

# 2016 ARRL International DX CW Contest Results

**It takes all kinds to have a successful event.**

**Matt Wilhelm, W1MSW, w1msw@arrrl.net**

Kam, N3KS, has spent years building and fine-tuning a station on the side of a Costa Rican volcano. One of the highlights of the station was its low noise levels, but, Kam wrote, “That soon began to change. A new national park was opened about 6 miles away and the area became very popular for bird watching. More people moved into the area and small hotels and cabins opened up nearby.” And with more people comes more technology, most of which is supposed to make our lives better, but as hams know, that can be a double-edged sword.

Fast forward to 2 days before the February 20 – 21 contest weekend. Guest operators Jim, WX3B, and Chris, KL9A, had flown into TI5W from stateside, and everyone was looking forward to competing against friends Dan, N6MJ, and John, K6AM, who were operating ZF1A to the north in the Cayman Islands. But RFI was causing problems on all bands except 160 meters, so Chris and Kam took a walk with a handheld radio with AM capability on the HF bands to try to find the source. It seemed as though the noise was coming from the overhead power lines. Then, frustrated and disappointed they could not determine the source of the RFI before the contest, a bit of luck came their way.

“I happened to be looking at a streetlight when the noise disappeared and noticed the streetlight came on at the exact time the noise disappeared, so we stood there and stared at the streetlight and waited,” Kam said. “Sure



The lush landscape surrounding TI5W on the north slope of Tenorio Volcano. This year N3KS, KL9A, and WX3B operated at the station and won the DX Multioperator, Single Transmitter, High Power and set the all-time record for the category. [Kamal Sirageldin, N3KS, photo]

enough, the streetlight then went off and the noise returned.” Because this was happening in the middle of the day, they quickly determined the problem was a bad sensor on the streetlight. Unfortunately, the pole was fenced in on a neighbor’s property and guarded by two large Doberman Pinschers. The power company could not fix the problem before the contest.

Now that the team was aware of the exact source of noise, they were able to mitigate the problem by turning the 160 meter antenna into a receive antenna for the low bands and, while not ideal in a contest, they used the noise blanker on their FTDX5000 transceivers to cancel out the noise on the high bands. The mitigation plan clearly worked, as they won their category and set the all-time record for DX Multioperator, Single Transmitter, High Power! Contesting is rife with stories such as this, and an operator’s ability to quickly solve these unforeseen problems can be the difference between winning and 2<sup>nd</sup> place, or worse.

## Applying Technology to Join in the Fun

Contrary to some of the myths about contesting, not all participants have been contesting for decades and have large, high-power stations with multiple towers and antennas. George, W1GIV, a high school senior and member of the Norwich Free Academy Amateur Radio Club (W1HLO), was licensed in 2014 and has a very modest station consisting of an Elecraft KX3 transceiver and a G5RV antenna. He first became interested in contesting when the W70 special event station was commemorating the 40th anniversary of the Oscar 7 launch, which happened during the same weekend as the 2014 ARRL Sweepstakes Phone Contest.

“After that weekend and between those two events on the air, I was hooked on contesting. It’s always a great opportunity to work new people and experiment with antennas, radios, or output power,” George wrote. But what makes George’s participation in this CW contest unique is — he doesn’t know CW!

## Read the Full Results

The full results of the contest are available online at [www.arrrl.org/contest-results-articles](http://www.arrrl.org/contest-results-articles). You’ll find detailed analysis and more play-by-play, along with the full line scores. Improve your skill by reviewing your log checking report, too!

## Top Ten — DX

### Single Operator, High Power

8P5A	
(W2SC, op)	7,548,552
TO7A (UT5UGR, op)	6,668,505
6Y1D	
(RA1A, op)	6,202,404
KP2M	
(KT3Y, op)	6,010,524
D4C	
(YL2KL, op)	5,828,427
CU4DX	
(EA5KA, op)	4,805,370
CR6K	
(CT1ILT, op)	3,858,990
KH7M	
(NA2U, op)	3,749,652
CR3A	
(OM3RM, op)	3,401,568
E7DX	
(E7OT, op)	2,617,824

### Single Operator, Low Power

NP2X	
(K9VV, op)	4,610,385
KP3Z	
(NP4Z, op)	4,272,912
VP9/W6PH	3,811,890
NP3A	3,259,872
YV8AD	2,491,482
EF2A	
(EA2OT, op)	2,280,960
HI3TT	1,730,394
HI3Y	1,499,808
PY2NY	1,419,834
EI0DX	
(G4XUM, op)	1,410,918

### Single Operator, QRP

P40W	
(W2GD, op)	3,570,936
HB9BMY	227,664
S50XX	193,125
LZ2RS	116,706
EF7AAW	112,488
IK6FWJ	102,336
LU8ADX	96,030
IZ3NVR	92,247
JH1OGC	86,292
DK0PO	66,420

### Single Operator Unlimited, High Power

V26M	
(N3AD, op)	5,191,725
G5V	
(G3BJ, op)	2,313,765
EF6T	
(EA3AIR, op)	2,176,500
SN7Q	
(SP7GIQ, op)	2,172,735
CE2MVF	2,095,218
IO1T	
(IZ1L BG, op)	1,904,952
OK7M	
(OK1DIG, op)	1,854,144
IR2C	
(IK2PFL, op)	1,852,560
EA5FV	1,719,480
EI5KF	1,331,172

