

Results of the 2022 CQ World Wide VHF Contest

BY JOHN "JK" KALENOWSKY,* K9JK

Wow ... hard to believe that this is already my fourth year as director for this contest. Just as I think I'm starting to get the hang of my duties as director: Monitoring log submissions and responding to questions from participants, doing the log checking, compiling the results, writing this article, some things happen and best laid plans encounter difficulties — more on that later in the article.

This year's third full weekend of July was another active year for the CQWW VHF Contest, though the impact of world events was definitely felt in the number of log submissions received from Europe. The total count of logs received in 2022 dropped from last year, with 850 received (plus another 14 classified as checklogs), but that is still the fifth-highest log count in the recent history of the contest.

A total of 49,996 QSOs were reported in this year's 864 logs, yielding an average of just over 50 contacts for each log. For 6 meters, 40,261 QSOs were reported in the 755 logs that included QSOs on that band versus 9,735 QSOs in the 430 logs that reported QSOs on 2 meters. The percentage of QSOs by band in 2022 is consistent with recent years — 80.5% of QSOs reported were on 6 meters and 19.5% were on 2 meters, as compared to an 82% / 18% split in 2021 and a 79% / 21% split in 2020.

Digital mode usage grew (again) in 2022. According to the two letter MØde reported on the Cabrillo QSO: Lines in the submitted logs, 38,738 of all QSOs were completed using "DG" or "RY", 77.4% overall. By band, it was 33,256 of 40,281 6-meter QSOs (82.6%) and 5,482 of 9,735 (56.3%) of 2-meter QSOs that were completed using digital modes this year. This is the first year in which more than half of the 144-MHz QSOs reported using "DG" or "RY".

USA

The log count from the contiguous 48 U.S. states increased this year to 515



If you made a 50-MHz contact with EN95, it was likely with XM3A, operated by Igor Slakva, VE3ZF, operating from the top of Mt. McLean on Manitoulin Island. (Credit: Igor Slakva, VE3ZF)

(plus four checklogs), an approximately 5% increase over the count from 2021. The Single-Operator, Single-Band category using 6-meters (SOSB6) continues as the most popular category overall in this contest. Nearly half of the logs from the U.S., 242, were SOSB6. Single Operator All-Band continued as the second most popular category with 202, a shade under 40%. The count of Rover logs grew by five from last year to 27. Single-Operator All-Band QRP matched the count from 2021 with 16. The Single-Operator, Single-Band, 2-meters (SOSB2) category was a little more competitive in 2022 with 13 entries. There were 10 Multi-Operator and five Hilltopper entries rounding out the U.S. total. The 4th call area continued its reign as the log submission leader with 118. The 5th call area was second busiest with 62, taking that spot away from 7th call

area which finished in third place for 2022 with 54 logs.

After claiming the top score in the SOSB6 category in 2021 (and top Rover category scores in prior years), Wyatt, ACØRA stayed in the one spot again for 2022 but added 2 meters to his equipment array to achieve the top score in the Single Operator, All Band category. Wyatt's final QSO / Multiplier counts were: 353/164 on 6 meters and 139/72 on 2 meters for a final score of 144,904.

There was some competition in the U.S. Multi-Operator efforts with the team at K5QE leading the scores in the category. Within 20% of Team Marshall's final score were the scores from teams at N4SVC and W8ZN. Final Scores, QSO, and Multipliers counts by band for these three competitors are summarized in the table below.

Team	Final Score	6m Qs	6m Mults	2m Qs	2m Mults
K5QE	113,096	343	151	100	60
N4SVC	99,182	379	171	59	31
W8ZN	92,070	278	114	146	51

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The U.S. winner of the SOSB6 category was Dan, K1TO. Dan kept himself very busy on the 50-MHz band with 420 QSOs and 168 Multipliers for a final score of 70,362. Dan did have some competition in the category from a fellow Floridian: Larry, N6AR. Larry almost matched Dan's multiplier count with 166 but had 35 fewer QSOs (385) for a final score of 62,748.

The SOSB2 category also found some notable efforts in the U.S. this

year. Paul, AA4ZZ, who had hosted the W4VHF Multi-Operator effort in 2021, focused his North Carolina station on the 144-MHz frequencies for 133 QSOs and 53 Multipliers, yielding a final score of 14,098. Stan, KA1ZE, piloted his W3XTT remote station in FN01 to find a few more multipliers than Paul did (57) but fell shy of Paul's QSO total with 110 for a final score of 12,426.

