 68,016 |
| N4ZAK/T | 546 | W3BGN | 60,720 |
| N8ZR/6 | 80 | W3GH | 43,792 |
| KH6CDO | 72 | ( NBQDB |  |
| Phone Only, Low Power |  | Multioperator |  |
|  |  | KY1H | 252,350 |
| K8XR | 42,200 | K4JYO | 179,564 |
| N50KR | 41,870 | WA2JQK | 175,994 |
| N3ADL | 38,352 | N50LS | 155,800 |
| KC3PZ | 36,210 | AA1JD | 151,872 |
| WD4NGB/T | 31,110 |  |  |

Top Five, DX


## The CX8BBH Down-and-Dirty 10-Meter Contest Antenna Story

By Jorge Camboni, CX8BBH
Conditions were extremely poor, as everybody must have noticed. Europe was almost nonexistent, and the activity from the rest of the world was greatly reduced.

After I finished the CW CQ WW DX Test, I realized I had to get ready for the 10-Meter Contest, but I had no antenna for the band, and no room to put one up. It was impossible to get my four-element 20-meter Yagi down from the tower at the time. So I had to build a very lightweight Yagi to erect on top of the 20-meter monster. It had to be very close to the other antenna for mechanical reasons; therefore the boom had to be oriented $90^{\circ}$ away to avoid interaction.

So I began to think, lose sleep, and got even bolder. Finally a solution came to mind and I went to work immediately. In 48 hours, I had constructed a five-element Yagi with a 20 -foot boom.

You're all familiar with bamboo. Well, I have lots of a plant very similar to bamboo planted in my backyard, called Tacuara. It's like bamboo, but much thinner and lighter. I had used it for years to build dozens of cubical quads. They lasted for a year or so, and that was all right with me.

So I built the entire Yagi from tacuara, including the boom. Then I attached the electrical elements (2-inch-wide thin brass ribbon) to the tacuara by means of a few turns of vinyl tape here and there, connected the coax and hairpin (I had previously optimized everything on the computer) and attached the four-pound monster to a short piece of 1 -inch tubing used to hold the stay for the 20 -meter antenna-without even testing it.

Up it went, and down the tower I came in a hurry to check it out. It worked fine, despite its showing $10 \%$ or so reflected power. It lasted about 72 hours, until the night after the contest. Then came the wind..

I'd tell the story of the linear, but you probably don't want to know. I should say, though, that since I didn't have time to rebuild the tank circuit, I had to cool it off with a fan. Otherwise (I had tried this before) it would have melted. So l lost a couple of hundred watts, but who cares? I was on the run!
on CW (K1HTN). Conditions weren't very good, but I had a good time anyway (KG1V). There was a lot of action for a "defunct" band (K1JKS). It felt just like a VHF contest! (K5ZD). When I had propagation to the US, I had a pipeline to Texas. But I only had one contact with a station in W7, and the power must have been turned off in California! (VP2VF). I hope I didn't miss the "big" openings! (WE1B). Ten meters is like a seductive siren song of a fickle dame! (KB2EEU). The propagation was spotty, and the QSB was significant (K2RI). If it wasn't for the computer and a voice keyer, I would have given up in the first hour. I worked 22 states, 8 countries, and 16 telephones (N2FF). There were a few Es openings, one on Saturday and two on Sunday from here to the southern states, and some trans-equatorial openings to Argentina on Sunday (WB2AMU). It was like 2 meters! We had good trans-equatorial propagation; I could hear VP2V and W4 (EA4TK). This contest is always fun. The openings were fewer and shorter this year, and that kept me constantly moving the beam. I was con-
stantly anticipating openings that didn't happen (WO2N). Perhaps if there had been more interest, I would have heard more stations (XE1VV). By Saturday night, I developed a headache from trying to pull S0 signals out of the noise (N2BIM). Most signals didn't move the S meter off the peg (WC9M). I've never operated this contest with sunspots, so it should be interesting when they return (N2MZH). If you can't hear 'em, you can't work 'em (N4MO). We up here in the North were up against heavy odds: winter here, summer elsewhere, and S9+ signals (OZ8T). I kept telling those darn kids not to leave the ionosphere door open, or they would let out all the propagation! (N3KFN). I felt like I was operating 70 cm , not 10 meters! (K3YD). Band conditions were terrible (N3NOP). The few contacts I could make were due to the good ears of the other operators (VU2UR). It was dead, dead and dead! (KC3Q). Except for a short time Saturday, I could only hear local stations (N3CZB). Even New Zealand had better conditions (VK2APK). There were a lot of signals that were too weak to identify (K9DIY).