### Single Operator Unlimited, Low Power

KP4KE	4,378,641
NP2P	
(N2TTA, op)	3,782,151
EF8R	1,773,696
CN8KD	1,344,150
EC4TA	915,687
F4DXW	909,144
DL0UM	
(DL7FER, op)	711,480
YO3JR	677,688
LU7HZ	547,740
DL1QQ	536,010

### Single Operator Unlimited, QRP

OK2FD	328,287
EA2DVR	6,615
PE2K	4,590
JK1TCV	3,927
UT0UM	3,744
R7RF/6	3,060
R7FO	2,808
JA7KBR	1,620
JR1LLD	189
LY2BGP	126

### Single Operator, 160 Meters

HK1R	134,850
NP2J	88,086
YV1KK	83,985
CU2KG	
(OH2BH, op)	67,473
V31YN	
(DJ4KW, op)	38,148
HC2AO	31,602
HA8A	
(HA8DZ, op)	22,533
EU1WW	
(EU1W, op)	4,332
M5O	
(G3LET, op)	3,234
UY0ZG	756
8S0DX	
(SM0DSG, op)	756

### Single Operator, 80 Meters

XE2X	209,745
CO2JD	152,703
KH6/WB4JTT	60,684
S52AW	54,120
YU6DX	41,652
YT3J	
(YT1AA, op)	29,016
DJ0MDR	24,570
LU1FAM	20,538
R7NW	19,278
DJ5EU	13,020

### Single Operator, 40 Meters

P49Y	
(AE6Y, op)	338,001
6Y4K	310,680
HK3TU	241,020
IR1Y	
(IK1YDB, op)	210,984
S53A	203,727
S50C	
(S53RM, op)	196,479
YT7A	195,750
S51YI	180,090
XE2S	175,938
9A9R	173,520

### Single Operator, 20 Meters

FY5KE	
(F6FVY, op)	421,083
SJ2W	
(SM2LIY, op)	302,808
TM6M	
(F1AKK, op)	288,042
OH8L	
(OH8LQ, op)	238,632
EI1Y	
(SQ6MS, op)	232,227
GM5A	209,352
OK8NM	
(OM6NM, op)	206,607
S50K	204,480
LU5FF	204,045
RT0F	168,681

### Single Operator, 15 Meters

CR2X	
(OH2PM, op)	323,460
TMSY	
(F8DBF, op)	289,323
MM3T	
(GM0ELP, op)	251,517
EI0PL	
(F5SDD, op)	243,180
VK2IA	229,158
CX2BR	195,660
TM0R	
(F5MNK, op)	192,420
IR1R	
(IK1HJS, op)	177,300
9A7V	175,320
LU6UO	173,283

### Single Operator, 10 Meters

HK1X	336,123
CW4MAX	
(CX2DK, op)	280,440
TO1A	
(F5HRY, op)	273,060
LU5FC	261,540
LW6DG	252,048
P40LE	
(K2LE, op)	195,231
XR2K	
(CE2LML, op)	154,338
TI8/AA8HH	103,272
LW8DQ	96,102
PY2XC	58,320

### Multioperator, Single Transmitter, High Power

TI5W	7,591,320
ZF1A	7,112,070
NP2N	5,400,612
KH6J	3,632,643
IR4M	2,933,304
IR4X	2,856,882
IO5O	2,057,250
DL1A	1,851,003
ES5Q	1,825,776
HG1S	1,813,650

### Multioperator, Single Transmitter, Low Power

V31TP	5,591,466
PJ6A	5,356,539
VP5K	4,397,823
ZW8T	1,909,104
OL1C	632,790
CE1CA	444,600
ED4R	373,005
ET7L	183,312
YU2A	136,968
F8KLY	105,561

### Multioperator, Two Transmitter

PJ4X	8,901,270
P40XM	8,476,512
T48K	7,595,616
VP2MWA	6,354,828
PS2T	5,574,807
PT5A	5,310,900
ED7P	4,002,786
LX7I	3,648,285
OL7M	2,561,976
HG7T	2,324,835

### Multioperator, Multitransmitter

PJ2T	9,825,354
KH6LC	7,028,070
CR3W	6,156,906
9A1A	3,706,425
JA3YBK	2,397,600
JE1ZWT	1,360,077
LZ9W	147,345
GM9N	17,976
RW4CRV	4,386
UI0L	888

## Amateur Radio on Reddit.com

A growing Amateur Radio community can be found in this popular corner of the Internet. Members of this “subreddit” range from individuals who are interested in learning more about the hobby, to seasoned hams, and everything in between. It’s a great place to share ideas, links to Amateur Radio-related information, successes, and failures, and ask questions about the hobby. For more information on the Amateur Radio subreddit, go to [www.reddit.com/r/amateurradio](http://www.reddit.com/r/amateurradio).