Jim, KO9A, continued his streak of being the top U.S. scorer in the Single-Operator, All-Band QRP category, now for a fourth straight year. Jim's 2022 score was a bit lower than last year's, with final QSO/Multiplier counts of 171/76 on 6 meters, and 58/29 on 2 meters for a final score of 29,820.

An excellent roving adventure was reported by Christopher, NV4B, resulting in a score of 52,752 to achieve the top score among this year's 27 U.S. Rover category entrants with a trek through six grids in Alabama, Mississippi, and Tennessee. Christopher logged 222 QSOs on 6 meters and 47 on 2 meters with multiplier

counts of 131 and 47 on the two bands, respectively.

In the U.S. Hilltopper category, Pete, K9PW, has rePETEd as the top scorer for the third year in a row. Pete's efforts resulted in a final score of 7,638 more than doubling his score from 2021. He logged 111 QSOs (88 on 50 MHz and 23 on 144 MHz) and contacted 47 different grid locators on 50 MHz and 10 on 144 MHz.

Among 32 U.S. clubs from which three or more logs were received in 2022, congratulations to the Potomac Valley Radio Club for the top club score of 357,237 from 38 submitted logs. Two very strong Multi-Operator efforts by teams at W8ZN and W3SO really boosted the club's total and Don, N3MK, was the top Single-Operator contributor.

DX

The 335 logs received from outside the U.S. for this year's contest was only half of last year's DX log count. The breakdown by continent is shown in the table below:

Continent	Logs	# of different DXCC Countries
Africa	1	1
Asia	95	12
Europe	100	29
Oceania	23	1
South America	45	4
North America (other than U.S.)	71	6 (other than U.S.)
Total	335	53



A "QTH selfie" by Ricardo, PY2QB, who operated from Lavrinhas Ranch in GG77, approximately 150 kilometers northeast of Sao Paulo, Brazil. (Credit: Ricardo Benedito, PY2QB)



View toward the horizon from PY2QB's operating location. (Credit: Ricardo Benedito, PY2QB)

CLUB COMPETITION

(Minimum of 3 entries required for listing)

UNITED STATES

Club Name	# Entries	Score
Potomac Valley Radio Club	38	357,237
Society Of Midwest Contesters.....	20	267,226
Florida Contest Group.....	12	183,841
Dfw Contest Group	6	142,584
Mt Airy VHF Radio Club.....	9	131,929
Yankee Clipper Contest Club.....	17	115,360
Florida Weak Signal Society	4	97,950
Arizona Outlaws Contest Club	16	94,139
Texas DX Society	6	90,413
Central Texas DX and Contest Club	4	82,462
Southern California Contest Club	16	54,642
North East Weak Signal Group.....	6	52,876
Pacific Northwest VHF Society	20	45,868
Rochester VHF Group	5	43,808
Northern California Contest Club	8	34,822
Carolina DX Association	4	28,234
New Mexico VHF Society	4	26,672
Arizona VHF Society.....	3	22,475
South East Contest Club.....	4	19,073
Frankford Radio Club.....	5	17,180
Northern Lights Radio Society	9	16,292
South Jersey DX Association.....	4	11,258
Grand Mesa Contesters of Colorado	6	5,904

Willamette Valley DX Club	3	4,816
Metro DX Club	3	4,805
North Coast Contesters	3	4,368
Central Ohio Operators Klub.....	3	3,585
Portage County Amateur Radio Service	6	2,024
Kentucky Contest Group.....	4	1,368
Minnesota Wireless Assn.....	6	1,240
Hudson Valley Contesters and DXers	4	745
Tennessee Contest Group.....	3	144

DX

Club Name	# Entries	Score
Italian Contest Club.....	3	45,889
Club De Radio Experimentadores De Occidente...	3	20,852
QSO Banat Timisoara.....	4	19,744
Contest Club Ontario	10	19,556
Manitoulin Amateur Radio Club	12	7,830
Rhein Ruhr DX Association	3	7,202
Contest Group du Quebec	4	6,810
Cabreuva DX	9	697
Radiofarol DX Group.....	12	665
Orari Lokal Kediri	10	408
Lu Contest Group	4	91
Rio DX Group.....	3	36

