



# ARRL International DX Contest - CW 2015 Results

By Kelly Taylor, VE4XT, [ve4xt@mymts.net](mailto:ve4xt@mymts.net)

***The snow in the US changed the object of this contest from digging out weak ones to just plain digging out.***

A massive snowstorm blanketed the northeastern United States over the weekend of February 21 and 22, laying waste to many well-laid contesting plans. Jeff, K1ZM, had planned to travel to Prince Edward Island to activate VY2ZM, but the weather had other ideas. Airports were closed, parking was banned, and forget about taking the bridge across the Northumberland Strait.

“The snow drifts were 15 to 18 feet in the capital (Charlottetown), and all parking was banned for days while they tried to find a place for the snow,” Jeff said. “My biggest surprise was hearing VY2TT on the air. I guess Ken, K6LA, managed to fly in between the storms, and his station is only a short walk from the road.”

While Jeff’s plans didn’t work out, his operation at home did, claiming a win, and a record, in the W/VE Single Operator, Low Power category.

## Snowy Struggles

Ken, K6LA, meanwhile, said getting to the end of his street wasn’t a problem, if you don’t consider landing at 2 AM with a 1 hour and 15-minute drive remaining a problem. All was good, except for the last few hundred feet, when he discovered his street wasn’t plowed.

“I started hiking through the snow. It was only about 100 yards, but it took 20 minutes because I kept falling into the snow. Finally, I crawled most of the way and there was a thin crust of frozen snow that I could stay on top of,” Ken said.

Kudos to Paul, K1XM, who humbly offered this quote: “The snow played a big part in people’s plans for the ARRL contests in W1 land this year. For me, that is a bigger story than what K1XM and KQ1F did.”

What Paul and Charlotte did, however, was win, for W and VE, the Multi-single, Low Power category and set a record for W/VE. But even they weren’t immune to Mother Nature at their location not far from Boston.

“We spent several hours Saturday shoveling snow off the roof,” Paul said. Then he had to fix the rotator that half died on Friday. “I opened the rotator control box and

found the problem was with the rotator itself or with the wiring on the tower. So I disabled the stops and ran the rotator until the top antennas were pointed at Europe and left it that way. We lost some Caribbean and Pacific multipliers because of this.”

For Dave, N1IX, winner of the W/VE Single Operator QRP category, the snow added a fair bit of work to the task of diagnosing a wonky 80 meter antenna.

“With each snowfall, a little bit more weight pulled on my coax connections,” Dave wrote. “Saturday night, I was getting a very high SWR on my 80 meter antenna. I had to snowblow a path out to the shed that houses the remote antenna switch. Fortunately, I only had to reseal the PL-259 connector.”

Dave said he had some of the best runs ever while QRP, even if the conditions seemed a bit down.



*US, here we come – no snow static here! The antennas at ZF1A firing toward the US from the Cayman Islands. (Photo courtesy ZF1A team)*

## Records, records, records

This was quite the year for records. According to recordmeister Bob, K3PH, records were set in Antarctica in Single Operator Low Power (RI1ANZ (RW6ACM, op.)) and in Single Operator Assisted High Power (DP1POL (DL5XL, op)) and in South America in Single Operator 20 Meters (FY5KE (F6FVY, op)) and Multi-Operator Two Transmitter (PJ4X).

Two records were set in North America, including by ZF1A in Multi-Single High Power and V26M (N3AD, op.) in Single Operator High Power. CR2X (OH2PM, op.) set the European record for Single Operator 20 meters, while ZM2IO (ZL3IO, op.) set the Oceanic record in Single Operator Assisted Low Power. In Africa, CN8KD is the new record-holder in Single Operator Assisted Low Power. Two records also fell in Asia, with RTØF taking the Multi-Operator Two Transmitter record and JA3YBK setting the Multi-operator Unlimited record.

On the W/VE side, 32 records were set, notably by Ron, VE3VN, for VE in Single Operator QRP with just more than a million points, KØRF takes the record for W0 in Multi-Operator Two Transmitter, while Bud, AA3B, rocketed to the new W2 Single Operator Assisted High Power record with nearly eight million points, demolishing a record that had stood since 2001. Steve, N2IC, similarly destroyed the K5 Single Operator Assisted High Power record with just more than seven million points.

Given that geographic disparity can dramatically lower expectations, these smaller regional battles are not to be discounted. For operators who know, for example, the Black Hole or New Mexico can't hold a ¼-watt resistor to the Eastern Seaboard, winning a regional competition and setting a record is no less of a victory. The included table lists the remainder of these impressive performances.

### New Records Set in 2015

Cont	Call	Score	Category
AN	RI1ANZ (RW6ACM, op)	45,384	SOLP
EU	CR2X (OH2PM, op)	379,800	SOSB-20
SA	FY5KE (F6FVY, op)	397,980	SOSB-20
AN	DP1POL (DL5XL, op)	353,142	SOUHP
NA	V26M (N3AD, op)	5,119,752	SOUHP
AF	CN8KD	986,328	SOULP
OC	ZM2IO (ZL3IO, op)	463,905	SOULP
NA	ZF1A	7,408,452	MSH
AS	RTØF	2,713,215	M2
SA	PJ4X	8,638,215	M2
AS	JA3YBK	3,771,885	MM

District	Call	Score	Category
7	N9RV	5,471,280	SOHP
1	K1ZM	5,155,248	SOLP
5	N5AW	3,644,865	SOLP
9	N4TZ	3,264,765	SOLP
8	KE8M	793,968	SQRP
VE	VE3VN	1,062,990	SQRP
3	NY3A	678,252	SOSB-15
4	K3RV	714,015	SOSB-15
6	W6YA	508,482	SOSB-15
0	KØDU (KØCL, op)	336,735	SOSB-40

2	AB3CX	5,884,707	SOUHP
3	AA3B	7,943,832	SOUHP
4	NQ4I (VE7ZO, op)	6,017,334	SOUHP
5	N2IC	7,244,160	SOUHP
8	W8MJ	4,081,194	SOUHP
0	KØEU	4,941,918	SOUHP
1	N1EN	2,705,526	SOULP
3	KB3WD	2,906,028	SOULP
6	W6AWW	556,920	SOULP
9	W9PA	2,304,159	SOULP
VE	VA3DF	2,278,068	SOULP
2	W2FU	10,091,928	MSH
5	K5TR	6,133,056	MSH
6	W6XB	2,719,080	MSH
1	K1XM	3,263,382	MSL
2	N2WKS	2,990,016	MSL
5	N5DO	2,172,576	MSL
0	KØUK	1,296,792	MSL
VE	VE9ML	2,501,730	MSL
9	K9CT	11,084,400	M2
0	KØRF	10,151,295	M2
0	NØNI	11,490,840	MM

### Warmer Climates

Gerry, W1VE, had the perfect antidote to the killer storm: go somewhere else. He scurried off to Aruba with Andy, K2LE, to win the DX Multi-Single, Low Power crown from P4ØLE, activating the former P49V made famous by the late Carl Cook, AI6V.

That was pretty much the case on the DX side, where, if the winners had snow to deal with, we'd have had much more of a problem than who won a radio contest. All but three winners were located in either the Caribbean or Central America.



Andy, K2LE, (left) and Gerry, W1VE, operated as P4ØLE from the famous P49V station, winning the Multi-Single, Low Power category. (Photo from W1VE)

At PJ4X, news of their status as the DX winner of the Multi-Two category came as a bit of a surprise. Marty, W1MD, said they were convinced TI5W was pulling away from them.

“At the end of the contest, we thought we were about 25,000 points, or 20 QSOs and one multiplier, behind the TI5 crew. Was it accuracy?” Marty wondered

Nope. Just plain brute force. While they did finish six multipliers behind TI5W, they had 180 more QSOs. “Wow, QSOs are king,” Marty wrote after being told the score breakdown. Imagine how happy they’ll be to learn they now hold the South American, Multi-Two record.