Dave, W9QL, and his trusty four-legged companion, Brett, teamed up for the contest to chase DX and make enough contacts to earn his DXCC award. [David Pritchard, W9QL, photo]

With a high percentage of contest participants using Logbook of the World (LoTW), contests are a great way to add to your DXCC totals and have them confirmed quickly. Since the contest, Dave has achieved DXCC and said he plans to continue operating in contests to increase his DXCC total. In addition to his multiplier hunting, Dave said, “I always look up my score from the year before and try to do a little better.”

### Battle of the Superstations

What about the other end of the contesting spectrum? I’m referring to the ultimate Multioperator Multitransmitter superstations with enormous verticals for the low bands, multiple towers with stacks of Yagis, and receive antennas spread across the property. This is also where the top operators come together to hunker down at their operating positions and put as many contacts in the log as fast as they

Cross-referencing a software decoder and the built-in KX3 decoder, he operated all search and pounce and was able to make 166 contacts, 96 of which were multipliers. Not bad for not knowing the code! George wrote:

One of my favorite aspects was hanging out in the Reddit IRC chat (see the sidebar) with other hams who were also participating in the contest. We were talking about the software we were using, testing out our equipment, etc. About an hour before the event, NV3Y and I did a quick CW QSO on 40 meters just to make sure both of our decoders and macros worked.

Before anyone becomes concerned that the use of decoders will be the end of CW contest-

ing, know that George has every intention of learning code, and this is a great way for him to participate while he focuses most of his time on his studies.

### Dogging DX

Contesting is not always the top priority of every contest participant. That’s shocking, perhaps, but what better way to work those last few contacts needed for an award than to get on the air over a weekend when the DX comes out to play? Dave, W9QL, has been contesting since 2000, but had other goals set that weekend. With only 10 entities left to achieve DXCC, Dave searched and pounced through the bands, looking for multipliers.

## Division Winners

### Single Operator, High Power

Atlantic	K3CR (LZ4AX, op)	5,780,583
Central	W9RE	3,729,519
Dakota	NE0U	459,360
Delta	K5GO	3,128,364
Great Lakes	K1LT	2,704,248
Hudson	N5DX	5,413,950
Midwest	K3PA	1,790,724
New England	K1ZZ	4,949,100
Northwestern	N9RV	3,472,524
Pacific	K6XX	2,639,097
Roanoke	NR3X (N4YDU, op)	3,389,040
Rocky Mountain	N2IC	4,196,370
Southeastern	K4AB	1,931,544
Southwestern	AF6O	960,894
West Gulf	WX0B (AD5Q, op)	3,086,424
Canada	VY2TT	5,373,720

### Single Operator, Low Power

Atlantic	KX2S	469,227
Central	N4TZ	1,545,804
Dakota	NA0N	738,783
Delta	K5KU	1,191,078
Great Lakes	NA8V	1,630,581
Hudson	W2ID	1,144,932
Midwest	N7WY	272,745
New England	W1UE	3,729,132
Northwestern	K2PO	1,244,310
Pacific	KJ6MBW	310,878
Roanoke	N4CW	609,792
Rocky Mountain	AF0E	103,350
Southeastern	K4SX	811,296
Southwestern	WN6K	426,624
West Gulf	N5AW	2,345,166
Canada	VE3DZ	2,930,445

### Single Operator, QRP

Atlantic	K3WWP	151,200
Central	KB0KFX	30,780
Dakota	K0PK	228,327
Delta	WB4GHZ	38,592
Great Lakes	KT8K	203,448
Hudson	K2JT	105,840
Midwest	WB9QAF	24,480
New England	N1IX	723,078
Northwestern	W7UDH	13,530
Pacific	W6JTI	334,917
Roanoke	N4CF	186,813
Rocky Mountain	WC7S	12,006
Southeastern	K8MR	157,950
Southwestern	N7IR	426,420
West Gulf	N4IJ	178,398
Canada	VE3VN	594,282

### Single Operator Unlimited, High Power

Atlantic	K3WW	6,394,752
Central	AA9A (N9UA, op)	2,974,833
Dakota	K0KX	1,960,083
Delta	AD4EB	1,360,512
Great Lakes	N8TR	1,597,590
Hudson	KV2K (K2NG, op)	4,409,307
Midwest	K0OU	638,631
New England	K6ND (K1XM, op)	5,354,640
Northwestern	KA6BIM	1,391,058
Pacific	K6RC	983,052
Roanoke	N4AF	4,790,430
Rocky Mountain	K7SCX	1,089,258
Southeastern	K5KG	3,736,494
Southwestern	KY7M	1,457,712
West Gulf	K5TR	2,445,381
Canada	VA2WA	4,464,072

### Single Operator Unlimited, Low Power

Atlantic	W3KB	1,770,624
Central	W9XT	1,508,931
Dakota	K0MPH	463,932
Delta	K3IE	1,042,548
Great Lakes	N8VV	743,400
Hudson	N2SQW	1,086,426
Midwest	AA0AI	489,600
New England	W1MSW	1,977,996
Northwestern	W7VO	303,195
Pacific	N6PN	240,543
Roanoke	W4IX	2,969,415
Rocky Mountain	AD1C	563,892
Southeastern	N4CJ	417,312
Southwestern	K6WSC	660,816
West Gulf	W0UO	1,561,950
Canada	VA3DF	1,592,745