The drop in "DX" log submissions in 2022 was fairly consistent for all continents, except for non-U.S. parts of North America. Operators from Canada submitted 53 logs this year, claiming the top spot for logs submitted from countries outside the U.S. The log count from Brazil was second overall by country, leading the South American contingent. Significant log counts from Japan (31) and China (25) brought the total count from Asia to 95, only five behind the total count of logs from Europe. The country leaders for Europe's 100 logs were Italy (15), Romania (13), and Germany (11). The ongoing conflict in eastern Europe appears to have had a significant impact on European participation. Indonesia was the only country in Oceania from which logs were received in 2022, with 23 logs, and the single log from Africa was from the Canary Islands.

Among the World/DX participants, the ranking of the top two categories matched that of U.S. log submitters with Single Operator, Single Band, 6 meters (SOSB6) winning the category popularity contest with 106 logs, followed by Single Operator, All Band with 85. The Single Operator, Single Band, 2 meters (SOSB2) was next in World popularity with 59 entries received. Fourth in world popularity was Single Operator, All Band, QRP, with 47 logs. There were 26 Multi-Operator, 8 Rover, and 6 Hilltopper submissions, which rounded out the category choices among DX stations.

The top score of any entry from outside the U.S. was from EA8DBM in the Canary Islands (IL18) in the Single Operator,

All Band category. The 6-meter conditions appear to have been very favorable for Aleksandr to record 358 QSOs and 195 Multipliers on the band, plus another 41 QSOs and 23 Multipliers on 144 MHz for a final score of 94,612.

Grid JM67 in Italy was the place to be to win the Multi-Operator category. A crew of nine operators at IR9K amassed a final score of 82,256 with QSO / Multiplier totals of 311/158 on 6 meters and 58/25 on 2 meters. A final score of 75,543 from the Multi-Operator team at 4O6BLM in Montenegro (JN92) is also notable, less than 10% behind IR9K's score.

Once again, Bostjan, S56P, was the DX leader in the SOSB2 category from his station in Slovenia (JN76) with a final score of 22,620 from 195 contacts among 58 different Grid Locators.

Propagation was likely quite different in Sardinia (JN40) and Mexico (DL68), but just 679 points (less than 3%) separates the final scores of Marco, ISØBSR, and Julian, XE2JS, among DX entrants in the SOSB6 category. Julian's QSO total was 235 (26 more than Marco) but Marco's 139 multipliers (17 more than Julian) gave Marco the top score of 28,495.

Canadian operator Nicolas, VA2VT, achieved the world group's top score in the Single-Operator, All-Band, QRP category, with 98 total QSOs and 61 Multipliers for a final score of 6,405. Nicolas operated from grid locator FN45 in the province of Quebec, the same spot where he had operated as VE2NCG (his prior callsign) and claimed the top score in the Hilltopper category in 2021.

ROVERS & GRIDS OPERATED

AA5PR/R	DM74 DM75 DM76 DM86
ABØYM/R	DM78 DM79 DM89 DN70
AC1JR/R	.FN31 FN32 FN41 FN42
AG6RS/R	.DM03 DM04 DM05
BG5BAA/R	.OL99 OM90 PL09 PM00
JG3DHN/R	.PM95 PM96 PM97 QM06 QM07
KØBAK/R	.FN10 FN20
KØDAS/R	.EN30 EN31 EN32 EN40 EN41 EN42
K6LMNR	.DM03 DM04
K9JK/R	.EN50 EN51 EN52 EN60 EN61 EN62
KA7RRA/R	.CN87 CN88 CN97 CN98
KD6EFQ/R	.DM12 DM13
KD6HOF/R	.CM88 CM98 CM99
KD8RTT/R	.EM28 EM29 EM38 EM39
KE4WMF/R	.FM07 FM16 FM17 FM18 FM26
KF2MR/R	.FN03 FN13
KG9OV/R	.EM59 EM68 EM69 EN50 EN51 EN60 EN61
KI5FIQ/R	.EM11 EM21 EM22
N2SLNR	.FN12 FN21 FN22 FN23
N6GP/R	DM03 DM04 DM13 DM14
N6LB/R	.CN88 CN98
N6UTC/R	.DM03 DM04 DM05
N9GH/R	.EN51 EN52 EN53 EN61
NV4B/R	.EM43 EM44 EM54 EM55 EM64 EM65
VA3OGG/R	.EN86 EN96
VA7OTC/R	.CN88 CN89
VE2GT/R	.FN35 FN36
VE3LDE/R	.EN86 EN95 EN96
VE3WVA/R	.EN85 EN95 EN96
WØETT/R	.DN62 DN70 DN71 DN72
W3DHJ/R	.DM77 DM78 DM87 DM88
W9YOY/R	.EN51 EN61
WB2SIH/R	.FN32 FN33
WD9EXD/R	.EN54 EN55 EN56 EN57 EN66
YD3AXD	.OI51

