



ARRL 2016 International DX Phone Contest Results

By Drew Vonada-Smith, K3PA, drew@whisperingwinds.org



The tower at VP2MMF. Chuck, K1XX, has a clever arrangement to service the Yagi from the roof, giving him more free time at the beach! (Chuck Carroll, K1XX, photo)

Pete, ON4TO, ran 10 miles on Saturday and QSOs on Sunday. Bill, N8NJA, almost made DXCC in a weekend, while John, N6HI, got on the air with five watts and 20 feet of end-fed wire slung out his window. What do these three hams have in common? They all got on for the 2016 ARRL International DX Phone Contest March 5 and 6 despite experiencing many of the excuses so many hams use to stay off the air.

I was once told by a wise ham that there are operators, and there are observers. Observers seem to have a multitude of reasons why they cannot operate, while operators seem to overcome barriers to get on the air.

Are you an operator or an observer? With apologies to David Letterman, it's time for tonight's Top Ten Reasons Hams Don't Contest.

10. I'm too busy to operate the full contest

That's true for many of us. Peter, ON4TO, notes he was busy running the Ostend-Bridges 10-mile run on the Saturday of the contest. Now that's a run! Just operate when you can, you don't need to be on for the entire contest. Or, pick a category, such as a single band that isn't active at all hours. There's a category just for you, so pick one and have some fun.

9. I only operate my favorite mode or band

There is a contest for any band or mode you might enjoy, from 160 meters to Hellschreiber. Just take a peek at the ARRL Contest Calendar and choose one!

8. My station is not competitive

Do you avoid that pickup basketball game with friends, just because you might not win? No, because it's all about the sport and the fun. Not to mention all the DX you can work in one weekend. Bill, N8NJA, said "Just about made DXCC!". There is a category in which almost anyone can be competitive, so whether you are single band, QRP, or multi-operator, you can compete with others in similar circumstances. Try it!

7. I'm too old

Not for this sport. As one example of hundreds, Joe, W7QN has been licensed since 1939 and is active in almost every major contest using his vertical antenna atop an apartment building. Joe makes hundreds of CW and phone QSOs and is having a great time. Why not join him?

6. I'm too young

Never! There are many talented young contesters. Check out the YOTA Youth Contesting Program in

Europe. Or YACHT, the Young Amateurs Communications Ham Team. We need you for the future of ham radio, and there are many older hams anxious to help. It's a better time than ever for young hams to have access to high-performance stations most of us can only dream of building. If you need a mentor and can't find one, please email your author.

5. The bands are too crowded

Do you prefer to eat at an empty buffet, or one loaded with all types of goodies? A busy band means opportunity. You will have lots of chances to work many stations, including ones you might not often find. And they are looking for YOU. Belly up to the bands and sample a few delicacies!

4. Sunspots are down

That's why we have more than one ham band! Even in low sunspot times, there are some interesting openings on 10 and 15 meters. Twenty meters is a solid producer for the entire sunspot cycle. And don't forget 40, 80, and 160 meters; those lower bands are as good as or better than they were during the peak, and now you will have time to take advantage of them. Conditions do not really get worse during low sunspot times, they merely change.

3. My antennas are restricted

Sadly, an all too common issue. But you don't need a perfect antenna to make contacts. Let's take a look at a few soapbox notes.

N6HI – 5 W to a 20 ft. end-fed wire tied to a rock thrown into a tree out my window. (61 QSOs)

K3RWN - Operated portable from my RV on a 33' wire vertical. Loads of fun! (56 QSOs)

NE8O/4 – Used a dipole in attic of house. 39 countries on 20, 51 on 15, 2 on 10. (233 QSOs)

Most areas are required to permit flagpoles, which make great verticals. Mobile antennas fit anywhere. Wires can be nearly invisible. Attics can host very good antennas; check out articles by attic-master ACØC. Be creative and try something; I think that you will be pleasantly surprised.



You don't need big towers! This quickly raised tribander by John, KCØDEB placed second in the Midwest for the Single Operator Unlimited Low Power category. (John van Eijndt, KCØDEB, photo)

2. I don't have a station at present

Well this one is insurmountable, isn't it? Not at all! Lots of multi-operator contest efforts would be happy to have another contributor. Ask around. Maybe the owner of that great station in your club hates to see it go unused. Ask him if he'd like to see it in the contest. And we now have the most modern solution of all, remote station operation. This is no longer just for experimenters; there are many stations now available for remote operation that are great performers and can be used by anyone with a computer and internet connection. To illustrate how far this technology has come, Alex, KU1CW, recently operated contest station W4AAW remotely, as a Single Operator Two Radio entry!

1. I don't have any contest experience

We all operated a first contest. Even Frank, W3LPL, was once a beginner. We all need your QSOs, so new and slower operators are very much welcomed. Brad, KK6ZLE, Dave, KEØHKV, Chad, KEØGLZ, Dave, KEØOG, and others all commented that this was their first

contest. Ed, KD2KJY noted that he had only received his license a few days before the contest!

Find another contester at your local club and chat. Or locate your local contest club and attend a meeting. Or, perhaps you might visit Contest University at Dayton one year. And of course, please feel free to email your author for contacts or mentorship ideas. But perhaps best method is to just turn on the radio and make some contacts!



Ralph, K9ZO (left) and Brian, K9QQ are sharing 15 meters on their new SDR transceivers at K9CT. Using a run station and a search-and-pounce station effectively on the same band requires a lot of attention to station-building details. (Ward Silver, NØAX, photo)



Not every contester can rock those pink headphones! Jo Ann, ND3JJ operates at NE3F. (Blair Bates, K3YD, photo)

Top Ten – U.S. and Canada

Single Operator, High Power

VY2ZM	6,252,480
N1UR	5,448,768
VY2TT (K6LA, op)	5,146,986
CJ3T (VE3AT, op)	4,885,650
W9RE	4,439,544
KQ2M	4,082,166
AA1K	3,337,560
NR5M	3,138,144
K3ZO	2,942,640
K4AB	2,432,673

Single Operator, Low Power

W1UE	2,482,284
N5AW	1,808,856
N1PGA	1,518,765
W7RM (K2PO, op)	1,412,775
K6XX	1,376,097
NA8V	1,274,016
K1KNQ	1,109,544
WB2WPM	966,966
VA3SWG	904,752
VE7UF (VE7JH, op)	809,778