Steve, KD6KKQ (I), takes a fine adjustment/alignment tool to the W6SD homebrew 10-meter beam, while Howard, K6QWH (r), assists.

Most of the stations I worked were from South America (WP4LNY). We had an amazingly strong opening to ZS on Saturday (WF3T). It was kind of like a VHF contest at times. The contest ended too soon, as the best Es of the contest was in full bloom at the end (K3ZO). There was only one hour of good propagation, but it wasn't to North America (EA6LP). Is VE3XO the only 10 -meter op in Canada? After hearing nothing west of the Rockies, I get a call from ZL2RR and about fall out of the chair! (N5OKR). I sure didn't have the luck I had last year (KC3PZ). Come back, sunspots! (AA3HM). I was thrilled to work South Africa on both modes (KB3AFT). The contest reminded me of Ivory Soap! I spent 99 and $44 / 100$ ths of my time listening to noise (KE3TA). By far, this was the worst propagation I have ever seen (AA4UF). The propagation was so good, I couldn't shake 'em with a stick! (KS4YT). What a bizarre contest! The propagation was abysmal, with spikes (KR4DL). Patience, persistence, and CW paid off! (N4ZC). This was a VHF contest, plain and simple (AA4NC). I was able to work 31 states and one province, great for the bottom of the sunspot cycle (ZL1ANJ). I sure got plenty of sleep! (NU4Y). It was amazing to work 5 X 4 F in the middle of 30 minutes of fruitless CQing (KS4KP). These were the worst $10-\mathrm{Meter}$ Contest conditions in over 30 years! I had 11 hours of hacking and 36 hours of TV and sleep! (K4VUD). It was a lonesome, fun, boring contest-Sunday was dead until the last hour (KN4AY). The best hour was the last one: I made 66 QSOs, 40 of them in the last half hour. I wonder how long that opening lasted after the contest? (AC1O). I never thought I'd be happy to work 14 countries on 10 meters before (WA6KUI). It was like pulling teeth, but it was a real demonstration of what you can do operating under adverse propagation conditions (AG4V). It was like a 6 -meter contest. The hardest multiplier to find was GW (GWØGEI). I did hear six states I needed, but not much DX! (K4UK). It sure would have been nice if we could have had an opening on Saturday (KE4PUC). The last 45 minutes were the best (N4MM). I thought the RSPCA was going to come to my door; after all, I had been beating a dead horse for hours (GØVSN). The band was only open from about 9:30 until 10:30 in the morning (W7YS). Saturday was better than Sunday (KA7T). I would have auctioned off the OM to get an opening to North America the way ZS did ( 9 K 2 YY ). The last four years, my score has slumped from 460 k to 175 k to 77 k to 8 k - that's pretty dramatic evidence of the sunspot cycle (WD7X). This was the third sunspot minimum since the contest started, and the worst conditions ever (W9XT). I spent too much time trying to get too few QSOs (KI7ST). I enjoyed the contest, but I wish the band would have been more open (NZ5O). Conditions weren't bad, there just wasn't any activity (K5YAA). Signals were hard to come by (AC5CB). Even the brief Es to New England didn't help. It seemed strange to hear the likes of 9J2 and FR5 almost begging for contacts! (WA5OYX). I lacked the patience to stick with it (W5ASP). The band went from bad to great to terrible (WB5UDX).


Scores
Scores are listed by DXCC Countries and ARRL/RAC Sections. Line scores list call sign, score, QSOs, multipliers, class ( $A=$ Mixed Mode, $B=$ Phone only, $C=C W$ only, $D=$ Multioperator), and power ( $A=$ QRP, $B=$ Low Power, $C=$ High Power). Division leaders are listed in bold.