QSO & GRID LEADERS

6-Meter QSOs		2-Meter QSOs	
K1TO	420	S56P	195
N6AR	385	HG6Z	189
N4SVC	379	HS1AN	181
EA8DBM	358	E24ZPX	181
ACØRA	353	HSØEDP	164
K5QE	343	OK1RDO	152
IR9K	311	W8ZN	146
W5PR	301	ACØRA	139
K2DRH	300	AA4ZZ	133
WA2FGK	287	HS1AB	124
W8ZN	278	W3SO	121
W5LO	264	E27IHO	121
K5PI	261	JF1RYU	120
WA4GPM	253	E24QND	120
XE2JS	235	K2DRH	115
N5RZ	235		
2-Meter Grids			
6-Meter Grids		2-Meter Grids	
EA8DBM	195	ACØRA	72
N4SVC	171	K2DRH	65
IR9K	169	KG9OV/R	63
K1TO	168	HG6Z	62
N6AR	166	K5QE	60
ACØRA	164	S56P	58
K5QE	151	W3XTT	57
ISØBSR	139	AA4ZZ	53
W5PR	136	W3SO	52
W5LO	133	W8ZN	51
N5RZ	132	4O6BLM	50
K2DRH	131	N2NT	44
NV4B/R	131	YO2LSP	39
WA4GPM	123	N2JMH	38
KC4PX	123		



PY2QB's antenna farm — a 7-element LFA Yagi and an omni vertical. (Credit: Ricardo Benedito, PY2QB)

In the world Hilltopper category, Zoran, E7ØAA was the top scorer from grid JN93 in Bosnia-Herzegovina. He had 69 total QSOs (25 on 6 meters and 44 on 2 meters) and 36 multipliers (18 each on 6 and 2 meters) earning Zoran a category-leading score of 4,068.

The top non-U.S. score in the Rover category was achieved by Masaki, JG3DHN, who travelled through five grids in Japan. Masaki logged 28 QSOs and 16 grid locators on 50 MHz and 32 QSOs and 17 grid locators on 144 MHz for a final score of 3,036.

The lower count of logs from DX participants is reflected in the lower number of clubs represented. Twelve clubs met the minimum requirement of three log submissions with the Italian Contest Club claiming the top aggregate total of 45,889 points from three logs. Marco, ISØBSR, was the top individual contributor to the club's total score.

Digital Modes

Digital modes, largely FT-8 (but there are others), continue to be a factor in this and other radiosport events, both VHF and High Frequency (HF). When propagation conditions are marginal, the ability of a computer to detect and decode exchange information from a signal in the receiver passband that is below the "noise" and not decodable by the human operator is quite an advantage and most of the higher scoring participants avail themselves of that capability in their operating strategy.

For 2023, the rules will not see any substantial changes but there may be an option to specify whether contacts were all completed using "Digital" (FT-8 and other modes in the digital "family" where a computer decodes the call and exchange sent by the other station), all "Analog" (SSB / CW / FM, where the human operator decodes the call and exchange sent by the other station) or "Mixed" (where both "Digital" and "Analog" are used). The present seven category structure will remain and there will NOT be any sub-categories by these sub-modes.

I also received a report of a station that appeared to be operating as a robot using digital modes as some of the software packages for digital modes are capable of doing. The callsign of this station appears in a number of logs but the no log was submitted for the callsign. For 2022, no contacts were removed from any other logs but since I feel such activity is not in the spirit of the CQWW VHF contest, I may also address this in the rules for 2023 and take action in the log checking.