### Single Operator Unlimited, QRP

Atlantic	NA3E	17,100
Hudson	WA2NYY	1,539
Northwestern	K7MK	21,357
Pacific	K9YC	388,020
Southeastern	K4AHO	4,797
Canada	VE3XT	42,465

### Single Operator, 160 Meters

Atlantic	N2OO	15,624
Central	KE0L	1,716
Great Lakes	W8TOP (W8UVZ, op)	4,224
New England	K1WHS	22,692
Northwestern	K7CW	2,394
Pacific	W6RKC	2,016
Roanoke	W4ZV	8,316
Southeastern	W4AA	8,316
Southwestern	N7GP	12,600

### Single Operator, 80 Meters

Atlantic	W3BGN	99,897
Central	N9TF	2,730
Delta	K9JU	1,650
Great Lakes	W8JGU	9,804
Hudson	N3SY	9,522
New England	W1HI	40,548
Northwestern	NE7D	4,536
Pacific	K6AAM	6,885
Roanoke	K4FJ	29,736
Rocky Mountain	NG0T	2,664
Southeastern	KM4HI	22,176
Southwestern	W9FI	7,425
West Gulf	K5RX	75,120
Canada	VY2ZM	208,527

### Single Operator, 40 Meters

Atlantic	WB8BPU	25,200
Central	N9CO	107,136
Delta	W9SN	371,952
Great Lakes	W8IQ	31,488
Hudson	W2EG	22,935
Midwest	N0EI	108
New England	KA1IS	114,750
Northwestern	W7QDM	16,218
Pacific	W6YX (N7MH, op)	234,555
Roanoke	KZ1A	23,424
Rocky Mountain	N5FO	241,758
Southeastern	WA1FCN	75,816
Southwestern	KA9A	17,649
Canada	VY2LI	9,804

### Single Operator, 20 Meters

Atlantic	N2MF	626,760
Central	N9XX	29,601
Delta	K4TRH	55,200
Great Lakes	NF8R	93,183
Hudson	KD2RD	559,011
New England	W1HFG	3,306
Pacific	K6GHA	14,352
Roanoke	NK3U	72,072
Rocky Mountain	KV0Q	336,930
Southeastern	N4OX	158,745
Southwestern	N7CW	119,508
Canada	VE7NI	105

### Single Operator, 15 Meters

Atlantic	NY3A	546,786
Central	W9ILY	254,205
Delta	K5WK	317,664
Great Lakes	K8AJS	257,400
Hudson	W2AW (N2GM, op)	251,472
Midwest	WN0L	39,996
New England	N1NK	168,714
Northwestern	K7MI	220,248
Pacific	K6ST	588
Roanoke	K3RV	585,519
Rocky Mountain	W2UP	303,930
Southeastern	N4WWW (N4KM, op)	394,809
Southwestern	N7DD	428,400
West Gulf	N5DO	216,918
Canada	VY2OX	106,875

### Single Operator, 10 Meters

Atlantic	K2SSS	62,220
Central	WB9Z	41,535
Delta	W5GAI	10,701
Great Lakes	N8XX	624
Hudson	WB2AMU	8,892
Midwest	N0JK	351
New England	W1END	4,278
Northwestern	K7EPH	1,890
Pacific	WD6DX	3,750
Rocky Mountain	N0TK	135
Southeastern	K2PS	28,800
Southwestern	K6VHF	1,824
Canada	VE7YU	6,612

### Multioperator, Single Transmitter, High Power

Atlantic	W2FU	7,232,448
Dakota	K0JE	99,918
Delta	K5UA	2,102,265
Great Lakes	W5MX	3,463,317
Hudson	K2QMF	4,506,489
New England	N1MM	4,438,518
Northwestern	K7RI	1,253,802
Roanoke	K8LF	314,352
Rocky Mountain	K0ZX	117,594
Southeastern	AD4ES	1,970,100
Southwestern	K6LL	2,273,808
West Gulf	AC4CA	1,586,910
Canada	VE7FO	10,152

### Multioperator, Single Transmitter, Low Power

Atlantic	W3YI	382,104
New England	W1FM	8,901
Roanoke	W4TG	181,440
Rocky Mountain	K0UK	623,904

### Multioperator, Two Transmitter

Atlantic	NN3W	7,714,323
Central	K9CT	6,061,809
Delta	K4TCG	4,540,737
Great Lakes	K8AZ	7,109,553
Hudson	W2CG	4,968,012
Midwest	N0NI	5,600,955
New England	K1IG	8,934,618
Northwestern	K7JR	1,377,918
Southwestern	N7AT	4,093,110
Canada	VE3JM	6,930,522

### Multioperator, Multitransmitter

Atlantic	W3LPL	13,700,160
Central	W0AIH	3,823,470
Delta	W5RU	3,831,648
Hudson	NE2V	4,392,360
New England	WK1Q	9,024,867
Pacific	N6WM	3,955,392
Roanoke	NR4M	10,499,202

can over the weekend. When these types of stations are discussed, there is always one particular battle between two calls: Tim Duffy's K3LR versus Frank Donovan's W3LPL. Both of these stations have dedicated radios on each band for both running

and searching for multipliers, combined with incredible arrays of antennas for both transmitting and receiving. For the past 11 years, these two stations have held 1<sup>st</sup> and 2<sup>nd</sup> place in the ARRL DX CW contest, and during that time they have split the top position almost

evenly. Scores for both stations are typically very close and K3LR, located near the Pennsylvania-Ohio border in western Pennsylvania, managed to hold onto the title for the last 3 years. But in 2016, W3LPL, located in Maryland, was finally able to take back the