Single Operator, QRP

N1TM	427,332
VE3UTT	253,752
W6QU (W8QZA, op)	182,532
AB3WS	146,718
NDØC	134,976
KA8SMA	110,568
K3TW	86,112
VE3FCT	83,850
K2YGM	69,336
K2GMY	64,746

Single Operator Unlimited, High Power

VE3EJ	7,096,032
K3WW	5,106,444
NC1I (K9PW, op)	4,974,930
K1RX	4,562,028
AA3B	4,179,792
W3UA	3,924,858
AA9A (N9UA, op)	3,764,487
N3RS	3,191,166
K5ZD	3,067,968
VE9CB	2,916,267

Single Operator Unlimited, Low Power

VA3DF	2,280,066
N2SQW	1,408,590
N2WKS	1,327,374
KS1J	1,244,196
WW3S	1,181,373
W3KB	1,087,824
N4RA	1,067,616

W4ZAO	991,116
K4DMR	819,930
AA4R	715,200
Single Operator Unlimited, QRP	
N4HH	33,264
WB6CZG	4,860
K8ZT	2,025
Single Operator, 160 Meters	
W2MF	25,230
NA1DX	6,237
WB4WXE	5,145
KM1R	3,906
AG4W	3,828
W2VO	2,652
N7GP (N5IA, op)	2,448
AA9BD	2,346
VE3EDY	2,070
K7CW	210
Single Operator, 80 Meters	
W3BGN	76,860
AA1BU	67,776
W3LL	67,521
W1XX	64,872
ND8DX	36,000
W4DD	16,524
KCØMCK	14,535
KX2S	14,250
W8JGU	12,600
N6RO	11,466
Single Operator, 40 Meters	
K1IG	355,635
W7WA	315,210
N2IC	296,646
W6YX (N7MH, op)	160,866
W6RW	56,160
W6KW	42,840
K4US (KK4ODQ, op)	38,988
KE3X	35,442
K9OM	31,284
VO1AX	29,865
Single Operator, 20 Meters	
K2R (KD2RD, op)	663,288
VE8EV	406,026
WR2G	153,699
AB1WR	116,145
W1AVK	98,010
NW3H	73,863
WA4JUK	70,992
A13Q	45,066
WX2N	43,452
W8GOC	38,430
Single Operator, 15 Meters	
N7DD	585,000
W4KZ (W4IX, op)	579,600

VE3DZ	475,440
K9BGL	461,328
K5RX	447,876
K2RD	216,315
WK9U	176,043
W2AW	173,145
KM4HI	160,908
W9ILY	123,120
Single Operator, 10 Meters	
W5PR	244,314
N4OX	201,201
K2SSS	178,470
N2PP	165,273
K4WI	84,708
W2RR (WA2AOG, op)	45,627
N4IJ	40,320
W5GAI	39,168
NA3M/4 (NA3M/4, op)	37,200
WD9EXD	35,046
Multioperator, Single Transmitter, High Power	
NV9L	4,931,412
K5TR	4,270,332
N1MM	3,641,790
W3MF	2,348,118
W5MX	2,261,802
WB2P	1,998,912
K7RI	1,958,712
K3MD	1,616,940
W4HZ	1,569,072
K5UA	1,515,621
Multioperator, Single Transmitter, Low Power	
VE2BWL	1,870,749
N5DO	1,412,028
KT4ZB	1,268,820
W3ZGD	806,316
K3MDX	377,646
K2AA	249,678
W1FM	233,415
KD7RCJ	202,419
N9VI	159,300
N8YXR	115,326
Multioperator, Two Transmitter	
K9CT	6,871,476
K1CC	6,652,800
K6ND	6,213,987
K8AZ	5,428,260
W6WB	4,312,011
W2CG	3,200,148
N2GZ	2,462,616
WA3EKL	2,393,682
KN5TX	2,030,580
WA2CP	1,977,732
Multioperator, Multitransmitter	
K3LR	18,199,188
W3LPL	14,961,258

WE3C	12,871,422
WK1Q	8,719,368
K1KI	7,410,609
W4RM	6,669,984
WØAIH	4,831,500
W4AAW	3,421,056
K1KP	3,055,620
NE3F	2,798,211

Top Ten - DX

Single Operator, High Power

KP3Z (N6MJ, op)	8,099,388
HK1NA (N6KT, op)	7,709,778
KP2M (N2TK, op)	5,942,970
CR6K (CT1ILT, op)	5,547,738
YN5Z (K7ZO, op)	5,049,432
KH7M (NA2U, op)	4,804,344
LX7I (LX2A, op)	4,513,665
NP2P (N2TTA, op)	3,932,040
TO5A (F5VHJ, op)	3,693,558
UA2F (UA2FB, op)	3,099,870

Single Operator, Low Power

VP2MMF (K1XX, op)	5,275,725
NP2X (K9VV, op)	5,157,432
HI3TEJ	4,926,180
VP9/W6PH	3,373,299
EC2DX	1,781,136
P43E	1,559,460
S5ØA	1,525,578
KH6CJJ	1,011,609
EIØDX (G4XUM, op)	1,007,199
EI1A (ON4EI, op)	893,325

Single Operator, QRP

VP5H (WØGJ, op)	1,447,740
F5BEG	125,685
DL8LR	121,728
SP9LJD	120,156
IO9P (IT9SPB, op)	90,954
OE6MBG	61,425
CT1BXT	52,065
JH1OGC	27,072
SP4LVK	21,783
JR4DAH	21,708

Single Operator Unlimited, High Power

P4ØM (VE3LA, op)	6,568,200
V26M (N3AD, op)	6,049,908
CS2C	4,952,214
IR4M (IK4MGP, op)	3,843,906
S57AL	2,887,164
EI6JK	2,544,522
ES5Q (ES5RY, op)	2,361,840
S54ZZ	2,014,920
IZ8EPX	2,013,912
WP4SK	1,953,000

Single Operator Unlimited, Low Power

WP2AA (KK9A, op)	4,279,968
CO8ZZ	2,222,154
EF8R (EA8RM, op)	1,719,468
ZW8T (PS8HF, op)	1,402,650
HI8JSG	1,256,100
PY8WW	964,080
DF2SD	794,010
V55DX	684,483
PY2ZR	619,248
XE2AU	480,900