For PJ4X, 20 Meters and 10 Meters made all the difference. They were beat by TI5W on all other bands, but nearly 300 more 10 Meter QSOs and more than 200 more 20 Meter QSOs spelled victory.



Left-to-right at PJ4X are Hans, PJ4LS; Bob, WA1Z, and Marty, W1MD. Although neck-and-neck with TI5W, they prevailed with a narrow victory in the Multi-Two category. (Photo courtesy of the PJ4X team)

“One thing I can for sure say is we had a very diverse group, with Martin, G4XUM, from the UK; Hans, PJ4LS, as a ‘local’ on PJ4, and the rest of us from various locations in the US,” he said. “There was no one shining star, but rather the team clicked well together considering we were a new ‘pick-up’ bunch. This was a great group of guys who all chipped in and performed at the top levels of radiosporting competition.”

Yuri, VE3DZ, had his own little getaway, to Jamaica as 6Y2T. Using a Kenwood TS 590S, Yaesu FT 1000 MP, a pair of amplifiers and a tri-band quad and wire low-band verticals as well as single-band vertical dipoles for the second radio, he was all set to score highly, till a tinge of illness set in and caused him to almost pull the plug Saturday afternoon.

“But I managed to stay in the chair until the end,” he said. “I believe I slept a couple of hours. Moved a lot of rare states, as usual. Otherwise, there was nothing really special.” Most readers would beg to disagree on the “special” part, since Yuri’s perseverance scored him a win in the Single Operator, High Power category with 6,351,696 points.

The low bands were a high point for Yuri. His 483 QSOs and 55 mults on 160 and 656 QSOs and 58 mults on 80 were the highest of any Single Operator.

## The Golden Logs

Accuracy in contesting is critical to performance, and it’s not uncommon for an error rate to be the difference between winning and losing. While it’s extremely difficult to maintain a zero error rate for the duration of the contest, a few logs stand out for praise.

Congrats to WJ9B, whose 2,242,755 points were the most of anyone in the contest, DX or W/VE, to come with a zero error rate. That’s 2,485 QSOs without a hitch. Congratulations! On the DX side, DL5WS had the highest combination of score and zero error rate with 343,908 points.

## Top Golden Logs - 0% Detected Errors

Call	Score	QSOs	Mults	Category
WJ9B	2,482,515	2485	333	SOHP
WG3J	1,876,464	1328	471	M2
N7IR	680,625	825	275	SOQRP
K8LY	635,628	658	322	SOULP
K5LY	375,564	526	238	SOLP
WA2JQK	477,225	525	303	SOLP
W7MEM	325,710	517	210	SOHP
AK7O	217,092	458	158	SOLP
K3GW	124,128	431	96	SO-20
K4MX	260,796	422	206	SOLP
NW3H	355,320	420	282	SOLP
K4YND	259,200	400	216	SOUQRP

Among the category winners, a low error rate was common. The category winners with the lowest error rates on the W/VE side were K1XM in Multi-Single Low Power and Andy, N2NT, in Single Operator High Power, each with a one per cent rate and on the DX side, Yuri, VE3DZ (as 6Y2T) in Single Operator High Power and Will, AA4NC (as HR2J) in Single Operator Assisted Low Power were tied, each with a 0.5 per cent error rate.

Other noteworthy error rates include K9CT in Multi-Two (1.1 per cent) W2FU in Multi-Single High Power and K3LR and W3LPL in Multi-Multi (1.5 per cent) and Dave, K1ZZ (No. 2 in Single Operator High Power) at 0.5 per cent. On the DX side, kudos to Multi-Two winner PJ4X (0.7 per cent) and Multi-Two runner-up TI5W (0.4 per cent). Also worthy of praise are ZF1A (Multi-Single High Power winner) at 0.6 per cent and Single Operator High Power runner-up CR3A (OM3RM, op.) at 0.7 per cent.

Gary, N7IR, had an impressive 825 QSOs and 273 multipliers with a zero per cent error rate... in QRP!

**Top Ten – US & Canada, Single-Op***Single Operator, High Power*

N2NT	6,531,390
K1ZZ	6,433,392
VY2TT	5,949,420
N1UR	5,898,495
N9RV	5,471,280
AA1K	5,406,840
N1RR ( @ K6ND)	5,258,964
K1TO	5,187,492
WXØB (AD5Q, op)	5,140,251
N4AF	5,037,390

*Single Operator, Low Power*

K1ZM	5,155,248
W1UE	4,332,825
N5AW	3,644,865
N4TZ	3,264,765
NA8V	3,186,522
N4YDU	2,838,924
WØUO	2,296,140
K5KU	2,155,740
K2TTM	1,777,662
K1VSJ	1,763,775

*Single Operator, QRP*

N1IX	1,206,408
VE3VN	1,062,990
VE3KI	1,040,910
W9WI	1,029,510
KE8M	793,968
N7IR	675,675
W6JTI	597,513
NØKE	520,290
AA1CA	509,640
N1TM	480,768

*Single Operator Unlimited, High Power*

KØDQ	8,547,984
AA3B	7,943,832
K3WW	7,303,296
N2IC	7,244,160
NQ4I (VE7ZO, op)	6,017,334
AB3CX	5,884,707
VA2WA	5,768,343
N3RS	5,755,932
W1/SP4Z	5,677,872
KØEU	4,941,918

*Single Operator Unlimited, Low Power*

KB3WD	2,906,028
W3KB	2,807,664
N1EN	2,705,526
W1MSW	2,537,076
WD4AHZ	2,482,146
W9PA	2,304,159
VA3DF	2,278,068
W1NT	2,037,501
K9PG	1,336,440
K6WSC	1,335,780

**Top Ten – US & Canada, Single-Band***Single Operator, 160 Meters*

W4ZV	33,453
N4XD	20,829
N7GP	11,685
W2VO	9,636
KM1R	8,256
NØTT	6,549
K4EJQ	6,372
W2MF	5,148
VE3OSZ	4,185
WD5R (N5ECT, op)	1,944

*Single Operator, 80 Meters*

W3BGN	156,657
VE3PN	74,088
K4FJ	67,890
W4PK	66,330
K3PA	61,128
K3JGJ	55,632
N5FO	50,286
VE1ZA	44,370
KØKT	33,408
W4DD	24,576

*Single Operator, 40 Meters*

KØDU (KØCL, op)	336,735
K9OM	317,775
W7WA	308,508
K7NJ	271,539
WA6O ( @ N6RO)	246,132
K9NR	203,148
W2EG	181,920
N7WA	147,609
W1XX	127,224
WA1FCN	117,000

*Single Operator, 20 Meters*

W8TA	439,815
K7KU (KØKR, op)	341,952
NR6O (DL8CA, op @ N6RO)	335,808
K3GW	122,835
AA6KJ	100,725
NF8R	72,708
KØPK	65,520
K4TRH	59,961
N9XX	59,736
W8GOC	53,130

*Single Operator, 15 Meters*

K3RV	714,015
NY3A	678,252
KU2M	643,830
N1LN	520,026
N5RZ	511,830
W6YA	508,482
K4OAQ	431,055
W2UP	404,766
W5WMU	399,048
N7CW	391,152



<i>Single Operator, 10 Meters</i>	
K2SSS	441,288
KD2RD	361,080
N4ZZ	360,360
AA5AU	262,818
W3EP	243,390
N4TB	223,488
K7BG	216,600
N7DR	201,717
K5ZO	165,087
KTØK	152,607

## The Bell-Ringers

Back in the land of the free, the crew at K9CT is celebrating its win in the W/VE Multi-Two category, a hard-fought battle considering the location — Trivoli, Illinois.