## Regional Leaders

Boxes list call sign, score, and category: M2 = Multioperator, Two Transmitter; MM = Multioperator, Multitransmitter; MSHP = Multioperator, Single Transmitter, High Power; MSLP = Multioperator, Single Transmitter, Low Power; SO-10 = Single Operator, 10 Meters; SO-15 = Single Operator, 15 Meters; SO-160 = Single Operator, 160 Meters; SO-20 = Single Operator, 20 Meters; SO-40 = Single Operator, 40 Meters; SO-80 = Single Operator, 80 Meters; SOHP = Single Operator, High Power; SOLP = Single Operator, Low Power; SOQRP = Single Operator, QRP; SOUHP = Single Operator Unlimited, High Power; SOULP = Single Operator Unlimited, Low Power; SOUQRP = Single Operator Unlimited, QRP

West Coast Region (Pacific, Northwestern, and Southwestern Divisions; Alberta, British Columbia, and NT Sections)	Midwest Region (Dakota, Midwest, Rocky Mountain, and West Gulf Divisions; Manitoba and Saskatchewan Sections)	Central Region (Central and Great Lakes Divisions; Ontario East, Ontario North, Ontario South, and Greater Toronto Area Sections)	Southeast Region (Delta, Roanoke, and Southeastern Divisions)	Northeast Region (New England, Hudson, and Atlantic Divisions; Maritime and Quebec Sections)
N9RV 3,472,524 SOHP	N2IC 4,196,370 SOHP	W9RE 3,729,519 SOHP	NR3X (N4YDU, op) 3,389,040 SOHP	K3CR (LZ4AX, op) 5,780,583 SOHP
K6XX 2,639,097 SOHP	WX0B (AD5Q, op) 3,086,424 SOHP	CJ3T (VE3AT, op) 3,351,312 SOHP	K5GO 3,128,364 SOHP	N5DX 5,413,950 SOHP
W7RN (N6TV, op) 2,302,416 SOHP	K3PA 1,790,724 SOHP	K1LT 2,704,248 SOHP	N8II 2,428,257 SOHP	VY2TT 5,373,720 SOHP
WJ9B 1,843,920 SOHP	WD5K 1,289,040 SOHP	K9MA 1,807,872 SOHP	K4AB 1,931,544 SOHP	N2NT 4,980,456 SOHP
AF6O 960,894 SOHP	W0ZA 796,824 SOHP	N8BJQ 1,445,499 SOHP	K4BA 1,879,434 SOHP	K1ZZ 4,949,100 SOHP
K2PO 1,244,310 SOLP	N5AW 2,345,166 SOLP	VE3DZ 2,930,445 SOLP	K5KU 1,191,078 SOLP	W1UE 3,729,132 SOLP
VE7UF (VE7JH, op) 859,278 SOLP	NA0N 738,783 SOLP	NA8V 1,630,581 SOLP	K4SXT 811,296 SOLP	WA1Z 2,830,800 SOLP
N7ZG 778,392 SOLP	N1CC 556,776 SOLP	N4TW 360,036 SOLP	N4CW 609,792 SOLP	W2ID 1,144,932 SOLP
WN6K 426,624 SOLP	W5RYA 421,080 SOLP	K9QVB 829,896 SOLP	N4H4 360,036 SOLP	K1VJSJ 1,110,108 SOLP
NN6CH 405,552 SOLP	NN5T 347,211 SOLP	KV9B 755,811 SOLP	K1TN 334,314 SOLP	NB1N 1,041,615 SOLP
N7IR 426,420 SOQRP	K0PK 228,327 SOQRP	VE3VN 594,282 SOQRP	N4CF 186,813 SOQRP	N1IX 723,078 SOQRP
W6JTI 334,917 SOQRP	N4IJ 178,398 SOQRP	KT8K 203,448 SOQRP	K8MR 157,950 SOQRP	K8CN 595,122 SOQRP
W6QU (W8QZA, op) 115,500 SOQRP	N0UR 63,030 SOQRP	W8RTJ 159,840 SOQRP	N4UJ 130,011 SOQRP	N1TM 270,600 SOQRP
KU7Y 66,192 SOQRP	WD0T 56,160 SOQRP	KB0KFX 30,780 SOQRP	K3TW 111,438 SOQRP	KU1N 161,868 SOQRP
K2GMY 34,080 SOQRP	KE0TT 37,947 SOQRP	VA3PCJ 27,600 SOQRP	K2YGM 95,064 SOQRP	K3WWW 151,200 SOQRP
VE7CC 2,063,556 SOUHP	K5TR 2,445,381 SOUHP	AA9A (N9UA, op) 2,974,833 SOUHP	N4AF 4,790,430 SOUHP	K3WW 6,394,752 SOUHP
KY7M 1,457,712 SOUHP	NM5M 2,025,765 SOUHP	K9NW 2,742,894 SOUHP	K5KG 3,736,494 SOUHP	AA3B 6,325,407 SOUHP
K6BIM 1,391,058 SOUHP	K0KX 1,960,083 SOUHP	K9IMM 1,941,390 SOUHP	K0LUZ 2,277,828 SOUHP	N3RS 5,709,645 SOUHP
W7VJ (N7NM, op) 1,213,920 SOUHP	N5JR 1,467,180 SOUHP	N0JJ 1,688,625 SOUHP	K7BV 2,238,336 SOUHP	K6ND (K1XM, op) 5,354,640 SOUHP
KO7SS 1,139,472 SOUHP	W5GN 1,373,856 SOUHP	VE3UTT 1,657,272 SOUHP	K5EK 2,034,912 SOUHP	K1RX 5,069,220 SOUHP
K6WSC 660,816 SOULP	W0UO 1,561,950 SOULP	VA3DF 1,592,745 SOULP	W4IX 2,969,415 SOULP	W1MSW 1,977,996 SOULP
W6AVW 321,048 SOULP	AD1C 563,892 SOULP	W9XT 1,508,931 SOULP	NA4XL 1,714,656 SOULP	W3KB 1,770,624 SOULP
W7VO 303,195 SOULP	AA0AI 489,600 SOULP	N8VV 743,400 SOULP	AA4FU 1,318,248 SOULP	KG4V (N1EN, op) 1,652,796 SOULP
AF6WG 269,325 SOULP	K0MPH 463,932 SOULP	K8BKM 630,990 SOULP	K3IE 1,042,548 SOULP	WO1N 1,639,950 SOULP