Single Operator Unlimited, QRP

OK2FD	92,400
JK1TCV	2,574
JA7KBR (7L4IOU, op)	378
PE2K	162
R7FO	126

Single Operator, 160 Meters

UYØZG	105
EU2EU	60
S56P	36
UA2FT	12

Single Operator, 80 Meters

XE2X	201,117
GM3PPG (G4BYB, op)	172,200
EB3CW	115,830
CO2JD	107,856
EA1BD	92,379
IK5RUN	73,524
9A1TT	66,402
OE6Z (OE6MBG, op)	64,260
RW1A	63,597
I4AVG	35,685

Single Operator, 40 Meters

OK7W (OK1CID, op)	256,650
TMØR (F4ARU, op)	254,700
9A7V	239,481
YT7A (YU7GM, op)	229,923
OK1GTH	209,700
SP8K	206,280
YW5T (YV5JBI, op)	188,832
US1I (UX2IO, op)	171,738
HG8R (HA8JV, op)	131,340
XE2S	120,060

Single Operator, 20 Meters

D4C (IZ4DPV, op)	773,577
ED1R (EC1KR, op)	444,906
OH8L (OH8LQ, op)	407,673
OL1X (OK4PA, op)	393,267
S5ØK	387,810
KH7BB	382,320
OK1NP	340,752
TG9ANF	320,433
RTØF	297,924

IR6T (IK6JNH, op)	294,066
Single Operator, 15 Meters	
FY5KE (F1HAR, op)	599,664
KH6LC (NH6V, op)	530,151
MIØSMK	423,522
9A3TR	349,164
KP4RV	341,640
G9W (MØDXR, op)	334,341
OK1CID	324,900
OHØI (OH9MM, op)	323,178
EI1Y (EI5JQ, op)	302,400
ZF2AH	286,578
Single Operator, 10 Meters	
PX5E (PP5JR, op)	645,480
PX2B (PY2LED, op)	562,320
LU5FC	481,839
NP2J	462,780
CV7S (CX7SS, op)	421,260
KP2XX	415,860
XE1B	395,772
PY2NDX	338,601
AH6RE	298,932
YV6CR	251,442
Multioperator, Single Transmitter, High Power	
TI5W	9,201,888
6Y1LZ	8,463,840
PJ2T	8,195,916
6Y6Y	7,318,629
PZ5W	6,318,243
TM6M	5,960,319
EI7M	5,532,588
KH6J	4,850,625
TO66R	4,449,912
DR1D	4,049,730
Multioperator, Single Transmitter, Low Power	
YV1KK	4,937,400
IB9O	480,996
EI1E	466,992
OL1C	393,786
M5BFL	371,604
3G1B	263,712
ZY5A	158,415
LU3VE	29,565
UR4RWW	25,326
SJ3A	23,598
Multioperator, Two Transmitter	
P4ØL	13,937,499
PJ4G	13,271,709
5D3A	9,716,394
ED7P	5,577,582
HI3K	5,182,125
PS2T	4,685,730
M6T	3,772,668
SN8B	3,396,096
CE3CT	3,321,528

II2S	2,220,996
Multioperator, Multitransmitter	
CR2X	13,759,620
C6ANA	9,187,338
9A1A	7,032,021
TI5M	7,027,884
II9P	6,926,841
9A1P	5,398,551
C6ANM	5,105,124
HCØE	3,695,988
EI9E	3,210,636
JA3YBK	1,854,711

Conditional Surrender

You can't talk about a DX Contest and not discuss band conditions. Was 2016 the time to give up on 10 meters? It depends. In US/VE, Single Band Ten Meter scores were down to about a third of 2015. But there were still big scores to be had, and in high band strongholds such as Brazil and Argentina, 10M scores were not down much at all. Conclusion? Keep the faith for 10, but plan to upgrade your 40 and 80 meter antennas.

Despite the decline, participation was strong, with 3,883 logs received, about even with last year's figure of 3,910. Total number of QSOs reported were slightly down, 1.72 million, from 1.88 million last year.

Clash of the Titans

Who were the big winners on the behemoth end of the scale? These hams operate the stations dreams are made of.

In the fiercely competitive Multioperator, Multi-Transmitter category, Tim's K3LR effort managed to repeat its SSB win of the last several years with 18.2M, after being upstaged by Frank's W3LPL surge on the CW weekend. W3LPL placed second with 15.0 M, while John's WE3C thrust was not far behind with 12.9M. Epic battles will continue here!

Among DX, the CR2X Multi-Multi team led with 13.8M. In second place was an impressive 9.2M showing by C6ANA.

In the Multioperator, Two Transmitter category, Craig, K9CT, led stateside with 6.9M, with Richard, K1CC, and Will, K6ND, very close behind. Offshore, P4ØL turned in 13.9M for the win, with a larger score than the Multi-Multi category! 5D3A earned silver with 9.7M.

What about the single operator efforts? Jeff, VY2ZM, took Single Operator, High Power category with 6.3M, followed by Ed, N1UR, and Ken, VY2TT (K6LA, op). DX was led by KP3Z (Dan, N6MJ, op) with 8.1M, followed closely by HK1NA (Richard, N6KT, op). In the High Power Unlimited category, John, VE3EJ, earned a clean win at 7.1M, with Chas, K3WW, and NC1I (Pete, K9PW, op) closely grouped for second and third. P4ØM (Ken, VE3LA, op) led from South America with 6.6M, followed closely by veteran V26M (Alan, N3AD, op).

Matchup among Mortals

What about contesting for the other 99% of us? Some of the lower power stations are a bit more modest, but staffed with real contesting talent, the scores can be formidable.

In US/VE, the Single Operator, Low Power category was won by Dennis, W1UE, with 2.5 million points. Marvin, N5AW, and John, N1PGA, placed second and third. For the Single Operator, Unlimited, Low Power category, Doug, VA3DF, produced a solid win, with Ken, N2SQW, and Zev, N2WKS, closely spaced for second and third.

Among DX, North America dominated, with VP2MMF (Chuck, K1XX, op) winning the Single Operator Low Power category, and WP2AA (John, KK9A, op) taking the Unlimited gold.