Apology From the Director

As I alluded in the opening paragraph of this article, despite having been director for this contest for four years, I still have a lot to learn and room to improve in fulfilling my duties as contest director. One significant area in need of my attention and improvement is the award plaques program, which have not been ordered / processed since past CQWW VHF

Contest Director Steve Bolia, N8BJQ, handled that for my first year as director in 2019. I did manage to collect the funds for plaques from the sponsors for 2020 and 2021, but I am delinquent in getting those plaques ordered and sent to the winners. For 2022, I have totally “dropped the ball” and that is why there is no listing of award plaques for 2022 in this article. I am working to get caught up for 2020 and 2021 and plaques for 2022 will follow (presuming that sponsors are still willing to continue their sponsorships despite MY poor performance). Going forward, I will be working to make the process for plaque

Number/letter groups after call letters denote the following: Class (A = all band, 6 = 6 meters, 2 = 2 meters, Q = QRP, H = Hilltopper, R = rover. M = multi-operator), Final Score, Number of OSOs, Number of grid locators, State/Province (USA/Canada only), Grid Locator or Number of grids activated (rover only). Rover scores for USA are listed separately. Scores in bold indicate certificate winners. Score in italic are dis-qualified.

2022 VHF RESULTS NORTH AMERICA

UNITED STATES

WZ1V	A	33,448	230	113	CT	FN31
N8RA	A	20,904	207	78	CT	FN31
N1JEZ	A	19,834	170	94	VT	FN44
K1KA	A	16,884	166	84	NH	FN42
NE1B	A	14,880	160	80	NH	FN42
AF1T	A	9,570	131	58	NH	FN43
N1SV	A	3,978	78	39	MA	FN42
N1JD	A	2,405	61	37	ME	FN44
N1PRW	A	1,856	58	29	MA	FN42
W1UED	A	1,725	44	23	CT	FN31
K1ZK	A	858	26	22	VT	FN34
K5ZD	A	850	50	17	MA	FN42
K1MD	A	836	35	22	RI	FN41
WA1LBK	A	702	29	18	MA	FN41
WB2VQQ	A	475	22	19	MA	FN32
N1SFE	A	420	26	14	CT	FN31
NE1F	A	352	22	16	NH	FN33
NF1O	A	312	24	13	NH	FN33
K2KA	A	310	22	10	MA	FN42
N2HX	6	20,448	217	98	MA	FN32
W1RM	6	6,272	113	58	CT	FN31
K1AR	6	5,175	116	45	NH	FN42
KB1W	A	2,074	61	34	MA	FN32
KE1R	A	1,988	74	28	CT	FN31
K1BZ	6	1,715	51	35	ME	FN54
K1TR	A	1,530	52	30	NH	FN42
K1EP	A	1,127	49	23	MA	FN42
W1MI	A	792	33	24	MA	FN32
K1KI	A	580	29	20	CT	FN32
AA1NK	A	532	40	14	MA	FN42
N1CEO	A	490	36	14	MA	FN42
W1AKI	A	490	38	14	NH	FN42
W1IG	A	364	26	14	CT	FN31
N1WRK	A	285	19	15	MA	FN41
K1ZZ	A	180	15	12	CT	FN31
K1SX	A	132	12	11	MA	FN41
WK1O	A	126	15	9	MA	FN42
AF1R	A	114	20	6	MA	FN42
W2CS	A	63	9	9	MA	FN41
N1ADX	A	49	7	7	MA	FN42
N1BQ	A	25	5	5	CT	FN31
N1SOH	M	7,038	126	48	MA	FN42
Ops: N1SOH W1FM						