“Fortunately, it is a competitive, state-of-the-art contest station,” wrote Bill, K3WA, one of the operators. “Unfortunately, it is located in the epicenter of the Black Hole, the place where RF goes to die.”

The crew has been at this a while, with host Craig, K9CT; Ryan, KB9OWD; two Steves (N5AC and N9CK); Ralph, K9ZO; Jim, N9TK, and Bill, K3WA, getting quite familiar with the station.

The four Elecraft K3s, two Alpha 87s, five-element 160 meter array, 80 meter foursquare, stacked 4/4 on 40 meters, 6/6/6 on 20 meters, 7/7/7 on 15, and 8/8/8 on 10 helped, but what Bill pointed to as a key piece of technology dates back centuries: a simple bell.

“Like many multiop teams, we announce working a new mult by ringing a bell,” Bill wrote. “On Sunday afternoons, we accompany the bell ringing with a round of applause. And the ops at K9CT kept applauding and applauding while keeping their runs going.

“The bell goes on 24 hours a day for the contest,” Bill said. It is a happy sound that we all respond to, even during sleep periods.”

### Maximum Multipliers Worked per Band

<i>Band</i>	<i>Call</i>	<i>Mults</i>
160	WE3C	71
80	K3LR	102
40	K3LR	127
20	W3LPL	136
15	K3LR	138
10	K3LR	124



Behind those big antennas seen in the photo of ZF1A on page 1 are the ZF1A team of (left-to-right) Kevin, N5DX; John, K6AM; Dan, N6MJ; and Andrew, ZF1EJ. (Photo courtesy of the ZF1A team)

John, K6AM, admits to being ready to give up trying to work a 48-hour contest solo. So, he assembled a dream team and headed to the Cayman Islands. There, ZF1A won the DX Multi-Single, High Power category. The team consisted of no less than reigning WRTC champ Dan, N6MJ, while another op was Dan’s runner-up, Kevin, N5DX, and, of course, John. They were set to “take an all-out assault on the multi-single record.”

“Conditions were just fantastic,” John wrote. “All bands were quiet and signals were very loud. I got the feeling we were loud, too. We set a goal of 7000 QSOs, 350 multipliers, and 7.5 million points. The contest ended about five minutes too soon.” Still, their 6939 QSOs and 358 multipliers were good for the record, with 7.4 million points.

### A Worthwhile Risk

The battle of the titans, the granddaddy of all categories, Multi-Multi, on the W/VE side, at least, often falls to the Maryland powerhouse, W3LPL. But Tim, K3LR, as always, was ready for the challenge, even taking a risk by dropping a new radio on the boys just as the contest was starting.

That new radio was an Icom IC-7850. “So there was some risk on 20, with the new radio. The IC-7850 worked flawlessly and provided an advantage with its narrow roofing filter and clean transmit, which helps with two-radio sharing,” Tim wrote.

Behind that IC-7850, and multiple IC-7800s, an IC-7700, and several 8877 single-band amplifiers, was an impressive crew, comprising John, VE3EJ; Greg, N3SD; Doug, K1DG; Ward, NØAX; Bob, W5OV; Lali, VE3NE; George, N3GJ; John, N2NC; Phil, K3UA, Bill, W2RQ, and Ed, VE3RA.

“Still, it’s 48 hours in the hyper-competitive Multi-Multi category — anything can happen,” Tim wrote.

Like the stations to the east, the snowstorm was also a factor, with both W3LPL and K3LR hammered by snow static. “The noise blankers were out in force!”

In the end, K3LR outlasted W3LPL by nearly 300 QSOs and 11 multipliers for the win. Nipping on the heels of W3LPL were the operators at WE3C, who were less than 200 QSOs behind. They were edged out by ’LPL on 80, 40, 20 and 15, but nearly overcame the gap on 160 and 10, where they outscored ’LPL by nearly 200 QSOs.

K3LR’s counterpart, the DX winner of the Multi-Multi category, was the crew at PJ2T. It wasn’t even close: PJ2T beat KH6LC by nearly 2,000 QSOs and by 13 multipliers. There’s a lot to be said for proximity. KH6LC did well, however, to edge ahead of 9A1A and IR1Y for second place. For KH6LC, it was 40, 20 and 10 Meters that put them in second.

The crew at W2FU was thrilled to set a record in the Multi-Operator, Single-Transmitter, High Power category. Their 10,091,928 points came courtesy 5,655 QSOs and 602 multipliers.

“This group of ops has been together for a number of years now, and they continue to get better every year at working together as a real team and putting up great scores from our location here in Western New York,” wrote Jeff, W2FU. “We are truly proud to bring home the M/S plaque this year.”

Forty meters to 15 meters were the money bands for W2FU, with 1,200 or more QSOs on each band and nearly 1,000 on 10. But they proved the value of mining every multiplier you can find, with an impressive 54 mults on 160 meters and 87 on 80.

### **Top Ten – US & Canada, Multioperator**

*Multioperator Single Transmitter, High Power*

W2FU	10,091,928
K1LZ	9,549,672
K5TR	6,133,056
K2QMF	6,079,797
K3PH	4,700,178
K5RX	3,844,992
W2XL	3,742,260
W8TK	3,517,212
K6LL	3,457,098
K1HI	3,178,182

<i>Multioperator Single Transmitter, Low Power</i>	
K1XM	3,263,382
N2WKS	2,990,016
VE9ML	2,501,730
N5DO	2,172,576
KØUK	1,296,792
W3HAC	549,504
VA7DZ	256,272
KA9VVQ	32,004
KB5ENP	11,766
K6III	10,716

<i>Multioperator, Two Transmitter</i>	
K9CT	11,084,400
K8AZ	10,245,528
KØRF	10,151,295
WK1Q (@ K1TTT)	8,787,483
WW4LL	8,331,867
W5RU	7,356,456
KB1H	5,383,680
W2CG	5,181,891
K4TCG	4,922,268
K2AX	4,450,446

<i>Multioperator, Unlimited Transmitter</i>	
K3LR	18,276,027
W3LPL	17,410,140
WE3C	16,787,709
NR4M	13,998,360
N4WW	13,568,670
NØNI	11,490,840
W4RM	11,179,332
WØAIH	9,841,842
K1KI	7,310,544
K3TN	6,759,792

### **Visits from Mr Murphy**

Down in Belize, the Single Op, Low Power DX winner had a number of issues to deal with, not the least of which was not operating in his usual category of Multi-Single. Rob, K5PI, didn’t let other plans by John, WCØW, and Mark, AG9A, stop him from heading to his haunt on the border with Guatemala and building, by himself, this year’s V31AT.

“We’ve got a good system to set up our antennas in pretty short order, but this year, it was just me (and some hotel staff), Rob wrote. “So over the course of 3 days, I put up the A3S tribander, 80/40 inverted V and a 160 meter inverted L (a modified Butternut HF2V). I brought my K3 and used a TS-690 as a second radio.”

Of course, Murphy will find you, even if you’re out of the way in the wilds of Belize. If anyone wondered

where Rob went in mid-exchange, his switching power supply had its own ideas of when to start up and when to shut down. “The other big disappointment was my brand-new triplexer, which failed a half-hour before the start of the contest.

“I had to rethink my antenna strategy, but I pressed the 40/80 antenna into service on 10/15/20 on the second radio, and it seemed to work reasonably well,” Rob said.



*Dave, N1IX, won the W/VE Single Operator, QRP category despite the bad weather conditions in the northeast. (Photo by N1IX)*

## The New England Nightmare

If K9CT has the Black Hole, Scott, KØDQ, had the “New England Nightmare.” Scott had a good outing for the first ARRL DX he’s done since turning 70, but he, too, had to contend with the snowstorm. He played at the home of Paul, K8PO, in southern Maine.

“Stations farther south are working Europe but we can’t hear them in New England (or at least in Maine),” he explained. “That happened this year, most notably on 10 meters Saturday morning and again Sunday morning on 20, where openings for us were significantly delayed.”