Division Winners

Single Operator, High Power

Atlantic	AA1K	3,337,560
Central	W9RE	4,439,544
Dakota	KØTT	2,030,589
Delta	W4KW	795,906
Great Lakes	K8AO	1,166,277
Hudson	NX2X	1,911,021
Midwest	K3PA	1,741,698
New England	N1UR	5,448,768
Northwestern	W7YAQ	917,448
Pacific	NR6Q	772,128
Roanoke	K3ZJ	1,926,474
Rocky Mountain	NCØB	711,552
Southeastern	K4AB	2,432,673
Southwestern	N6AA	606,498
West Gulf	NR5M	3,138,144
Canada	VY2ZM	6,252,480

Single Operator, Low Power

Atlantic	WB2WPM	966,966
Central	KD9MS	793,455
Dakota	KØVVX	116,298
Delta	K5XU	140,700
Great Lakes	NA8V	1,274,016
Hudson	W2ID	523,107
Midwest	WØYJT	139,860
New England	W1UE	2,482,284
Northwestern	W7RM (K2PO, op)	1,412,775
Pacific	K6XX	1,376,097
Roanoke	N3ZV	443,808
Rocky Mountain	N7JMO (N7MZW, op)	307,380
Southeastern	K1KNQ	1,109,544
Southwestern	N7IR	678,468
West Gulf	N5AW	1,808,856
Canada	VA3SWG	904,752

Single Operator, QRP

Atlantic	AB3WS	146,718
Central	KB9NKM	36,057
Dakota	NDØC	134,976
Delta	WB4GHZ	10,710
Great Lakes	KA8SMA	110,568
Hudson	K2YGM	69,336
New England	N1TM	427,332
Northwestern	KK7VL	432
Pacific	K2GMY	64,746
Roanoke	K4WY	60,606
Southeastern	K3TW	86,112
Southwestern	W6QU (W8QZA, op)	182,532
West Gulf	KG5GMN	3,192
Canada	VE3UTT	253,752

Single Operator Unlimited, High Power

Atlantic	K3WW	5,106,444
Central	AA9A (N9UA, op)	3,764,487
Dakota	KØKX	1,886,340
Delta	NA4K	902,700
Great Lakes	W8MJ	2,640,000
Hudson	W2IRT	2,212,197
Midwest	KØVXU	846,450
New England	NC1I (K9PW, op)	4,974,930
Northwestern	KA6BIM	2,183,808
Pacific	K7XC	730,917
Roanoke	K7BV	1,985,454
Rocky Mountain	NØKE	1,143,408
Southeastern	KT4Q	1,954,782
Southwestern	KY7M	1,825,320
West Gulf	K5ZO	1,543,650
Canada	VE3EJ	7,096,032

Single Operator Unlimited, Low Power		
Atlantic	WW3S	1,181,373
Central	W9VQ	201,954
Dakota	NØHJZ	266,766
Delta	N4DW	87,870
Great Lakes	K8LY	496,584
Hudson	N2SQW	1,408,590
Midwest	AAØAI	692,382
New England	KS1J	1,244,196
Northwestern	N7FLT	292,929
Pacific	K6GHA	515,043
Roanoke	N4RA	1,067,616
Rocky Mountain	KIØJ	472,392
Southeastern	W1MD	312,987
Southwestern	KK6NON	457,659
West Gulf	N5JR	657,150
Canada	VA3DF	2,280,066
Single Operator Unlimited, QRP		
Great Lakes	K8ZT	2,025
Pacific	WB6CZG	4,860
Southeastern	N4HH	33,264
Single Operator, 160 Meters		
Atlantic	W2MF	25,230
Central	AA9BD	2,346
Midwest	K8MCN	12
New England	KM1R	3,906
Northwestern	K7CW	210
Southeastern	WB4WXE	5,145
Southwestern	N7GP (N5IA, op)	2,448
Canada	VE3EDY	2,070
Single Operator, 80 Meters		
Atlantic	W3BGN	76,860
Central	WI9H	5,643
Delta	N5RN	4,182
Great Lakes	ND8DX	36,000
New England	AA1BU	67,776
Northwestern	KZ1W	918
Pacific	N6RO	11,466
Roanoke	KCØMCK	14,535
Southeastern	W4DD	16,524
Canada	VE9OA	5,049
Single Operator, 40 Meters		
Atlantic	K4US (KK4ODQ, op)	38,988
Central	K9IDQ	19,620
Delta	W8FR	17,901
Great Lakes	AD8C	16,200
Hudson	K4BNC	12,540
Midwest	WDØBGZ	15,834
New England	K11G	355,635
Northwestern	W7WA	315,210
Pacific	W6YX (N7MH, op)	160,866
Roanoke	KD4RH	29,760
Rocky Mountain	N2IC	296,646
Southeastern	W6KW	42,840
Southwestern	W6RW	56,160
Canada	VO1AX	29,865
Single Operator, 20 Meters		
Atlantic	NW3H	73,863
Central	W9WJ	22,143
Dakota	WFØT	1,197
Delta	KD5COL	432
Great Lakes	W8GOC	38,430
Hudson	K2R (KD2RD, op)	663,288
New England	AB1WR	116,145
Northwestern	W7PU	29,346
Pacific	W7XZ	26,271

Roanoke	WA4JUK	70,992
Rocky Mountain	W9BNO	3
Southeastern	AG4YL	14,352
Southwestern	KE7GKI	4,032
West Gulf	KF5ZNQ	30,690
Canada	VE8EV	406,026
Single Operator, 15 Meters		
Atlantic	KD2ARU	15,288
Central	K9BGL	461,328
Delta	WA4RNN	35,190
Great Lakes	W8WA	50,568
Hudson	W2AW	173,145
Midwest	KAØP	429
New England	N1DC	69,762
Northwestern	KD7DCR	51,714
Pacific	K2RD	216,315
Roanoke	N1LN	95,118
Southeastern	W4KZ (W4IX, op)	579,600
Southwestern	N7DD	585,000
West Gulf	K5RX	447,876
Canada	VE3DZ	475,440
Single Operator, 10 Meters		
Atlantic	K2SSS	178,470
Central	WD9EXD	35,046
Delta	W5GAI	39,168
Great Lakes	W4LID	12,120
Hudson	WB2AMU	22,350
Midwest	KEØGLZ	2,046
New England	NN1N	5,865
Pacific	KF7KTC	4,785
Roanoke	W6DVS	6,603
Rocky Mountain	K7ULS	324
Southeastern	N4OX	201,201
Southwestern	K9WZB	23,142
West Gulf	W5PR	244,314
Canada	VY2LI	3,672
Multioperator, Single Transmitter, High Power		
Atlantic	W3MF	2,348,118
Central	NV9L	4,931,412
Delta	K5UA	1,515,621
Great Lakes	W5MX	2,261,802
Hudson	AB2DE	963,870
Midwest	NØMA	1,261,113
New England	N1MM	3,641,790
Northwestern	K7RI	1,958,712
Pacific	W7EB	209,622
Roanoke	W4HZ	1,569,072
Rocky Mountain	WY7YL	31,680
Southeastern	W4TA	172,881
West Gulf	K5TR	4,270,332
Canada	VE6AO	118,800
Multioperator, Single Transmitter, Low Power		
Atlantic	W3ZGD	806,316
Central	N9VI	159,300
Great Lakes	N8YXR	115,326
New England	W1FM	233,415
Northwestern	W7PT	85,344
Roanoke	K3MDX	377,646
Southeastern	KT4ZB	1,268,820
Southwestern	KD7RCJ	202,419
West Gulf	N5DO	1,412,028
Canada	VE2BWL	1,870,749
Multioperator, Two Transmitter		
Atlantic	WA3EKL	2,393,682
Central	K9CT	6,871,476
Delta	W4GZX	175,725
Great Lakes	K8AZ	5,428,260
Hudson	W2CG	3,200,148
New England	K1CC	6,652,800