N6PN 240,543 SOULP	K1QJ 444,108 SOULP	VE3GFN 586,692 SOULP	AD8J 985,932 SOULP	VO1HP 1,272,456 SOULP
K9YC 388,020 SOUQRP	K5RX 75,120 SO-80	VE3XT 42,465 SOUQRP	K4AHO 4,797 SOUQRP	NA3E 17,100 SOUQRP
K7MK 21,357 SOUQRP	NG0T 2,664 SO-80	W8TOP (W8UVZ, op) 4,224 SO-160	W4AA 8,316 SO-160	VE9BWK 15,318 SOUQRP
N7GP 12,600 SO-160	N5FO 241,758 SO-40	KE0L 1,716 SO-160	W4ZV 8,316 SO-160	WA2NYY 1,539 SOUQRP
K7CW 2,394 SO-160	N0EI 108 SO-40	K4FJ 29,736 SO-80	AG4W 6,201 SO-160	K1WHS 22,692 SO-160
W7FI 2,100 SO-160	KV0Q 336,930 SO-20	KM4HI 22,176 SO-80	KZ2I 918 SO-160	N200 15,624 SO-160
W6RKC 2,016 SO-160	WU0A 24 SO-20	KJ4EX 4,080 SO-80	K2XN 0 SO-160	W2VO 6,318 SO-160
K7HP 216 SO-160	W2UP 303,930 SO-15	K9JU 1,650 SO-80	W4AA 8,316 SO-160	W3GH 5,661 SO-160
W9FI 7,425 SO-80	W5UR (AA5B, op @ AA5B) 239,598 SO-15	N9TF 2,730 SO-80	W4ZV 8,316 SO-160	KN2T 4,320 SO-160
K6AAM 6,885 SO-80	N5DO 216,918 SO-15	AC8CE 2,232 SO-80	AG4W 6,201 SO-160	VY2ZM 208,527 SO-80
NE7D 4,536 SO-80	W7CT 199,872 SO-15	N9CO 107,136 SO-40	K22I 918 SO-160	W3BGN 99,897 SO-80
W1PR 720 SO-80	KZ5J 111,435 SO-15	W8IQ 31,488 SO-40	K2XN 0 SO-160	W1HI 40,548 SO-80
W6YX (N7MH, op) 234,555 SO-40	VE5GC 924 SO-10	K9CJ 28,272 SO-40	W4AA 8,316 SO-160	W1XX 39,060 SO-80
KA9A 17,649 SO-40	N0JK 351 SO-10	W8UE 27,714 SO-40	W4ZV 8,316 SO-160	K1DM 24,111 SO-80
W7QDM 16,218 SO-40	N0TK 135 SO-10	WO9S 9,546 SO-40	AG4W 6,201 SO-160	KA1IS 114,750 SO-40
N7QR 75 SO-40	AC4CA 1,586,910 MSHP	NF8R 93,183 SO-20	K22I 918 SO-160	WC1M 70,686 SO-40
N3LGA 60 SO-40	K5SZ 536,760 MSHP	W8GOC 31,464 SO-20	K2XN 0 SO-160	W8BPU 25,200 SO-40
N7CW 119,508 SO-20	K0ZX 117,594 MSHP	N9XX 29,601 SO-20	W4AA 8,316 SO-160	W2EG 22,935 SO-40
K6GHA 14,352 SO-20	K0JE 99,918 MSHP	K8AJS 257,400 SO-15	W4ZV 8,316 SO-160	VY2LI 9,804 SO-40
NI6G 8,094 SO-20	K0UK 623,904 MSLP	W9ILY 254,205 SO-15	W4AA 8,316 SO-160	N2MF 626,760 SO-20
NO6X 2,691 SO-20	N0CG 34,314 MSLP	W8WA 226,734 SO-15	W4ZV 8,316 SO-160	KD2RD 559,011 SO-20
VE7NI 105 SO-20	N0NI 5,600,955 M2	VE3TG 67,914 SO-15	W4ZV 8,316 SO-160	W2TF 115,515 SO-20
N7DD 428,400 SO-15		KG9N 28,908 SO-15	W4ZV 8,316 SO-160	A1Q 48,204 SO-20
W6YA 354,816 SO-15		WB9Z 41,535 SO-10	W4ZV 8,316 SO-160	N3XF 38,976 SO-20
K7MI 220,248 SO-15		K9BGL 40,683 SO-10	W4ZV 8,316 SO-160	NY3A 546,786 SO-15
K7WP 82,410 SO-15		WD9EXD 8,532 SO-10	W4ZV 8,316 SO-160	W2AW (N2GM, op) 251,472 SO-15
WB6L 81,528 SO-15		N8XX 624 SO-10	W4ZV 8,316 SO-160	NA3D 233,700 SO-15
VE7YU 6,612 SO-10		KB8O 330 SO-10	W4ZV 8,316 SO-160	W2AW 173,145 SO-15
WD6DX 3,750 SO-10		W5MX 3,463,317 MSHP	W4ZV 8,316 SO-160	N1NK 168,714 SO-15
K7EPH 1,890 SO-10		K8AZ 7,109,553 M2	W4ZV 8,316 SO-160	K2SSS 62,220 SO-10
K6VHF 1,824 SO-10		VE3JM 6,930,522 M2	W4ZV 8,316 SO-160	N2PP 46,350 SO-10
K6LL 2,273,808 MSHP		K9CT 6,061,809 M2	W4ZV 8,316 SO-160	W3DF 15,600 SO-10
K7RI 1,253,802 MSHP		W9VW 937,062 M2	W4ZV 8,316 SO-160	K3SWZ 14,580 SO-10
W6RFU 932,640 MSHP		W0AII 3,823,470 MM	W4ZV 8,316 SO-160	WB2AMU 8,892 SO-10
W8TK 729,882 MSHP			W4ZV 8,316 SO-160	W2FU 7,232,448 MSHP
VE7FO 10,152 MSHP			W4ZV 8,316 SO-160	K2QMF 4,506,489 MSHP
N7AT 4,093,110 M2			W4ZV 8,316 SO-160	N1MM 4,438,518 MSHP
K7JR 1,377,918 M2			W4ZV 8,316 SO-160	K3PH 3,249,900 MSHP
N6WM 3,955,392 M2			W4ZV 8,316 SO-160	W2XL 2,572,731 MSHP
N6XI 1,412,235 MM			W4ZV 8,316 SO-160	W3YI 382,104 MSLP
			W4ZV 8,316 SO-160	W3WN 183,012 MSLP
			W4ZV 8,316 SO-160	W1FM 8,901 MSLP
			W4ZV 8,316 SO-160	K1IG 8,934,618 M2
			W4ZV 8,316 SO-160	NN3W 7,714,323 M2
			W4ZV 8,316 SO-160	W1VE 6,125,328 M2
			W4ZV 8,316 SO-160	W2CG 4,968,012 M2
			W4ZV 8,316 SO-160	W2YC 4,490,892 M2
			W4ZV 8,316 SO-160	W3LPL 13,700,160 MM
			W4ZV 8,316 SO-160	K3LR 12,482,748 MM
			W4ZV 8,316 SO-160	WE3C 11,422,500 MM
			W4ZV 8,316 SO-160	WK1Q 9,024,867 MM
			W4ZV 8,316 SO-160	K1KI 5,115,240 MM