“I managed to sneak into the Portland (Maine) airport and arrive at Paul’s Thursday afternoon, between two major storms,” he wrote. “There was a foot of snow in his driveway on Monday as I left.

“The weather had also done some significant antenna damage earlier in the winter with a major ice storm breaking off the tips of several of the parasitic elements.”

How’d he do as a newly minted septuagenarian? How’s being the W/VE winner of the Single Operator Unlimited, High Power category sound?

“The fact you can participate and remain competitive in a

sport from pre-teenager years into your eighth decade is a wonderful thing and fairly rare in any sport,” Scott commented.

So while he won the category (last year he was narrowly beaten by KI1G), he fell short of the Unlimited record. Though he calls himself a “dyed-in-the-wool unassisted operator,” he said he actually enjoys operating Unlimited, particularly with his new skills at using the Reverse Beacon Network (RBN).

“It was less stressful, especially on Sunday afternoon. Concerns over being on the wrong band or missing a rare mult are significantly reduced with the RBN data in front of you. And, I took off four hours and didn’t feel guilty.”

His strategy to choose assisted this year is evident in the distribution of QSOs, with an impressive 111 Qs and 56 multipliers on 160, 478 Qs and 77 mults on 80 and fairly even distribution of QSOs among the remaining bands. Making hay when the sun shines is key to contesting, and with assisted, you know exactly where Old Sol is shining.



*Jean-Robert, HH2JR, struggled to keep the generator working throughout the contest at 4V1JR. [Dale Long, N3BNA, photo]*

## An Unexpected Victory

Never give up. That’s the lesson from Will, AA4NC, who, as HR2J, won the DX Single Operator Unlimited, Low Power category. “Winning this contest was completely unexpected, because I did not get to operate the last 10 hours of the contest on Sunday due to equipment failure,” Will wrote.

Though he had two radios (an Elecraft K3 and a Kenwood TS-440) and several power supplies, when the second supply died, it “let the smoke out” of the K3, rendering it inoperable. No problem, fire up the Kenwood, he thought. Except there was no computer-

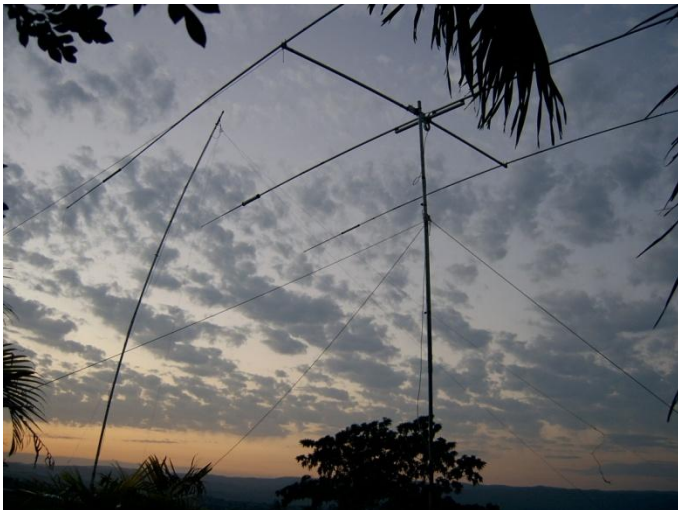


keying interface. So, he struggled through several QSOs using a Bencher paddle as a straight key before packing it in and exploring the Honduran mountains.

The technical issues leave open the question of what might have been. His 3,316 QSOs just edged second-place NP2P's 3,298, but were they on pace to break the North American Single Operator Assisted Low record? That record, by the way, is held by none other than AA4NC. He set it from V31RR in 2011. He would have had to average 187 QSOs per hour to beat his record.

From this, he's got two lessons: Always prepare all your equipment before the contest, and, to his competitors, never give up when you think you're behind, "because you can never tell when their radio may go down in flames!"

His counterpart from W/VE was Vitaly, KB3WD, whose 2796 QSOs and 356 multipliers held up as the winner. While he soundly trounced runner-up Keith, W3KB, in QSOs, Keith's 464 multipliers put him within 100,000 points of winning. With the extra multipliers, Keith was 71 QSOs away from victory. Keith also gets a congrats for a 0.4 per cent error rate. Well done!



*Wouldn't you like to have this view of the antenna farm during next year's contest? Rob, K5PI, built this V31AT antenna farm to win the DX Single-Op, Low Power category. (Photo by K5PI)*

## Ready for Next Year?

Check those rotators, get the snow shovels handy, make sure you can key all your radios, and join the fun next year. The 2016 ARRL DX CW contest takes place February 20 and 21.



## Top Ten – DX, Single Operator

### Single Operator, High Power

6Y2T (VE3DZ, op)	6,351,696
CR3A (OM3RM, op)	5,436,675
YW4D (YV1DIG, op)	4,571,847
CR6K (CT1ILT, op)	4,514,940
NP2N (W2VJN, op)	4,312,203
E7DX (E77DX, op)	3,848,022
G4A (G4TSH, op)	3,466,053
FM5BH	3,418,680
GM7R (GMØNAI, op)	3,404,940
EA6URA (EA3AIR, op)	3,337,686

### Single Operator, Low Power

V31AT (K5PI, op)	4,865,205
VP9/W6PH	4,202,388
HI3K	3,941,595
CT3EE (OM3GI, op)	3,631,878
EF8R (EA8RM, op)	2,946,216
HC1WDT (WØOR, op)	2,729,100
OE3K (OM7JG, op)	1,990,170
D44EE (OZ1BII, op)	1,740,942
DL1IAO	1,730,040
CO8DM	1,699,500

### Single Operator, QRP

GJ2A (MJØASP, op)	1,093,935
F/E72T	641,556
OA4SS	494,079
G3SXW	323,664
HB9BMY	319,218
JH1OGC	240,345
HG3M (HA3MY, op)	223,146
OK2FD	207,438
LZ2RS	197,925
DM2M (DK3WE, op)	196,650

### Single Operator Unlimited, High Power

V26M (N3AD, op)	5,119,752
SP7GIQ	3,177,000
S5ØA	3,057,873
EF7T (EA7OT, op)	2,540,160
UA2F (UA2FB, op)	2,448,600
S57AL	2,387,385
UW2M (UR0MC, op)	2,154,450
S59ABC (S51DS, op)	2,032,512
DL2CC	2,022,111
HB9FAP	1,960,560

### Single Operator Unlimited, Low Power

HR2J (AA4NC, op)	3,146,292
NP2P (N2TTA, op)	3,083,328
CO8ZZ	2,278,248
PJ7/WJ2O	2,103,672
II9P (IZ8JAI, op)	1,725,621
EC4TA	1,393,902
HI3TT	1,375,170
PY1NX	1,353,000
F4DXW	1,312,479
PJ7AA	1,303,560

## Top Ten – DX, Single Band

### Single Operator, 160 Meters

C6AKQ (N4BP, op)	113,274
V31YN (DJ4KW, op)	39,744
HK1MW	37,356
9A2NA	30,666
HA8A (HA8DZ, op)	20,160
YUØT	17,139
DJØMDR	15,552
M5O (G3LET, op)	15,198
JA8NFV	2,544
HI3LFE	2,139

### Single Operator, 80 Meters

XE2X	168,258
DL3DXX	99,216
IK2CLB	78,351
YTØA (YU1XX, op)	67,320
OK2EW	58,752
OM2Y	57,405
Z35T	50,181
YT4A	45,924
ON7EH	33,744
KH6/WB4JTT	26,208

### Single Operator, 40 Meters

HK1R	308,700
C6AWW (NX4N, op)	292,320
4O/E77W	234,000
S5ØC (S53RM, op)	215,940
S52AW	211,869
S57Z	201,426
S51YI	198,360
YT7A (YU7DW, op)	193,320
SN3A (SP3HLM, op)	188,613
9A2L (9A2VJ, op)	163,515