Pacific	W6WB	4,312,011
Southeastern	N4SVC	1,838,403
Southwestern	NX6T	1,749,384
West Gulf	KN5TX	2,030,580
Canada	VE6FI	964,665
Multioperator, Multitransmitter		
Atlantic	K3LR	18,199,188
Central	WØAIH	4,831,500
Delta	W5TCR	2,268
Great Lakes	KB8O	1,623,780
New England	WK1Q	8,719,368
Roanoke	W4RM	6,669,984
Southwestern	N9NA	73,062

Let's Go Clubbing

In the Affiliated Club Competition, Unlimited Category, Frankford Radio Club could not repeat their upset victory of last year and slipped to second place with just less than 250 million points. Yankee Clipper Contest Club took the gavel with 274M. Bringing up third place was Potomac Valley Radio Club with 167M.

The North Coast Contesters dominated the Medium club category with 70M. The Northeast Wisconsin DX Association did the same for Local clubs, with 8.9M.

Affiliated Club Competition

Club	Score	Entries
Unlimited		
Yankee Clipper Contest Club	274,162,590	247
Frankford Radio Club	249,781,071	182
Potomac Valley Radio Club	167,112,891	179
Florida Contest Group	60,990,525	91
Society of Midwest Contesters	52,851,153	146
Minnesota Wireless Assn	52,584,165	100
Contest Club Ontario	51,088,656	55
Northern California Contest Club	31,864,626	70
Arizona Outlaws Contest Club	28,109,301	70
Southern California Contest Club	25,359,303	61
Medium		
North Coast Contesters	70,028,448	27
DFW Contest Group	28,738,929	31
Carolina DX Association	26,497,110	49
Central Texas DX and Contest Club	23,542,155	29
Mad River Radio Club	18,916,917	30
Hudson Valley Contesters and DXers	17,265,213	33
Tennessee Contest Group	16,628,661	37
Willamette Valley DX Club	12,935,433	39
South East Contest Club	12,890,844	30
Georgia Contest Group	12,774,801	20
Alabama Contest Group	9,474,438	25
Order of Boiled Owls of New York	9,103,149	16
Kentucky Contest Group	9,017,736	19
Kansas City Contest Club	7,882,392	17
Louisiana Contest Club	7,876,791	6
Mother Lode DX/Contest Club	7,364,715	26
Contest Group du Quebec	6,903,543	10
Grand Mesa Contesters of Colorado	6,314,121	19
Maritime Contest Club	6,057,540	13
Northeast Maryland Amateur Radio Contest Society	5,996,874	15
Orca DX and Contest Club	5,689,239	17
Iowa DX and Contest Club	5,613,459	3
Swamp Fox Contest Group	5,527,374	11
Niagara Frontier Radiosport	5,153,892	12
North Texas Contest Club	5,097,264	11
Big Sky Contesters	4,528,872	8
Western Washington DX Club	4,346,019	26
Rochester (NY) DX Assn	4,117,893	22
Radiosport Manitoba	3,767,583	5
CTRI Contest Group	3,734,751	8
North Carolina DX and Contest Club	2,558,637	11
Bristol (TN) ARC	2,054,754	12
Mississippi Valley DX/Contest Club	1,862,097	9
Saskatchewan Contest Club	1,297,023	6
Meriden ARC	1,003,566	12
Utah DX Association	954,396	15
East Coast Canada Contest Club	864,699	3
South Jersey Radio Assn	749,178	4
Western New York DX Assn	672,600	3
Texas DX Society	607,395	7
Local		
Northeast Wisconsin DX Assn	8,907,393	9
Central Virginia Contest Club	4,837,839	6
Bay Area DXers	3,739,458	9
Hilltop Transmitting Assn	3,257,187	8
Delara Contest Team	2,740,524	7
Spokane DX Association	1,549,266	9
599 DX Association	1,385,808	9
Bergen ARA	1,344,639	10
Portage County Amateur Radio Service	1,279,767	6
Sussex County ARC	1,182,414	3
Fort Wayne Radio Club	1,025,628	4

Mall City Contest Group	850,260	5
Skyview Radio Society	848,655	8
Sunday Creek Amateur Radio Federation	764,631	7
Salt City DX Assn	734,136	4
Northern Arizona DX Assn	685,320	6
Tri-County ARA	647,907	4
Dupage ARC	558,930	3
Oakland County Amateur Radio Society	545,871	3
Metro DX Club	527,880	7
Sterling Park ARC	514,977	7
Peterborough Amateur Radio Club	482,004	8
NorDX Club	420,258	7
Boeing Employees ARS - St. Louis	383,235	3
Murgas ARC	358,524	3
Milford (OH) ARC	317,064	5
Pottstown Area ARC	251,592	3
Fulton County ARC	229,503	3
Southwest Ohio DX Assn	227,610	4
Delaware-Lehigh ARC	226,989	3
New Providence ARC	226,860	5
Calgary ARA	186,714	3
West Park Radiops	168,087	6
San Diego DX Club	168,084	3
Great South Bay ARC	152,613	4
Southern California DX Club	127,836	3
Granite State ARA	95,586	4
Gwinnett ARS	94,833	3
Mt Vernon (OH) ARC Contesters	86,490	4
Alexandria Radio Club	78,699	3
Lone Star DX Assn	62,874	3
Pueblo West Amateur Radio Club	59,328	4
Nanaimo Amateur Radio Association	57,891	4
Sierra Nevada ARS	42,126	3
Clark County Amateur Radio Club	7,524	3

(kkn.net/~k5tr/scoredb) Records are made to be broken, so start smashing!