N2JMH	A	35,090	217	121	NY	FN12
N2NT	A	33,363	231	99	NJ	FN20
Ops: N2NC						
WW2Y	A	27,560	214	106	NY	FN24
W9KXI	A	24,480	189	102	NY	FN12
K2EENE	A	3,268	69	43	NY	FN13
K2RET	A	3,038	68	31	NJ	FM29
N2SLO	A	2,496	62	32	NY	FN30
W2SJ	A	2,352	63	28	NJ	FM29
K2OEQ	A	2,310	51	35	NY	FN13
WT2J	A	646	32	19	NY	FN30
WA3AFS	A	540	32	18	NY	FN32
W2RME	A	378	20	14	NY	FN22
Ops: W2BDN						
N2RC	A	352	21	16	NY	FN21
W2ZS	A	156	13	12	NY	FN23
N2NKK	A	126	12	9	NY	FN22
N3YY	6	14,596	171	89	NY	FN22
K22I	6	7,860	133	60	NJ	FM29
K2MGE	A	6,370	100	65	NY	FN02
KD2JOE	A	4,437	89	51	NJ	FM29
W3SW	A	2,720	76	40	NY	FN22
W2FDJ	A	925	40	25	NJ	FM29
K2ZR	A	374	24	17	NY	FN03
N2OO	A	270	27	10	NJ	FM29
N2BEG	A	180	16	12	NY	FN12
N2JJ	A	108	14	9	NY	FN33
K2AMI	A	96	16	8	NY	FN20
KX1W	A	60	12	9	NY	FN29
K4RUM	A	77	12	7	NY	FN30

sponsorship and distribution to the winners more like the process that is in place for other events in the CQ World Wide family of contests under the umbrella of the World Wide Radio Operators Foundation, Inc. <<https://tinyurl.com/4p9dr6kd>>. Net, net, I will do better in 2023.

What Else Will 2023 Bring?

The 2023 CQWW VHF Contest will be held on July 15th and 16th, the earliest dates that the third full weekend of July can fall. This weekend is also the closest to the summer solstice where the summer Sporadic-E season typically

peaks and hopefully where participants can finally experience some enhanced propagation from Cycle 25?

Repeating the constant plea of past directors, if you operate, please send in a log. Any size log is greatly appreciated. If you need help, please ask. More logs make cross-checking the other logs more accurate.

Don't forget to check out the CQWW VHF Contest website <www.cqwwvhf.com>. Comments, suggestions, and corrections are always welcome. Quite a bit of the data was entered manually. If you find an error, please let us know.