$\begin{array}{lllll}\text { W3FV (+net) } & 22,540 & 159 & 46 & \mathrm{D} \\ \text { K3ANS ( }+ \text { net) } & 21,460 & 233 & 29 & \mathrm{D} \\ \text { N3KQH (+NUYY) }\end{array}$
 $\begin{array}{lrrrr}\text { N3BNA (+net) } & 10,528 & 105 & 28 & D \\ \text { N3FSC (+WB3GBN) } & & & \\ \text { K3CP (+net) } & 5,400 & 100 & 18 & D \\ \text { N3ISH (+nt) } & 3,104 & 73 & 16 & \text { D }\end{array}$ $\begin{array}{rrrrr}\text { N3ISH }(+ \text { net }) & 864 & 36 & 12 & D \\ \text { N3NOP }(+ \text { N } 3 \text { UMN }) \\ 600 & 50 & 6 & D\end{array}$


## Western Pennsylvania

 K3QKKB3A
ADBJ

| AD8J | 28 | 4 |
| :---: | :---: | :---: |
| WA3GQU | 24 |  |
| WBgWG/T | 32 |  |
| N3KEJ/T | 2,900 | 58 |
| KE3TA | 696 | 29 |
| KC60KU/3/T | 16 |  |
| Ni31 | 700 | 50 |
| K3UA | 208 | 13 |
| K3WWP | 88 | 10 |
| NB4J | 512 | 16 |

4

## $\begin{array}{lrrrr}\text { KN4aS } & 1,558 & 27 & 19 & \text { A } \\ \text { K4ZGB } & 35,640 & 238 & 60 & \text { A } \\ \text { AA4UF } & 26,000 & 224 & 40 & \text { A } \\ \text { N4YOS } & 20,824 & 152 & 38 & \text { A B } \\ \text { WZ4F } & 100,448 & 397 & 86 & \text { A } \\ \text { WA4UYW } & 8,400 & 105 & 40 & \text { B B } \\ \text { KSSYT } & 70 & 5 & \text { B B } \\ \text { AE4MU } & 5,252 & 101 & 26 & \text { B C } \\ \text { AE4JM } & 14,012 & 113 & 31 & C\end{array}$ <br> K4JYO (+net) <br> $\begin{array}{cccc}\text { KD4TT (+KK4TE), } \\ \text { 65, } \\ \text { KE4GHC }(+K T 4 D U) & 443 & 68 & D\end{array}$

| Georgia |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| AA4GA | 73,472 | 315 | 82 | A B |
| K4BAI | 12,210 | 95 | 37 | A B |
| WB1CTE | 8,520 | 74 | 35 | A B |
| K4PI | 16,716 | 111 | 42 | A |
| AD4PZ | 2,470 | 48 | 19 | A C |
| NH6SR | 5,840 | 146 | 20 | B B |
| KE4YXD/T | 2,360 | 59 | 20 | B B |
| KF4ABR | 1,484 | 53 | 14 | B |
| KQ4HC | 21,620 | 235 | 46 | B C |
| KM9P | 101,680 | 410 | 62 | C |
| KR4DL | 24,864 | 168 | 37 | C B |
| Kentucky |  |  |  |  |
| AL7L/4 | 3,360 | 42 | 20 | A B |
| K2YJL | 720 | 26 | 9 | A B |
| KC4WQ | 1,166 | 32 | 11 | A C |
| KI4DC | 1,326 | 51 | 13 | B B |
| N41YX | 3,358 | 73 | 23 | B C |
| N4XM | 108 | 9 | 3 | C C |
| N4GNL (+K | $\begin{array}{r} \text { (4DO) } \\ 26,784 \end{array}$ | 372 | 36 | D |
| North Carolina |  |  |  |  |
| N4ZC | 263,704 | 723 | 119 | A C |
| N42AK/T | 546 | 21 | 13 | B A |
| WA4ZXA | 5,640 | 94 | 30 | B B |
| KE4BKW/T | 1,480 | 37 | 20 | B B |
| WD4BMG | 512 | 32 | 8 | B B |
| KC4YM | 38,054 | 359 | 53 | B C |
| WIIHN | 1,920 | 40 | 12 | C B |
| B4HFL) |  |  |  |  |
| KD4WOE (KC4WLL,KD4AQY, KF4s BGP,CWZ,ops) |  |  |  |  |
|  | 1,410 | 47 | 15 | D |
| Northern Florida |  |  |  |  |
| NU4Y | 167,890 | 667 | 103 | A B |
| KD4YAR | 12,402 | 101 | 39 | $A B$ |
| KS4KP | 7,068 | 111 | 31 | $A B$ |
| KB4FOS | 5,936 | 96 | 28 | $A B$ |
| KE4MVK/T | 112 | 16 | 7 | B |
| AC4NJ (WC4E, op) |  |  |  |  |
|  | 248,148 | 820 | 113 | A C |
| KD4FG | 34,888 | 331 | 49 | A C |
| KC4WZR/T | 12,240 | 153 | 40 | 8 B |
| KQ4YY | 2,080 | 52 | 20 | B $B$ |
| W9CNF | 270 | 15 | 9 | B B |
| Kavud | 78,848 | 704 | 56 | BC |
| W4UEA | 5,040 | 90 | 28 | B C |
| W5HUQ | 56,000 | 280 | 50 | C B |
| KN4AY | 33,864 | 249 | 34 | C B |