### Single Operator, 20 Meters

FY5KE (F6FVY, op)	397,980
CR2X (OH2PM, op)	379,800
CS2C (OK1RF, op)	339,840
TMSY (F8DBF, op)	329,580
OH8L (OH8LQ, op)	295,911
MM3T (GMØELP, op)	228,420
OL6P	214,020
CO8CY	187,266
YT1X	169,560
DK3QZ	151,740

### Single Operator, 15 Meters

SJ2W (SM2LIY, op)	348,120
TM6M (F1AKK, op)	320,067
F6ARC	316,041
9A5X	242,841
CO8LY	240,189
DR4A (DL6WT, op)	226,371
SN8B (SP8CUR, op)	205,692
NH2DX (KG6DX, op)	204,612
MM2N (MM0GPZ, op)	204,300
OH6AC (OH6CS, op)	201,666

Single Operator, 10 Meters

LO5D (LU8EOT, op)	276,660
YV1KK	217,440
PY2MC	186,048
C6AUM (K4RUM, op)	163,725
DK3T (DK3DM, op)	145,365
JA1BPA	143,982
LW8DQ	143,640
9A3TR	143,046
JG1ILF	138,510
IT9VDQ	124,488

Top Ten – DX, Multioperator

Multioperator, Single Transmitter, High Power

ZF1A	7,408,452
P4ØL	6,530,958
KP2M	6,318,288
NP4Z	5,433,729
EI7M	4,718,418
LX7I	4,340,952
IR4M	4,155,294
EC2DX	3,984,000
WH7M	3,792,360
IR4X	3,667,356

Multioperator, Single Transmitter, Low Power

P4ØLE	3,591,945
ZW8T	1,469,160
OL1C	1,272,297
YU1EXY	758,808
LZ9R	651,900
DLØUM	646,140
OM3KWZ	462,840
3Z1K	305,280
SP9KAT	174,264
UR4RWW	66,555

Multioperator, Two Transmitter

PJ4X	8,638,215
TI5W	8,608,767
KH7XX (@ KH6YY)	5,659,920
ED7P	5,423,826
KL7RA	5,328,375
EF8U	5,258,304
OL4A	4,962,060
DP9Z	3,940,692
DL1A	3,887,100
HG7T	3,826,914

Multioperator, Unlimited

PJ2T	9,048,096
KH6LC	6,732,747
9A1A	6,189,369
IR1Y	5,270,184
OL7M	5,096,409
CE3CT	4,863,921
JA3YBK	3,771,885
LZ9W	2,655,000
RT0C	2,542,446
LY2IJ	1,292,814

Continental Leaders

Africa

SOHP	CR3A (OM3RM, op)	5,436,675
SOLP	CT3EE (OM3GI, op)	3,631,878
SOQRP	D44TBR	48
SOUHP	CN8KD	986,328
SOSB-10	EA8AVK	62,805
M2	EF8U	5,258,304

Asia

SOHP	P3F (5B4AGN, op)	1,500,240
SOLP	JH4UYB	1,055,010
SOQRP	JH1OGC	240,345
SOUHP	JR2GRX	1,367,310
SOUHP	JH1EAQ	694,089
SOSB-160	JA8NFV	2,544
SOSB-80	JN7FAH	10,692
SOSB-40	JS1OYN	17,427
SOSB-20	RK9QWM (RW9QU, op)	108,750
SOSB-15	JA7FTR	189,312
SOSB-10	JA1BPA	143,982
MSH	JAØQNJ	1,990,386
LSH	JJ2YNR	34,680
M2	RTØF	2,713,215
MM	JA3YBK	3,771,885

Europe

SOHP	CR6K (CT1ILT, op)	4,514,940
SOLP	OE3K (OM7JG, op)	1,990,170
SOQRP	GJ2A (MJØASP, op)	1,093,935
SOUHP	SP7GIQ	3,177,000
SOUHP	I19P (I28JAI, op)	1,725,621
SOSB-160	9A2NA	30,666
SOSB-80	DL3DXX	99,216
SOSB-40	4O/E77W	234,000
SOSB-20	CR2X (OH2PM, op)	379,800
SOSB-15	SJ2W (SM2LIY, op)	348,120
SOSB-10	DK3T (DK3DM, op)	145,365
MSH	EI7M	4,718,418
LSH	OL1C	1,272,297
M2	ED7P	5,423,826
MM	9A1A	6,189,369

North America

SOHP	6Y2T (VE3DZ, op)	6,351,696
SOLP	V31AT (K5PI, op)	4,865,205
SOQRP	WP4DT	2,691
SOUHP	V26M (N3AD, op)	5,119,752
SOUHP	HR2J (AA4NC, op)	3,146,292
SOSB-160	C6AKQ (N4BP, op)	113,274
SOSB-80	XE2X	168,258
SOSB-40	C6AWW (NX4N, op)	292,320
SOSB-20	CO8CY	187,266
SOSB-15	CO8LY	240,189
SOSB-10	C6AUM (K4RUM, op)	163,725
MSH	ZF1A	7,408,452
M2	TI5W	8,608,767

**Oceania**

SOHP	KH6RS (W5JR, op)	1,728,480
SOLP	KH6CJJ	938,250
SOQRP	5W1SA	66,030
SOUHP	DP1POL (DL5XL, op)	353,142
SOULP	ZM2IO (ZL3IO, op)	463,905
SOSB-80	KH6/WB4JTT	26,208
SOSB-40	VK4TT	4,959
SOSB-20	YB8TK	1,020
SOSB-15	NH2DX (KG6DX, op)	204,612
SOSB-10	3D2KM (W6ZL, op)	89,595
MSH	WH7M	3,792,360
M2	KH7XX (@ KH6YY)	5,659,920
MM	KH6LC	6,732,747

**South America**

SOHP	YW4D (YV1DIG, op)	4,571,847
SOLP	HC1WDT (WØOR, op)	2,729,100
SOQRP	OA4SS	494,079
SOUHP	PY2PT	1,796,985
SOULP	PY1NX	1,353,000
SOSB-160	HK1MW	37,356
SOSB-80	HK1ANP	5,103
SOSB-40	HK1R	308,700
SOSB-20	FY5KE (F6FVY, op)	397,980
SOSB-15	CX2BR	162,279
SOSB-10	LO5D (LU8EOT, op)	276,660
MSH	P4ØL	6,530,958
LSH	P4ØLE	3,591,945
M2	PJ4X	8,638,215
MM	PJ2T	9,048,096



## Regional Leaders

SOQRP/LP/HP = Single-Op All-Band; SOULP/HP = Single-Op Unlimited; MSL/MSH = Multioperator, Single Transmitter