## Continental Winners

### Africa

Single Operator, High Power	D4C (YL2KL, op)	5,828,427
Single Operator, Low Power	EA8CN	1,120,392
Single Operator, QRP	EA8/G4ERW	1,056
Single Operator Unlimited, High Power	ZS6WN	440,316
Single Operator Unlimited, Low Power	EF8R	1,773,696
Multioperator, Single Transmitter, Low Power	ET7L	183,312
Multioperator, Multitransmitter	CR3W	6,156,906

### Asia

Single Operator, High Power	JR2GRX	998,568
Single Operator, Low Power	JH4UYB	580,635
Single Operator, QRP	JH1OGC	86,292
Single Operator Unlimited, High Power	5B4AMM	962,226
Single Operator Unlimited, Low Power	JH1EAQ	344,379
Single Operator Unlimited, QRP	JK1TCV	3,927
Single Operator, 160 Meters	JE1SPY	162
Single Operator, 80 Meters	JA7QVI	3,276
Single Operator, 40 Meters	7M4CLF	58,926
Single Operator, 20 Meters	RT0F	168,681
Single Operator, 15 Meters	JA7FTR	140,250
Single Operator, 10 Meters	JG1AVO	1,419
Multioperator, Single Transmitter, High Power	JA7ZFN	1,467,144
Multioperator, Single Transmitter, Low Power	JH1OES	36,180
Multioperator, Two Transmitter	7J1YAJ	1,092,573
Multioperator, Multitransmitter	JA3YBK	2,397,600