## $\begin{array}{lrrrrr}\text { East Bay } & & & & & \\ \text { N6PDX } & 6,118 & 87 & 23 & \text { A B } \\ \text { K6AOM } & 5,544 & 117 & 18 & \text { A B } \\ \text { KG6LF } & 30,320 & 300 & 40 & \text { A } & C \\ \text { KI6OY } & 280 & 28 & 5 & \text { B B }\end{array}$ <br> $\begin{array}{lrrrrr}\text { Hawail } & & & & & \\ \text { NH6YK } & 1,870 & 84 & 11 & \text { A B } \\ \text { KH6CDO } & 72 & 9 & 4 & \text { B A } \\ \text { WH6CQH } & 11,774 & 203 & 29 & \text { B C }\end{array}$

## Los Angeles



## Santa Barbara

$\begin{array}{lrrrrr}\text { WA6FGV } & 16,112 & 123 & \mathbf{3 8} & \text { A A } \\ \text { W7CB/6 } & 17,876 & 136 & 41 & \text { A C } \\ \text { WA5VGI } & 3,584 & 56 & 16 & \text { C C } \\ \text { NTWLL (+KB6VME) } & & & & & \end{array}$

| N7WLL (+KB6VME) |  |  |  |
| ---: | ---: | ---: | ---: |
| 304 | 19 | 8 | D |

Santa Clara Valley
$\begin{array}{lrrrrr}\text { N6NF } & 31,762 & 296 & 42 & \text { A B } \\ \text { AA6MC } & 7,700 & 86 & 25 & \text { A B }\end{array}$
$\begin{array}{lrrrrr}\text { AA6MC } & 7,700 & 86 & 25 & \text { A B B } \\ \text { KB6RBW/N } & 2,700 & 73 & 15 & \text { A B } \\ \text { W6PLJ } & 1,872 & 52 & 13 & \text { A B } \\ \text { AB6YL } & 22,720 & 182 & 4 & 4 \text { A C } \\ \text { W6ISO } & 9,312 & 135 & 24 & \text { A C }\end{array}$

## Tennessee



## $\begin{array}{lrrrrl}\text { Arkansas } & & & & & \\ \text { N5XYN } & 462 & 21 & 11 & \text { B B } \\ \text { KC5PTF/T } & 360 & 18 & 10 & \text { B B } \\ \text { K5RO } & 24,402 & 249 & 49 & \text { B } & C \\ \text { AA5XQ } & 288 & 12 & 6 & \text { C } & \text { C }\end{array}$ <br> Louisiana