Northeast Region			Southeast Region			Central Region			Midwest Region			West Coast Region		
New England, Hudson and Atlantic Divisions; Maritime and Quebec Sections			Delta, Roanoke and Southeastern Divisions			Central and Great Lakes Divisions; Ontario Section			Dakota, Midwest, Rocky Mountain and West Gulf Divisions; Manitoba and Saskatchewan Sections			Pacific, Northwestern and Southwestern Divisions; Alberta, British Columbia and NWT Sections		
Call	Score	Cat	Call	Score	Cat	Call	Score	Cat	Call	Score	Cat	Call	Score	Cat
N2NT	6,531,390	SOHP	K1TO	5,187,492	SOHP	XL3T (VE3AT, op)	4,405,635	SOHP	WXØB (AD5Q, op)	5,140,251	SOHP	N9RV	5,471,280	SOHP
K1ZZ	6,433,392	SOHP	N4AF	5,037,390	SOHP	K1LT	3,480,420	SOHP	K5YAA	1,719,162	SOHP	K6XX	3,447,690	SOHP
VY2TT	5,949,420	SOHP	N8II	3,294,000	SOHP	W5MX	3,216,780	SOHP	WD5K	1,691,967	SOHP	VE7CC	3,336,858	SOHP
K1ZM	5,155,248	SOLP	N4YDU	2,838,924	SOLP	N4TZ	3,264,765	SOLP	N5AW	3,644,865	SOLP	N7ZG	1,571,724	SOLP
W1UE	4,332,825	SOLP	K5KU	2,155,740	SOLP	NA8V	3,186,522	SOLP	WØUO	2,296,140	SOLP	N6RV	996,996	SOLP
K2TTM	1,777,662	SOLP	N4XL	1,456,866	SOLP	KV8Q	1,112,412	SOLP	NAØN	1,653,798	SOLP	WN6K	609,894	SOLP
N1IX	1,206,408	SOQRP	W9WI	1,029,510	SOQRP	VE3VN	1,062,990	SOQRP	NØKE	520,290	SOQRP	N7IR	675,675	SOQRP
AA1CA	509,640	SOQRP	K8MR	349,866	SOQRP	VE3KI	1,040,910	SOQRP	KEØG	99,774	SOQRP	W6JTI	597,513	SOQRP
N1TM	480,768	SOQRP	K4HC	251,856	SOQRP	KE8M	793,968	SOQRP	N8LA	65,688	SOQRP	W7Yaq	345,408	SOQRP
KØDQ	8,547,984	SOUHP	NQ4I (VE7ZO, op)	6,017,334	SOUHP	W8MJ	4,081,194	SOUHP	N2IC	7,244,160	SOUHP	VE7JH (@ VE7UF)	3,531,087	SOUHP
AA3B	7,943,832	SOUHP	K5KG	4,454,748	SOUHP	K9IMM	3,287,076	SOUHP	KØEU	4,941,918	SOUHP	AA7A	2,970,000	SOUHP
K3WW	7,303,296	SOUHP	W4ML (W4MYA, op)	3,690,720	SOUHP	VE3CX	2,568,456	SOUHP	KØKX	3,078,765	SOUHP	K4XU	2,735,460	SOUHP
KB3WD	2,906,028	SOUHP	WD4AHZ	2,482,146	SOUHP	W9PA	2,304,159	SOUHP	N5JR	879,660	SOUHP	K6WSC	1,335,780	SOUHP
W3KB	2,807,664	SOUHP	AA4FU	1,291,335	SOUHP	VA3DF	2,278,068	SOUHP	KØRI	850,680	SOUHP	W7OM	734,124	SOUHP
N1EN	2,705,526	SOUHP	K3IE	1,290,432	SOUHP	K9PG	1,336,440	SOUHP	K5IID	834,750	SOUHP	W6Aww	556,920	SOUHP
K2SSS	441,288	SO-10	N4ZZ	360,360	SO-10	N8LJ	33,003	SO-10	N7DR	201,717	SO-10	K7BG	216,600	SO-10
KD2RD	361,080	SO-10	AA5AU	262,818	SO-10	N8OL	25,854	SO-10	K5ZO	165,087	SO-10	K7WP	111,840	SO-10
W3EP	243,390	SO-10	N4TB	223,488	SO-10	NF8M	3,042	SO-10	KTØK	152,607	SO-10	KA7T	82,170	SO-10
NY3A	678,252	SO-15	K3RV	714,015	SO-15	N8BJQ	341,847	SO-15	N5RZ	511,830	SO-15	W6YA	508,482	SO-15
KU2M	643,830	SO-15	N1LN	520,026	SO-15	W8WA	317,205	SO-15	W2UP	404,766	SO-15	N7CW	391,152	SO-15
N2ED	195,888	SO-15	K4OAQ	431,055	SO-15	W9ILY	209,244	SO-15	NR5M (N1XS, op)	332,112	SO-15	NU6S	340,392	SO-15
K3GW	122,835	SO-20	K4TRH	59,961	SO-20	W8TA	439,815	SO-20	K7KU (KØKR, op)	341,952	SO-20	NR6O (DL8CA, op)	335,808	SO-20
K1FQL	44,400	SO-20	K9UQN	35,520	SO-20	NF8R	72,708	SO-20	KØPK	65,520	SO-20	AA6KJ	100,725	SO-20
A13Q	42,210	SO-20	AF2G	972	SO-20	N9XX	59,736	SO-20	VE4AKF	48,852	SO-20	N7YT	50,310	SO-20
W2EG	181,920	SO-40	K9OM	317,775	SO-40	K9NR	203,148	SO-40	KØDU (KØCL, op)	336,735	SO-40	W7WA	308,508	SO-40
W1XX	127,224	SO-40	WA1FCN	117,000	SO-40	VE3UTT	102,942	SO-40	K7NJ	271,539	SO-40	WA6O (@ N6RO)	246,132	SO-40
WO3Z	54,948	SO-40	K9IL	41,580	SO-40	WA3C	96,390	SO-40	W5ZO	38,220	SO-40	N7WA	147,609	SO-40
W3BGN	156,657	SO-80	K4FJ	67,890	SO-80	VE3PN	74,088	SO-80	K3PA	61,128	SO-80	W6AYC	3,528	SO-80
K3JGJ	55,632	SO-80	W4PK	66,330	SO-80	W8JGU	19,470	SO-80	N5FO	50,286	SO-80	VE7YU	3,315	SO-80
VE1ZA	44,370	SO-80	W4DD	24,576	SO-80	AC8CE	5,616	SO-80	KØKT	33,408	SO-80	N6AN	1,782	SO-80
W2VO	9,636	SO-160	W4ZV	33,453	SO-160	VE3OSZ	4,185	SO-160	NØTT	6,549	SO-160	N7GP	11,685	SO-160
KM1R	8,256	SO-160	N4XD	20,829	SO-160	K2UR	1,782	SO-160	KRØP	363	SO-160	W6RKC	1,674	SO-160
W2MF	5,148	SO-160	K4EJQ	6,372	SO-160	WD8DSB	585	SO-160	K5TR	6,133,056	MSH	W7RH	1,296	SO-160
W2FU	10,091,928	MSH	K4MM	2,926,710	MSH	VE3YAA	2,593,668	MSH	K5RX	3,844,992	MSH	W8TK	3,517,212	MSH
K1LZ	9,549,672	MSH	WW4LL	8,331,867	M2	VE3MIS	726,948	MSH	NØIM	2,058,840	MSH	K6LL	3,457,098	MSH
K2QMF	6,079,797	MSH	W5RU	7,356,456	M2	KA9VVQ	32,004.00	MSL	N5DO	2,172,576	MSL	W6XB	2,719,080	MSH
K1XM	3,263,382	MSL	K4TCG	4,922,268	M2	KA9VVQ	32,004.00	MSL	KØUK	1,296,792	MSL	VA7DZ	256,272	MSL
N2WKS	2,990,016	MSL	NR4M	13,998,360	MM	K9CT	11,084,400	M2	KB5ENP	11,766.00	MSL	K6III	10,716	MSL
VE9ML	2,501,730	MSL	N4WW	13,568,670	MM	K8AZ	10,245,528	M2	KØRF	10,151,295	M2	N7BV	2,985,846	M2
WK1Q @K1TTT)	8,787,483	M2	W4RM	11,179,332	MM	WØAIH	9,841,842	MM	NØNI	11,490,840	MM	W7VJ	1,068,633.00	M2
KB1H	5,383,680	M2				VE3NZ	90,060	MM				N6VV	416,208.00	M2
W2CG	5,181,891	M2										AK7AZ	1,962,504	MM
K3LR	18,276,027	MM												
W3LPL	17,410,140	MM												
WE3C	16,787,709	MM												