Records set, 2016 ARRL DX Phone				
EU	EC2DX	1,781,136	2016	SLP
OC	KH6LC (NH6V,	530,151	2016	S15
AF	D4C (IZ4DPV,	773,577	2016	S20
AS	RTØF	297,924	2016	S20
EU	CS2C	4,952,214	2016	SAH
SA	P4ØM (VE3LA)	6,568,200	2016	SAH
AF	EF8R (EA8RM)	1,719,468	2016	SAL
AS	JK1TCV	2,574	2016	SAQ
EU	OK2FD	92,400	2016	SAQ
AS	RD8D	11,760	2016	MSL
EU	CR2X	13,759,620	2016	MM
1	KI1G	355,635	2016	S40
5	N2IC	296,646	2016	S40
9	AA9A (N9UA,	3,764,487	2016	SAH
VE	VE3EJ	7,096,032	2016	SAH
8	N4RA	1,067,616	2016	SAL
VE	VA3DF	2,280,066	2016	SAL
4	N4HH	33,264	2016	SAQ
6	WB6CZG	4,860	2016	SAQ
8	K8ZT	2,025	2016	SAQ
5	K5TR	4,270,332	2016	MSH
9	NV9L	4,931,412	2016	MSH

Ripe for Records

Nearly as many records fell in 2016 as last year. Twenty-two new records were set, with 11 by W/VE and 11 by DX stations. Let's look at a few of the biggest changes.

In the big Multi-Operator, Multi-Transmitter category, Team CR2X scored 13.8M to nearly double the European record held by 9A1A since 2002. That's almost 13,000 QSOs. Simply amazing.

D4C (Massimo, IZ4DPV, op) brought in 774k to smash the 464k record of EF8R (Juan, EA8CAC/EA8RM, op) set in 2011 for Single Op 20 Meters from Africa. Not to be outdone, Juan went back to EF8R and set a new Single Op Unlimited Low Power record for Africa, scoring 1.72M to overthrow the 236k figure set by Heijo, EA8OM, in 2011. Nicely done!

Closer to home, John, VE3EJ, set a new Single Operator, Unlimited, High Power figure of 7.1M, besting the 5.2M figure set by Ken, VY2TT, in 2014. Take a bow, John!

All of the ARRL contest records are available online at arrl.org/contest-records. More than 400,000 scores are included in the K5TR Contest database, too.

Was that Quebec Three Afghanistan Bananastand?

Copying the call and exchange correctly is important; make the extra effort and ask for a fill when you need it. Penalties are assessed for errors, so boost your score by getting the call sign right! The Top Five Accuracy Leaders in major categories are listed in the following table.

Accuracy Leaders

W-VE

Single-Op

Call	Category	QSOs	Error %	Index
VY2ZM	SOHP	4206	1.2	13.504
CJ3T (VE3AT, op)	SOHP	3645	0.8	13.482
VY2TT (K6LA, op)	SOHP	3971	1.5	13.449
N1UR	SOHP	3887	1.6	13.430
W9RE	SOHP	3298	1	13.418

Single-Op Unlimited

Call	Category	QSOs	Error %	Index
VE3EJ	SAH	4162	1	13.519
NC1I (K9PW, op)	SAH	3330	0.9	13.432
AA3B	SAH	2826	0.6	13.391
K3WW	SAH	3325	1.7	13.352
AA9A (N9UA, op)	SAH	2700	0.8	13.351

Multiop

Call	Category	QSOs	Error %	Index
K3LR	MM	8940	1.1	13.841
W3LPL	MM	7576	1	13.779
WE3C	MM	6839	1.3	13.705
WK1Q	MM	5174	1.5	13.564
K1KI	MM	4355	1.3	13.509

DX

Single-Op

Call	Category	QSOs	Error %	Index
HK1NA (N6KT, op)	SOHP	8051	0.6	13.846
KP3Z (N6MJ, op)	SOHP	8006	0.6	13.843
KP2M (N2TK, op)	SOHP	6246	0.6	13.736
YN5Z	SOHP	5803	0.3	13.734
VP2MMF (K1XX, op)	SOLP	5451	0.8	13.656

Single-Op Unlimited

Call	Category	QSOs	Error %	Index
P4ØM (VE3LA, op)	SAH	6741	1	13.729
V26M (N3AD, op)	SAH	6245	1.1	13.686
CS2C	SAH	5221	0.6	13.658
IR4M (IK4MGP, op)	SAH	4627	0.5	13.615
WP2AA (KK9A, op)	SAL	4670	0.8	13.589

Multiop

Call	Category	QSOs	Error %	Index
P4ØL	M2X	13209	0.4	14.081
PJ4G	M2X	12821	0.6	14.048
CR2X	MM	12745	0.6	14.045
5D3A	M2X	9791	1	13.891
C6ANA	MM	8923	0.9	13.861

Let us also celebrate the remarkable achievement of those on the Top Ten Golden Log list; the largest ten error-free logs.

Top 10 Golden Logs

Call	QSOs	Category
DJ1AA	555	SOUHP
K7VIT	383	SOUHP
TK5MH	354	SOUHP
K7WP	350	SOUHP
S54O	333	SOUHP
W1MD	323	SOULP
S56A	298	SOUHP
DK4WA	283	SOHP
WA2FZB	274	SOLP
K17Y	225	SOUHP

The Real Top Ten

With the many new and interesting categories added to the ARRL DX Contest over the years, there were more worthy winners than these pages can acknowledge. Don't forget to review the Top Ten table and marvel at these impressive scores. And of course, the other extensive tables and score listings as well.

Most importantly, be sure to put March 4-5, 2017 in your calendar and join the fun next year.