$\begin{array}{lrrrrr}\text { NZ5O } & 7,252 & 68 & 37 & \text { A B } \\ \text { AA5FJ } & 18,912 & 197 & 48 & \text { B B } \\ \text { KB4OGM } & 3,720 & 62 & 30 & \text { B B } \\ \text { N8RR } & \mathbf{2 4 , 3 0 0} & \mathbf{1 3 5} & \mathbf{4 5} & \text { C } & \text { C }\end{array}$

## Mississippi

| KA5GGJUT | 6,468 | 97 | 33 | A B |
| :--- | ---: | ---: | ---: | :--- | :--- |
| AB5YG | 121,030 | 496 | 95 | A |
| KC5KPP | 5,888 | 92 | 32 | B B |
| KJ5RC | 4,800 | 60 | 40 | B B |
| KB5ZKXTT | 3,300 | 55 | 30 | B B |

## New Mexico

## KB5TZJ North Texas

| K3ETS | 288 | 17 | 6 | A A |
| :---: | :---: | :---: | :---: | :---: |
| K5QY | 2,898 | 65 | 21 | A B |
| WK5K | 2,552 | 35 | 22 | A B |
| AA5U0 | 71,540 | 398 | 73 | A $\mathbf{C}$ |
| N5VAV | 9,106 | 157 | 29 | B |
| AB5ZR | 200 | 20 | 5 | B B |
| AB5ZS | 56 | 14 | 2 | B B |
| KC5ALW | 6,728 | 58 | 29 | C ${ }^{\text {B }}$ |
| W5F | 7,504 | 67 | 28 | C C |
| Oklahoma |  |  |  |  |
| K5YAA | 24,206 | 147 | 49 | A B |
| AC5CB | 576 | 17 | 12 | A B |
| N5RXF | 726 | 33 | 11 | B B |
| W5UIP | 432 | 27 | 8 | B B |
| KO9X |  |  |  |  |


$\begin{array}{lrrrrr}\text { KA7T } & 2,064 & 43 & 12 & \text { C B } \\ \text { WB5QMP } & 20 & 5 & 1 & \text { C B }\end{array}$
WE9A (+WD9HTC,WI9X)

| Indiana |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| AA9CG | 15,856 | 110 | 47 | A B |
| K9DIY | 156 | 8 | 6 | A C |
| N9XDS | 1,064 | 38 | 14 | B B |
| KA9CQC/T | 806 | 31 | 13 | B B |
| WD9ATUT | 80 | 8 | 5 | B B |
| KB@C | 2,250 | 45 | 25 | B C |
| N9XBM |  |  |  |  |
|  | 29,184 | 191 | 38 |  |
| WB6OLA 448167 C B |  |  |  |  |
| W9OEH (+WA8JOC, WD8SDL) |  |  |  |  |
| N9QX (+KE91) |  |  |  |  |


| Wisconsin |  |  |  |
| :---: | :---: | :---: | :---: |
| N9NE | 2,520 | 40 | 18 A A |
| N9NUN/T | 5,984 | 86 | 34 A B |
| KG9DO | 912 | 36 | 12 A B |
| W9XT | 99,120 | 415 | 84 A C |
| AA9BJ | 1,272 | 32 | 12 AC |
| N91SN | 16,926 | 217 | 39 B B |
| WB9PUB/T | 2,814 | 67 | 21 B B |
| K9WTF | 230 | 23 | 5 B B |
| KA9JBD/T | 140 | 14 | 5 B B |
| KB9KIT/T | 112 | 14 | 4 B B |
| K90SH | 1,664 |  | 13 CC |