K1MUU	6	64	8	8	NY	FN32
K2AEY	6	64	10	8	NY	FN13
N2SO	6	20	5	4	NY	FN31
K2MN	6	16	4	4	NJ	FM29
N2SFS	6	12	4	3	NY	FN21
K3TC	A	21,146	193	97	MD	FM19
K3ZO	A	10,184	142	67	MD	FM18
K3MD	A	7,286	104	64	PA	FM10
KR1ST	A	7,074	101	54	PA	FN21
NF3R	A	6,902	99	58	PA	FN20
N3MWQ	A	6,096	93	48	DE	FM29
K3KSX	A	2,044	44	28	MD	FM19
KD3HN	A	1,344	48	28	PA	FM19
WB3IGR	A	576	25	18	PA	FN10
NG3W	A	72	6	6	PA	FN01
WA3AAN	A	66	11	6	PA	FN20
KB8TU	A	24	8	3	PA	EN91
AA3S	A	4	2	2	MD	FM19
WA2FGK	G	27,522	287	99	PA	FN21
Ops: K2LNS						
K3ISH	6	10,001	137	73	PA	FN21
N1EK	G	5,688	112	52	MD	FM19
K3UJA	6	3,588	80	46	PA	EN91
KB3ORR	6	825	34	25	PA	EN90
KB4BKV	6	405	28	15	MD	FM19
K3HX	6	270	19	15	PA	FN00
K3CU	6	204	17	12	PA	FN20
N3XL	6	144	16	9	MD	FM18
W3ZJ	G	90	10	9	DC	FM18
N3DUE	6	66	11	6	MD	FM19
K3KU	6	21	7	3	MD	FM19
N3QE	6	18	6	3	MD	FM19
KN1OLA	6	1	1	1	PA	FN00
W3XTT	G	12,426	110	57	PA	FN01
WA3EQQ	G	1,452	35	22	MD	FM09
K3HW	G	272	18	16	PA	FN20
K3GD	H	551	21	19	PA	FN11
W3SO	M	62,181	324	141	PA	FM19
Ops: W3XOX W3IDT W3SF W3BTX						
W3RFC	M	16,936	164	73	MD	FM19
Ops: W3RFC K9OQ WA3OFF K9OQ						
WA3EKL	M	15,614	162	74	MD	FM19
Ops: WA3EKL KB3VQC WT3K W1TRT K3TB3						
N9SG	N3DPB					
N3MK	A	49,368	304	132	VA	FM27
WA4GPM	A	40,415	278	137	FL	EM90
K4KMA	A	37,380	232	140	SC	EM93
K4KMF	A	2,372	121	57	VA	FM17
K1HTV	A	37,128	266	119	VA	FM18
K3DNE	A	25,920	196	120	SC	EM94
N4HNB	A	20,868	176	94	VA	FM17
K5VIP	A	19,074	186	102	VA	FM16
WB2SNN	A	16,055	166	95	FL	EL96
K5EK	A	14,014	156	91	NC	FM03
WB4OMG	A	13,973	137	89	FL	EL98
N4QV	A	11,644	142	82	FL	EL96
W1BQ	A	11,100	147	75	FL	EL98
K4WMS	A	9,588	122	68	VA	FM17
AB4SF	A	7,752	121	57	VA	FM17
W3IP	A	5,456	106	44	VA	FM19
N4LAZ	A	5,415	73	57	NC	EM95
KO4JH	A	5,250	86	50	VA	FM18
N4Q4C	A	4,752	70	48	NC	FM16
K2PS	A	4,437	88	51	FL	EL98
K4AKS	A	3,268	61	37	FL	EL88
K4FJW	A	2,100	45	35	VA	EM86
K4RWF	A	2,091	51	41	SC	EM92
AC4SF	A	1,752	47	35	VA	EM92
K5VG	A	30	8	5	VA	FM18
WA4EA	A	3,520	50	44	VA	EM74
K4BAI	A	3,486	84	42	GA	EM72
K4S0A	A	3,034	57	41	VA	FM18
N2QTF	A	2,867	63	47	VA	FM07
WA4LDU	A	2,501	52	41	SC	EM93
K4AKS	A	2,368	61	37	FL	EL88
K4FJW	A	2,100	45	35	VA	EM86
K4RWF	A	2,091	51	41	SC	EM92
AC4SF	A	1,752	47	35	VA	EM92
K5VG	A	30	8	5	VA	FM18
WA4EA	A	3,520	50	44	VA	EM74
K4BAI	A	3,486	84	42	GA	EM72
K4S0A	A	3,034	57	41	VA	FM18
N2QTF	A	2,867	63	47	VA	FM07
WA4LDU	A	2,501	52	41	SC	EM93
K4AKS	A	2,368	61	37	FL	EL88
K4FJW	A	2,100	45	35	VA	EM86
K4RWF	A	2,091	51	41	SC	EM92
AC4SF	A	1,752	47	35	VA	EM92</