Regional Leaders

SOQRP/LP/HP = Single-Op All-Band; SO-xx = Single-Op Single-Band; SOUQRP/LP/HP = Single-Op Unlimited; MSL/MSH = Multioperator, Single Transmitter LP/HP; M2/M = Multioperator, Two/Multi-Transmitter

West Coast Region			Midwest Region			Central Region			Southeast Region			Northeast Region		
Pacific, Northwestern, and Southwestern ARRL Divisions; Alberta; British Columbia, and NT RAC Sections			Dakota, Midwest, Rocky Mountain and West Gulf ARRL Divisions; Manitoba and Saskatchewan RAC Sections			Central and Great Lakes ARRL Divisions; Greater Toronto Area, Ontario East, Ontario North, and Ontario South RAC Section			Delta, Roanoke, and Southeastern ARRL Divisions			New England, Hudson and Atlantic ARRL Divisions; Maritime and Quebec RAC Sections		
Call	Score	Cat	Call	Score	Cat	Call	Score	Cat	Call	Score	Cat	Call	Score	Cat
W7YAQ	917,448	SOHP	NR5M	3,138,144	SOHP	CJ3T (VE3AT, op)	4,885,650	SOHP	K4AB	2,432,673	SOHP	VY2ZM	6,252,480	SOHP
NR6Q	772,128	SOHP	KØTT	2,030,589	SOHP	W9RE	4,439,544	SOHP	K3ZJ	1,926,474	SOHP	N1UR	5,448,768	SOHP
N6AA	606,498	SOHP	K3PA	1,741,698	SOHP	K8AO	1,166,277	SOHP	KM4D	1,340,625	SOHP	VY2TT (K6LA, op)	5,146,986	SOHP
VA7ST	594,000	SOHP	KM5VI	1,477,080	SOHP	K8GL	867,399	SOHP	K4BAI	1,189,440	SOHP	KQ2M	4,082,166	SOHP
W6AEA	512,616	SOHP	WD5K	1,348,740	SOHP	VE3KZ	644,304	SOHP	KZ2I	1,088,760	SOHP	AA1K	3,337,560	SOHP
W7RM (K2PO, op)	1,412,775	SOLP	N5AW	1,808,856	SOLP	NA8V	1,274,016	SOLP	K1KNQ	1,109,544	SOLP	W1UE	2,482,284	SOLP
K6XX	1,376,097	SOLP	N7JMO (N7MZW, op)	307,380	SOLP	VA3SWG	904,752	SOLP	N3ZV	443,808	SOLP	N1PGA	1,518,765	SOLP
VE7UF (VE7JH, op)	809,778	SOLP	N1CC	297,198	SOLP	KD9MS	793,455	SOLP	N9DFD	352,800	SOLP	WB2WPM	966,966	SOLP
N7IR	678,468	SOLP	VE5SF	289,395	SOLP	VE3VN	683,100	SOLP	KK4RV	339,378	SOLP	W2TF	555,660	SOLP
WN6K	665,796	SOLP	KF5VDX	235,074	SOLP	K8PGJ	502,740	SOLP	KD9LA	317,775	SOLP	W2ID	523,107	SOLP
W6QU (W8QZA, op)	182,532	SOQRP	NDØC	134,976	SOQRP	VE3UTT	253,752	SOQRP	K3TW	86,112	SOQRP	N1TM	427,332	SOQRP
K2GMY	64,746	SOQRP	NNØQ	31,122	SOQRP	KA8SMA	110,568	SOQRP	K4WY	60,606	SOQRP	AB3WS	146,718	SOQRP
KFØX	14,700	SOQRP	WBØIWG	23,100	SOQRP	VE3FCT	83,850	SOQRP	N4ZAK	37,380	SOQRP	K2YGM	69,336	SOQRP
N6HI	7,788	SOQRP	KG5GMN	3,192	SOQRP	KB9NKM	36,057	SOQRP	KB4QQJ	24,900	SOQRP	N3UR	38,130	SOQRP
KK7VL	432	SOQRP	NQ5O	810	SOQRP	VE3LJQ	31,920	SOQRP	WB4GHZ	10,710	SOQRP	N1JEO	28,203	SOQRP
KA6BIM	2,183,808	SOUHP	VE4VT (VE4EAR, op)	2,274,300	SOUHP	VE3EJ	7,096,032	SOUHP	K7BV	1,985,454	SOUHP	K3WW	5,106,444	SOUHP
KY7M	1,825,320	SOUHP	KØKX	1,886,340	SOUHP	AA9A (N9UA, op)	3,764,487	SOUHP	KT4Q	1,954,782	SOUHP	NC1I (K9PW, op)	4,974,930	SOUHP
W7VO	1,136,694	SOUHP	K5ZO	1,543,650	SOUHP	W8MJ	2,640,000	SOUHP	K5EK	1,828,044	SOUHP	K1RX	4,562,028	SOUHP
VE7NY	1,121,112	SOUHP	NØKE	1,143,408	SOUHP	VE3RA	1,788,468	SOUHP	N4HU	1,633,284	SOUHP	AA3B	4,179,792	SOUHP
W6TK	1,040,814	SOUHP	WØJM	1,088,802	SOUHP	K9IMM	1,582,272	SOUHP	W3GQ	1,539,681	SOUHP	W3UA	3,924,858	SOUHP
K6GHA	515,043	SOULP	AAØAI	692,382	SOULP	VA3DF	2,280,066	SOULP	N4RA	1,067,616	SOULP	N2SQW	1,408,590	SOULP
KK6NON	457,659	SOULP	N5JR	657,150	SOULP	VE3HG	566,250	SOULP	W4ZAO	991,116	SOULP	N2WKS	1,327,374	SOULP
VA7BEC	360,468	SOULP	KCØDEB	539,478	SOULP	K8LY	496,584	SOULP	K4DMR	819,930	SOULP	KS1J	1,244,196	SOULP
K7ANT	314,160	SOULP	KIØJ	472,392	SOULP	VE3JAQ	414,732	SOULP	AA4R	715,200	SOULP	WW3S	1,181,373	SOULP
KØW3C	306,228	SOULP	AD1C	272,025	SOULP	N8VV	394,356	SOULP	N3UA	520,614	SOULP	W3KB	1,087,824	SOULP