Colorad

$\begin{array}{llll}\text { K KøGAS (+KJøG) } \\ 6,664 & 72 & 34\end{array}$
low

| WN0G | 2,304 | 58 | 18 | A |
| :---: | :---: | :---: | :---: | :---: |
| WDøGVY | 1,092 | 27 | 13 | A |
| KBOTUI/T | 400 | 22 | 8 | A |
| NC®P | 146,004 | 473 | 102 |  |
| WøPPF | 580 | 29 | 10 |  |
| Kansas |  |  |  |  |
| WBøYJT | 5,610 | 58 | 33 |  |
| K0BJ | 1,440 | 29 | 15 | A |
| KAøSIX | 988 | 23 | 13 | A |
| KøWUI | 12,232 | 139 | 44 | B |
| NØYYO/ | 3,360 | 56 | 30 | B |
| KF®M | 780 | 26 | 15 | B |
| ØSPF | 520 | 20 | 13 | B |
| KøIEW | 176 | 11 | 8 | B |
| WIOR | 1,144 | 22 | 13 | C |
| NOøY |  |  |  |  |
| $\begin{array}{rlrl}\text { KBGISS (+KøVXUU,KC6EI,KGGUA) } \\ \mathbf{3 6 , 6 9 8} & 187 & 59\end{array}$ |  |  |  |  |
|  |  |  |  |  |
| Minnesota |  |  |  |  |
| Kort | 107,532 | 500 | 87 |  |
| AC®W | 8,384 | 131 | 32 | B |
| WAøRPI | 104 | 13 | 2 |  |
| KRøB (AF9T,KA@JZV,KBøKQA, |  |  |  |  |
|  | 71,292 | 330 | 78 | D |
| NøAT (+net) | 224 | 10 | 7 | D |
| Missouri |  |  |  |  |
| Wagx | 28,106 | 276 | 47 |  |
| KC0CL | 1,690 | 35 | 13 | A |
| WB4RDV | 12 | 2 |  | A |
| N8ZR/6 | 80 | 8 | 5 | B |
| WB6GFV/T | 1,216 | 32 | 19 | B |
| N®EID | 96 | 7 | 3 | C |
| KSøM | 1,456 | 26 | 14 | C |
| AAGNB | 140 | 7 | 5 | C |
| KøRWL | 21,128 | 139 | 38 | C |
| K4VX | 10,200 | 102 | 25 | C |

## Nebraska

$\begin{array}{llllll}\text { NøLAQ } & 132 & 9 & 6 & \text { A B } \\ \begin{array}{l}\text { South } \\ \text { WDGT }\end{array} & 56,560 & 287 & 70 & \text { A C }\end{array}$
VE
New Brunswick
VE9DXR $8 \quad 2$ B B
Nova Scotia
$\begin{array}{lrrrrr}\text { VX1CZ } & 6,768 & 62 & 36 & \text { A B } \\ \text { VE1RAA } & 18,180 & 202 & 45 & \text { B C }\end{array}$
Ontario
$\begin{array}{lrrrrr}\text { VE3OIL } & 3 & 3,080 & 54 & 22 & \text { A B } \\ \text { VE3EJ } & 33,976 & 182 & 62 & \text { A } C \\ \text { VE3HX } & 3,128 & 46 & 17 & \text { C B } \\ \text { VE3VFR } & 39,856 & 212 & 47 & \text { C } \\ \text { VE3KP } & 18,648 & 126 & 37 & \text { C } \\ \text { VE3XO } & \\ \text { (+ } & \end{array}$
VE3XO (+VE3s HO,MM, MV,WHE)
131,906 481
111
$\begin{array}{cccc} & 131,906 & 481 & 111 \\ \text { VE3ODX (VA3ACK, VE3SRE,OPs) } \\ & 812 & 43 & 7 \\ \text { VE3ZTH } & & 8\end{array}$
Alberta
$\begin{array}{llll}\text { VE6FR } & 224 & 15 & 7 \\ \text { A B }\end{array}$
British Columbia
$\begin{array}{llllll}\text { VE7XF } & 1,008 & 24 & 14 & \text { A B } \\ \text { VE7XO } & 660 & 33 & 10 & \text { B } \\ \text { VE7FJE } & 2,640 & 60 & 11 & \text { C B } \\ \text { VE7DVV } & 1,364 & 30 & 11 & \text { C B }\end{array}$
Marine Moblle
$\begin{array}{llll}\text { K5LZO } & 2,660 & 46 & 19\end{array}$
Checklogs
EA3AMV, EA5VG, K1ZZ, KC4KFT
ZS6AJS.