## Division Winners

### Atlantic

Single Operator, High Power	AA1K	5,406,840
Single Operator, Low Power	K2LNS	1,090,110
Single Operator, QRP	K3WWP	275,628
Single Operator Unlimited, High Power	AA3B	7,943,832
Single Operator Unlimited, Low Power	KB3WD	2,906,028
Single Operator, 160 Meters	W2VO	9,636
Single Operator, 80 Meters	W3BGN	156,657
Single Operator, 40 Meters	WO3Z	54,948
Single Operator, 20 Meters	K3GW	122,835
Single Operator, 15 Meters	NY3A	678,252
Single Operator, 10 Meters	K2SSS	441,288
Multioperator, Single Transmitter, High Power	W2FU	10,091,928
Multioperator, Single Transmitter, Low Power	W3HAC	549,504
Multioperator, Two Transmitter	K2AX	4,450,446
Multioperator, Unlimited	K3LR	18,276,027

### Central

Single Operator, High Power	W9OP	1,199,565
Single Operator, Low Power	N4TZ	3,264,765
Single Operator, QRP	N9JR	121,275
Single Operator Unlimited, High Power	K9IMM	3,287,076
Single Operator Unlimited, Low Power	W9PA	2,304,159
Single Operator, 160 Meters	K2UR	1,782
Single Operator, 40 Meters	K9NR	203,148
Single Operator, 20 Meters	N9XX	59,736
Single Operator, 15 Meters	W9ILY	209,244
Single Operator, 10 Meters	NG9M	2,523
Multioperator, Single Transmitter, Low Power	KA9VVQ	32,004
Multioperator, Two Transmitter	K9CT	11,084,400
Multioperator, Unlimited	WØAIH	9,841,842

### Dakota

Single Operator, High Power	NEØU	1,352,496
Single Operator, Low Power	NAØN	1,653,798
Single Operator, QRP	KEØG	99,774
Single Operator Unlimited, High Power	KØKX	3,078,765
Single Operator Unlimited, Low Power	NØBUI	654,828
Single Operator, 20 Meters	KØPK	65,520
Single Operator, 10 Meters	NØUK	5,742
Multioperator, Single Transmitter, High Power	NØIM	2,058,840

### Delta

Single Operator, High Power	AD4EB	1,519,614
Single Operator, Low Power	K5KU	2,155,740
Single Operator, QRP	W9WI	1,029,510

Single Operator Unlimited, High Power	NA4K	1,480,845
Single Operator Unlimited, Low Power	K3IE	1,290,432
Single Operator, 160 Meters	K4EJQ	6,372
Single Operator, 40 Meters	K9IL	41,580
Single Operator, 20 Meters	K4TRH	59,961
Single Operator, 15 Meters	W5WMU	399,048
Single Operator, 10 Meters	N4ZZ	360,360
Multioperator, Two Transmitter	W5RU	7,356,456

### Great Lakes

Single Operator, High Power	K1LT	3,480,420
Single Operator, Low Power	NA8V	3,186,522
Single Operator, QRP	KE8M	793,968
Single Operator Unlimited, High Power	W8MJ	4,081,194
Single Operator Unlimited, Low Power	K9NW	1,210,680
Single Operator, 80 Meters	W8JGU	19,470
Single Operator, 40 Meters	WA3C	96,390
Single Operator, 20 Meters	W8TA	439,815
Single Operator, 15 Meters	N8BJQ	341,847
Single Operator, 10 Meters	N8LJ	33,003
Multioperator, Two Transmitter	K8AZ	10,245,528

### Hudson

Single Operator, High Power	N2NT	6,531,390
Single Operator, Low Power	K2TTM	1,777,662
Single Operator, QRP	NQ2W	249,795
Single Operator Unlimited, High Power	K2CYE	4,601,325
Single Operator Unlimited, Low Power	N2SQW	1,043,643
Single Operator, 80 Meters	N3SY	960
Single Operator, 40 Meters	W2EG	181,920
Single Operator, 20 Meters	AC2PB	15,660
Single Operator, 15 Meters	KU2M	643,830
Single Operator, 10 Meters	KD2RD	361,080
Multioperator, Single Transmitter, High Power	K2QMF	6,079,797
Multioperator, Single Transmitter, Low Power	N2WKS	2,990,016
Multioperator, Two Transmitter	W2CG	5,181,891

### Midwest

Single Operator, High Power	KØDEQ	1,118,967
Single Operator, Low Power	N7WY	463,761
Single Operator, QRP	N8LA	65,688
Single Operator Unlimited, High Power	KØBJ	1,191,204
Single Operator Unlimited, Low Power	AAØAI	770,796
Single Operator, 160 Meters	NØTT	6,549
Single Operator, 80 Meters	K3PA	61,128
Single Operator, 20 Meters	N9HDE	6,048
Single Operator, 15 Meters	KAØP	330



Single Operator, 10 Meters	KTØK	152,607
Multioperator, Single Transmitter, Low Power	KB5ENP	11,766
Multioperator, Unlimited	NØNI	11,490,840

### **New England**

Single Operator, High Power	K1ZZ	6,433,392
Single Operator, Low Power	K1ZM	5,155,248
Single Operator, QRP	N1IX	1,206,408
Single Operator Unlimited, High Power	KØDQ	8,547,984
Single Operator Unlimited, Low Power	N1EN	2,705,526
Single Operator, 160 Meters	KM1R	8,256
Single Operator, 80 Meters	W1JN	4,050
Single Operator, 40 Meters	W1XX	127,224
Single Operator, 20 Meters	K1FQL	44,400
Single Operator, 15 Meters	K1NYK	110,778
Single Operator, 10 Meters	W3EP	243,390
Multioperator, Single Transmitter, High Power	K1LZ	9,549,672
Multioperator, Single Transmitter, Low Power	K1XM	3,263,382
Multioperator, Two Transmitter	WK1Q (@ K1TTT)	8,787,483
Multioperator, Unlimited	K1KI	7,310,544

### **Northwestern**

Single Operator, High Power	N9RV	5,471,280
Single Operator, Low Power	N7ZG	1,571,724
Single Operator, QRP	W7YAQ	345,408
Single Operator Unlimited, High Power	K4XU	2,735,460
Single Operator Unlimited, Low Power	W7OM	734,124
Single Operator, 160 Meters	W7WR	54
Single Operator, 80 Meters	N7QS	552
Single Operator, 40 Meters	W7WA	308,508
Single Operator, 20 Meters	N7YT	50,310
Single Operator, 15 Meters	WA7LT	286,212
Single Operator, 10 Meters	K7BG	216,600
Multioperator, Two Transmitter	N7BV	2,985,846

### **Pacific**

Single Operator, High Power	K6XX	3,447,690
Single Operator, Low Power	K6LRN	294,690
Single Operator, QRP	W6JTI	597,513
Single Operator Unlimited, High Power	N7TR	1,668,480
Single Operator Unlimited, Low Power	NA6O	283,050
Single Operator, 160 Meters	W6RKC	1,674
Single Operator, 40 Meters	WA6O (@ N6RO)	246,132
Single Operator, 20 Meters	NR6O (DL8CA, op @ N6RO)	335,808
Single Operator, 15 Meters	NU6S	340,392
Single Operator, 10 Meters	K6TA	45,684
Multioperator, Single Transmitter, High Power	W6XB	2,719,080

Multioperator, Single Transmitter, Low Power	K6III	10,716
Multioperator, Two Transmitter	N6VV	416,208

### Roanoke

Single Operator, High Power	N4AF	5,037,390
Single Operator, Low Power	N4YDU	2,838,924
Single Operator, QRP	K4HC	251,856
Single Operator Unlimited, High Power	W4ML (W4MYA, op)	3,690,720
Single Operator Unlimited, Low Power	AA4FU	1,291,335
Single Operator Unlimited, Low Power	K4YND	259,200
Single Operator, 160 Meters	W4ZV	33,453
Single Operator, 80 Meters	K4FJ	67,890
Single Operator, 40 Meters	NQ4K	3,900
Single Operator, 15 Meters	K3RV	714,015
Single Operator, 10 Meters	N4VA	102,816
Multioperator, Unlimited	NR4M	13,998,360