WB6CZG	4,860	SOUQRP		K8MCN	12	SO-160		K8ZT	2,025	SOUQRP		N4HH	33,264	SOUQRP		W2MF	25,230	SO-160
																NA1DX	6,237	SO-160
N7GP (N5IA, op)	2,448	SO-160		N2IC	296,646	SO-40		AA9BD	2,346	SO-160		WB4WXE	5,145	SO-160		KM1R	3,906	SO-160
K7CW	210	SO-160		WDØBGZ	15,834	SO-40		VE3EDY	2,070	SO-160		AG4W	3,828	SO-160		W2VO	2,652	SO-160
				KBØYH	7,080	SO-40						K4NV	3	SO-160				
N6RO	11,466	SO-80						ND8DX	36,000	SO-80						W3BGN	76,860	SO-80
KZ1W	918	SO-80		KF5ZNQ	30,690	SO-20		W8JGU	12,600	SO-80		W4DD	16,524	SO-80		AA1BU	67,776	SO-80
				WD5BHS	7,380	SO-20		WI9H	5,643	SO-80		KCØMCK	14,535	SO-80		W3LL	67,521	SO-80
W7WA	315,210	SO-40		WFØT	1,197	SO-20						WB6RAB	9,720	SO-80		W1XX	64,872	SO-80
W6YX (N7MH, op)	160,866	SO-40		KK9TT	816	SO-20		K9IDQ	19,620	SO-40		WA4TII	7,020	SO-80		KX2S	14,250	SO-80
W6RW	56,160	SO-40		W9BNO	3	SO-20		W9QL	16,218	SO-40		N5RN	4,182	SO-80				
WA2BFW	26,880	SO-40						AD8C	16,200	SO-40						KI1G	355,635	SO-40
																K4US (KK4ODQ, op)		
WA7AR	14,841	SO-40		K5RX	447,876	SO-15		VA3QWW	12,789	SO-40		W6KW	42,840	SO-40			38,988	SO-40
				W5RAW	1,716	SO-15		K8YN	7,104	SO-40		K9OM	31,284	SO-40		KE3X	35,442	SO-40
VE8EV	406,026	SO-20		NZ5M	1,008	SO-15						KD4RH	29,760	SO-40		VO1AX	29,865	SO-40
W7PU	29,346	SO-20		KAØP	429	SO-15		W8GOC	38,430	SO-20		W8FR	17,901	SO-40		WB8BPU	19,152	SO-40
W7XZ	26,271	SO-20						KC8QDQ	37,350	SO-20		KZ1A	9,660	SO-40				
																K2R (KD2RD, op)		
VE7FCO	18,306	SO-20		W5PR	244,314	SO-10		W9WJ	22,143	SO-20							663,288	SO-20
KE7GKI	4,032	SO-20		N4IJ	40,320	SO-10		KC8NLP	5,724	SO-20		WA4JUK	70,992	SO-20		WR2G	153,699	SO-20
				AK5DX	33,807	SO-10		KC8EVS	120	SO-20		K3TXW	17,850	SO-20		AB1WR	116,145	SO-20
N7DD	585,000	SO-15		K5KJ	12,285	SO-10						AG4YL	14,352	SO-20		W1AVK	98,010	SO-20
K2RD	216,315	SO-15		KEØGLZ	2,046	SO-10		VE3DZ	475,440	SO-15		KF4RPJ	13,350	SO-20		NW3H	73,863	SO-20
K7XE	56,772	SO-15						K9BGL	461,328	SO-15		N4ADK	11,070	SO-20				
KD7DCR	51,714	SO-15		K5TR	4,270,332	MSHP		WK9U	176,043	SO-15						W2AW	173,145	SO-15
												W4KZ (W4IX, op)						
N7RVD	48,546	SO-15		NØMA	1,261,113	MSHP		W9ILY	123,120	SO-15			579,600	SO-15		N1DC	69,762	SO-15
				WY7YL	31,680	MSHP		W9OP	98,532	SO-15		KM4HI	160,908	SO-15		N2YBB	49,062	SO-15
K9WZB	23,142	SO-10		AAØA	28,290	MSHP						N1LN	95,118	SO-15		VE2QQ	26,100	SO-15
KF7KTC	4,785	SO-10						WD9EXD	35,046	SO-10		AA4NP	49,368	SO-15		W1NK	15,510	SO-15
KK6PGL	3,510	SO-10		N5DO	1,412,028	MSLP		W9TA	18,270	SO-10		N9GQA	39,204	SO-15				
K6ST	828	SO-10		W5KS	1,980	MSLP		W4LID	12,120	SO-10						K2SSS	178,470	SO-10
WD6DX	216	SO-10						KC9GHA	495	SO-10		N4OX	201,201	SO-10		N2PP	165,273	SO-10
																W2RR (WA2AOG, op)		
				KN5TX	2,030,580	M2		KE8CKG	3	SO-10		K4WI	84,708	SO-10			45,627	SO-10
K7RI	1,958,712	MSHP										W5GAI	39,168	SO-10		WB2AMU	22,350	SO-10
												NA3M/4 (NA3M/4, op)						
K7JR	318,528	MSHP						NV9L	4,931,412	MSHP			37,200	SO-10		K3SWZ	21,150	SO-10
W7IWW	290,400	MSHP						W5MX	2,261,802	MSHP		KM4HVE	9,840	SO-10				
KØIP	251,250	MSHP						W8PR	1,492,260	MSHP						N1MM	3,641,790	MSHP
W7EB	209,622	MSHP						W9OAB	125,550	MSHP		W4HZ	1,569,072	MSHP		W3MF	2,348,118	MSHP
												K5UA	1,515,621	MSHP		WB2P	1,998,912	MSHP

KD7RCJ	202,419	MSLP						N9VI	159,300	MSLP		K5KDX	333,450	MSHP		K3MD	1,616,940	MSHP
W7PT	85,344	MSLP						N8YXR	115,326	MSLP		W4TA	172,881	MSHP		W3DQ	1,035,066	MSHP
K7YUR	22,119	MSLP						VE3LS	72,693	MSLP		NR4C	130,746	MSHP				
KG7UAV	270	MSLP						WR4U	26,676	MSLP						VE2BWL	1,870,749	MSLP
								W8BI	10,575	MSLP		KT4ZB	1,268,820	MSLP		W3ZGD	806,316	MSLP
W6WB	4,312,011	M2										K3MDX	377,646	MSLP		K2AA	249,678	MSLP
NX6T	1,749,384	M2						K9CT	6,871,476	M2		KB5JC	30,336	MSLP		W1FM	233,415	MSLP
VE6FI	964,665	M2						K8AZ	5,428,260	M2						W3WN	100,980	MSLP
								WA8RRA	239,616	M2		N4SVC	1,838,403	M2				
N9NA	73,062	MM						W8AJT	161,505	M2		W4UQ	882,108	M2		K1CC	6,652,800	M2
								W8DGN	129,654	M2		W4GZX	175,725	M2		K6ND	6,213,987	M2
																W2CG	3,200,148	M2
								WØAIH	4,831,500	MM		W4RM	6,669,984	MM		N2GZ	2,462,616	M2
								KB8O	1,623,780	MM		W4AAW	3,421,056	MM		WA3EKL	2,393,682	M2
												W5TCR	2,268	MM				
																K3LR	18,199,188	MM
																W3LPL	14,961,258	MM
																WE3C	12,871,422	MM
																WK1Q	8,719,368	MM
																K1KI	7,410,609	MM