### Europe

Single Operator, High Power	CU4DX (EA5KA, op)	4,805,370
Single Operator, Low Power	EF2A (EA2OT, op)	2,280,960
Single Operator, QRP	HB9BMY	227,664
Single Operator Unlimited, High Power	G5W (G3BJ, op)	2,313,765
Single Operator Unlimited, Low Power	EC4TA	915,687
Single Operator Unlimited, QRP	OK2FD	328,287
Single Operator, 160 Meters	CU2KG (OH2BH, op)	67,473
Single Operator, 80 Meters	S52AW	54,120
Single Operator, 40 Meters	IR1Y (IK1YDB, op)	210,984
Single Operator, 20 Meters	SJ2W (SM2LIY, op)	302,808
Single Operator, 15 Meters	CR2X (OH2PM, op)	323,460
Single Operator, 10 Meters	YT5W (YU1AU, op)	12,180
Multioperator, Single Transmitter, High Power	IR4M	2,933,304
Multioperator, Single Transmitter, Low Power	OL1C	632,790
Multioperator, Two Transmitter	ED7P	4,002,786
Multioperator, Multitransmitter	9A1A	3,706,425

### North America

Single Operator, High Power	8P5A (W2SC, op)	7,548,552
Single Operator, Low Power	NP2X (K9VV, op)	4,610,385
Single Operator, QRP	CO2CW	21,708
Single Operator Unlimited, High Power	V26M (N3AD, op)	5,191,725
Single Operator Unlimited, Low Power	KP4KE	4,378,641
Single Operator, 160 Meters	NP2J	88,086
Single Operator, 80 Meters	XE2X	209,745
Single Operator, 20 Meters	6Y4K	310,680
Single Operator, 15 Meters	CO8CY	97,524
Single Operator, 10 Meters	CO8LY	142,785
Multioperator, Single Transmitter, High Power	TI8/AA8HH	103,272
Multioperator, Single Transmitter, Low Power	TI5W	7,591,320
Multioperator, Two Transmitter	V31TP	5,591,466
	T48K	7,595,616

### Oceania

Single Operator, High Power	KH7M (NA2U, op)	3,749,652
Single Operator, Low Power	ZM4T (ZL3IO, op)	1,359,585
Single Operator, QRP	VK2DX	34,155
Single Operator Unlimited, High Power	NH2DX (KG6DX, op)	180,000
Single Operator Unlimited, Low Power	VK7CW	154,440
Single Operator, 160 Meters	KH6KG	216
Single Operator, 80 Meters	KH6/WB4JTT	60,684
Single Operator, 40 Meters	ZL2AGY	103,704
Single Operator, 20 Meters	DP1POL (DL5XL, op)	100,398
Single Operator, 15 Meters	VK2IA	229,158
Multioperator, Single Transmitter, High Power	KH6J	3,632,643
Multioperator, Single Transmitter, Low Power	YE1R	2,520
Multioperator, Two Transmitter	ZL3X	1,422,225
Multioperator, Multitransmitter	KH6LC	7,028,070

### South America

Single Operator, High Power	OA4SS	2,049,111
Single Operator, Low Power	YV8AD	2,491,482
Single Operator, QRP	P40W (W2GD, op)	3,570,936
Single Operator Unlimited, High Power	CE2MVF	2,095,218
Single Operator Unlimited, Low Power	LU7HZ	547,740
Single Operator, 160 Meters	HK1R	134,850
Single Operator, 80 Meters	LU1FAM	20,538
Single Operator, 40 Meters	P49Y (AE6Y, op)	338,001
Single Operator, 20 Meters	FY5KE (F6FVY, op)	421,083
Single Operator, 15 Meters	CX2BR	195,660
Single Operator, 10 Meters	HK1X	336,123
Multioperator, Single Transmitter, Low Power	ZW8T	1,909,104
Multioperator, Two Transmitter	PJ4X	8,901,270
Multioperator, Multitransmitter	PJ2T	9,825,354



W2GD (left) and DL6RAI (right) performing tower work at P49V in Aruba during the week before the contest. The work was finished just in time for DH8BQA, DL5CW, DL5LYM, and DL6RAI to operate Multioperator, Two Transmitter P40XM together for the first time. [Oliver Droese, DH8BQA, photo]

title. Frank attributes the win partially to this year's propagation that benefited his station over K3LR.

"Very favorable propagation to Europe allowed us to develop a 500-QSO advantage compared to our more northerly competitors," Frank wrote. "Twenty and 15 meters were particularly favorable during the Saturday daylight hours, 15 and 10 meters were favorable during Sunday daylight hours, followed by a strong 80 meter opening to close out the last few hours of the contest." When the author recently discussed the win with Frank in Dayton, he said that if it wasn't for factors such as these changes in propagation, he would lose interest in the game and stop coming back each year to try and win again.

No matter how large or small your station, what your operating goals are, or how much time you have to operate over the weekend, there truly is something for everyone to enjoy in the ARRL International DX CW contest. If you haven't tried contesting, if it has been a while, or maybe if you are new to CW, be sure to put February 18 – 19, 2017 on your calendar and come see what all the fun is about.