### Rocky Mountain

Single Operator, High Power	WØZA	1,291,500
Single Operator, Low Power	KCØV	635,193
Single Operator, QRP	NØKE	520,290
Single Operator Unlimited, High Power	N2IC	7,244,160
Single Operator Unlimited, Low Power	KØRI	850,680
Single Operator, 80 Meters	N5FO	50,286
Single Operator, 40 Meters	KØDU (KØCL, op)	336,735
Single Operator, 20 Meters	K7KU (KØKR, op)	341,952
Single Operator, 15 Meters	W2UP	404,766
Single Operator, 10 Meters	N7DR	201,717
Multioperator, Single Transmitter, Low Power	KØUK	1,296,792
Multioperator, Two Transmitter	KØRF	10,151,295

### Southeastern

Single Operator, High Power	K1TO	5,187,492
Single Operator, Low Power	W4AA	980,343
Single Operator, QRP	K8MR	349,866
Single Operator Unlimited, High Power	NQ4I (VE7ZO, op)	6,017,334
Single Operator Unlimited, Low Power	WD4AHZ	2,482,146
Single Operator Unlimited, Low Power	W4JDS	43,956
Single Operator, 80 Meters	W4DD	24,576
Single Operator, 40 Meters	K9OM	317,775
Single Operator, 20 Meters	AF2G	972
Single Operator, 15 Meters	N3GD	62,010
Single Operator, 10 Meters	N4TB	223,488
Multioperator, Single Transmitter, High Power	K4MM	2,926,710
Multioperator, Two Transmitter	WW4LL	8,331,867
Multioperator, Unlimited	N4WW	13,568,670

### Southwestern

Single Operator, High Power	NA6MG	669,864
Single Operator, Low Power	N6RV	996,996
Single Operator, QRP	N7IR	675,675
Single Operator Unlimited, High Power	AA7A	2,970,000
Single Operator Unlimited, Low Power	K6WSC	1,335,780
Single Operator, 160 Meters	N7GP	11,685
Single Operator, 80 Meters	W6AYC	3,528
Single Operator, 20 Meters	AA6KJ	100,725
Single Operator, 15 Meters	W6YA	508,482
Single Operator, 10 Meters	K7WP	111,840
Multioperator, Single Transmitter, High Power	W8TK	3,517,212
Multioperator, Unlimited	AK7AZ	1,962,504

### West Gulf

Single Operator, High Power	WXØB (AD5Q, op)	5,140,251
Single Operator, Low Power	N5AW	3,644,865
Single Operator, QRP	AA5TB	16,560
Single Operator Unlimited, High Power	K5NA	1,970,175
Single Operator Unlimited, Low Power	N5JR	879,660
Single Operator, 40 Meters	W5ZO	38,220
Single Operator, 15 Meters	N5RZ	511,830
Single Operator, 10 Meters	K5ZO	165,087
Multioperator, Single Transmitter, High Power	K5TR	6,133,056
Multioperator, Single Transmitter, Low Power	N5DO	2,172,576

### Canada

Single Operator, High Power	VY2TT	5,949,420
Single Operator, Low Power	VE3XB	1,048,194
Single Operator, QRP	VE3VN	1,062,990
Single Operator Unlimited, High Power	VA2WA	5,768,343
Single Operator Unlimited, Low Power	VA3DF	2,278,068
Single Operator, 160 Meters	VE3OSZ	4,185
Single Operator, 80 Meters	VE3PN	74,088
Single Operator, 40 Meters	VE3UTT	102,942
Single Operator, 20 Meters	VA3GUY	52,800
Single Operator, 15 Meters	VE1JBC	39,843
Single Operator, 10 Meters	VY2OX	49,248
Multioperator, Single Transmitter, High Power	VE3YAA	2,593,668
Multioperator, Single Transmitter, Low Power	VE9ML	2,501,730
Multioperator, Unlimited	VE3NZ	90,060



## Sponsored Plaque Winners

Thanks to the generous sponsorship of numerous clubs and individuals, we are pleased to announce the winners of a sponsored ARRL DX CW plaque. The ARRL wishes to thank the plaque sponsors for their continued commitment to the ARRL Plaque Program. Without their support and dedication, the Plaque Program would not be possible. Unsponsored plaques may be purchased by the plaque winner. If you wish to purchase an unsponsored plaque or order a duplicate plaque, contact ARRL Contest Branch Manager at (860) 594-0232 or by e-mail at [contests@arrl.org](mailto:contests@arrl.org). The cost for plaques is \$75 (includes shipping).

W/VE Single Operator High Power CW	Frankford Radio Club	N2NT
W/VE Single Operator Low Power CW	Ed Sawyer, N1UR	K1ZM
W/VE Single Operator QRP CW	Sean Kutzko, KX9X	N11X
W/VE Single Operator Unlimited, High Power CW	Harold Ritchey, W3WPG, Memorial	KØDQ
W/VE 1.8 MHz CW	Jerry Rosalius, WB9Z	W4ZV
W/VE 7 MHz CW	Drew Vonada-Smith, K3PA	KØDU (KØCL, op)
W/VE 21 MHz CW	Carl Luetzelschwab, K9LA	K3RV
W/VE 28 MHz CW	Richard Bennett, KØXG	K2SSS
World Single Operator High Power CW	North Jersey DX Association	6Y2T (VE3DZ, op)
World Single Operator Low Power CW	The CW Operators' Club	V31AT (K5PI, op)
World Single Operator QRP CW	Gerald (Jerry) Griffin, K6MD/DK6MX	GJ2A (MJØASP, op)
World Multioperator Single Transmitter, High Power CW	John Patterson, WCØW/V31TP	ZF1A
World Multioperator, Single Transmitter, Low Power CW	John Patterson, WCØW/V31TP	P4ØLE
World Multioperator Two Transmitters	CW Frankford Radio Club — K2TD Memorial	PJ4X
World Multioperator Unlimited CW	H Stephen Miller, NØSM	PJ2T
World 1.8 MHz CW	Fred Race, W8FR, in Memory of DL1FF	C6AKQ (N4BP, op)
World 3.5 MHz CW	W1FJ, in Memory of W1BIH & N4XR	XE2X
World 14 MHz CW	Jeff Hartley, N8II	FY5KE (F6FVY, op)
World 21 MHz CW	Caribbean Contesting Consortium PJ2T	SJ2W (SM2LIY, op)
World 28 MHz CW	W7EW / W7AT	LO5D (LU8EOT, op)
Asia Single Operator QRP CW	Sean Kutzko, KX9X	JH1OGC
Asia Multioperator Single Transmitter High Power CW	Yankee Clipper Contest Club	JAØQNJ
North America Single Operator High Power CW	Potomac Valley Radio Club	6Y2T (VE3DZ, op)
Europe Single Operator High Power CW	Jim George, N3BB	CR6K (CT1ILT, op)
Caribbean Single Operator Low Power CW	9Y4VU Memorial — Friends of the Frankford Radio Club	HI3K
Canada Single Operator Low Power CW	Contest Club Ontario	VE3XB
Seventh Call Area Single Operator High Power CW	Willamette Valley DX Club	N9RV
Central Division Single Operator High Power CW	Northern Illinois DX Association	W9OP
Great Lakes Division Single Operator CW	North Coast Contesters	K1LT
Hudson Division Single Operator High Power CW	HVCDX & AARA John Naberezny, WE2F, Memorial	N2NT
Pacific Division Single Operator Low Power CW	Central California DX Club, Inc. W6MEL	K6LRN
Pacific Division Single Operator 20 Meters CW	Jim Davis, NN6EE	NR6O (DL8CA, op@N6RO)