N6VHF	6	168	21	8	CA	DM13	WU9D	6	228	19	12	IL	EN61	VE3LDY	A	27	6	3	ON	EN95	JK3HFN	6	25	5	5	PMT5						
N6VOH	6	126	19	7	CA	DM13	WA9LEY	6	135	15	9	IL	EN61	VA3TSS	A	21	4	3	ON	EN96	JR3UIC	6	16	4	4	PMT4						
AJ6HT	6	56	9	7	CA	CM87	W9TA	6	72	10	8	WI	EN63	VE3IZQ	A	20	4	4	ON	FN04	JO4JKL	6	16	4	4	PM65						
W6DMW	6	40	8	5	CA	CM97	W9WB	6	35	7	5	WI	EN52	VE3AC	A	10	3	2	ON	EN96	JA6WFM	6	6	3	2	PM52						
N4DLA	6	28	7	4	CA	CM87	KO4HMB	6	30	6	5	IL	EN61	VE3HZQ	A	4	2	1	ON	EN96	JI1IKC	6	4	2	2	PM95						
W6SX	6	1	1	1	CA	DM07	K9SUL	6	6	3	3	IL	EN50	VE7AB	6	774	45	18	BC	CN98	JF1RYU	2	3,120	120	13	PM86						
N6AN	Q	16	5	4	CA	DM04	W9EWZ	2	352	17	11	WI	EN52	VA7ST	A	589	31	19	DC	D000	JE2HXLP	2	816	34	12	PM64						
AA6XA	H	108	11	6	CA	CN87	K9PW	H	7,638	111	57	IL	EN51	VA3WEB	6	480	25	20	ON	FN04	JH4PUS	2	44	11	2	QM06						
W0XR	A	20,907	208	101	AZ	DM22	K9PW	H	7,638	111	57	IL	EN51	VO1HP	6	96	12	8	NL	GN37	JA1KPF	Q	228	14	12	PM64						
N7IR	A	15,300	177	85	AZ	DM43	K9PW	H	7,638	111	57	IL	EN51	VE3TM	6	42	7	6	ON	FN25	JL3OXR	Q	60	6	5	QM06						
N7EPD	A	9,776	56	52	WA	CM87	AC0RA	A	144,904	492	236	IA	EN42	W0JW	A	19,594	191	101	IA	EN31	VE3KG	6	30	6	6	PM85						
AA7A	A	8,040	118	67	AZ	DM43	WQ0P	A	20,592	160	99	KS	EM19	VA6MA	2	8	2	2	AB	DO03	J8CEA	Q	24	6	4	QN14						
W7FI	A	7,426	140	47	WA	CN87	W0ZQ	A	2,856	58	34	MN	EN34	VA2VT	Q	6,405	88	61	QC	FN45	JH7UU	Q	21	4	3	QM08						
W7MEM	A	6,728	98	58	ID	DN17	W0ZA	A	1,683	53	33	NE	EN00	VA7USD	Q	700	37	14	BC	CN98	JF1TEU	Q	16	4	2	QM05						
W7EW	A	6,171	109	51	OR	CN84	K0VG	A	4,664	74	53	MN	EN27	VE7AJK	Q	104	14	8	BC	CN98	JR1NKN	Q	10	5	2	PM85						
KD7UO	A	1,968	67	24	WA	CN87	K0AWU	A	3,192	55	42	MN	EN37	VE3JO	Q	49	7	7	ON	EN93	JK1UZ	Q	4	2	2	PM95						
KX7L	A	1,536	59	24	WA	CN87	KAOPQW	A	1,334	41	23	MN	EN33	VE3EG	Q	9	3	3	ON	FN03	JO6NZN	Q	1	1	1	PM52						
W7QJT	A	1,428	40	28	AZ	DM24	AA0AW	A	1,350	39	27	MN	EN36	XM3A	H	3,710	82	35	ON	EN95	JG3DHN	R	3,036	60	33	5						
K7IU	A	1,387	61	19	WA	CN97	KE0IZE	A	1,104	35	24	IA	EN41	Op: VE3ZF												KAZAKHSTAN						
N7QQZ	A	1,024	42	16	WA	CN87	W0RT	A	1,075	39	25	KS	EM27	VA3OGG/RR	924	35	22	3	ON	3	UP4L	6	700	29	25	MO13						
N7NEV	A	988	38	26	AZ	DM43	W8LYJ	A	819	38	21	CO	DN70	VA7OTC/R	735	32	15	BC	2	UN3G	6	100	10	10	MN83							
N7XU	A	988	40	26	OR	CN94	K0SCO	A	589	26	19	MO	EM48	VE2GTR/R	R	99	12	9	QC	2	UN7JX	6	81	9	9	NN19						
K7ULS	A	546	24	21	UT	DN41	KG0TW	A	475	21	19	MO	EM49	VE3LD	R	60	7	6	ON	3	UN9L	6	6	3	2	MO13						
KC7OY	A	496	24	16	OR	CN82	KE0KKD	A	336	20	14	IA	EN31	VE3LDE/R	R	60	7	6	ON	3	UN8G	6	4	2	2	MN83						
WA7YAZ	A	396	23	18	UT	DN40	KB0KQI	A	189	12	9	CO	DM79	Op: VE3ZF												KOREA						
W0TV	A	294	21	14	OR	CN92	W6GMT	A	56	7	7	MN	EN37	T21ALF	6	40	8	5	EJ79	TI2ALF	6	40	8	5	EJ79	KYRGYSTAN						
N7RK	A	264	21	11	AZ	DM33	WA0LIF	A	48	8	4	MN	EN35	CO3VR	6	4,902	88	57	EL83	EX8MJ	6	154	14	11	MN72							
N6ZE7	A	210	22	7	WA	CN87	W0ZEF	A	27	5	3	MN	EN34	CO2QU	6	4,743	96	51	EL83	Op: VE3ZF												KR
N7DB	A	162	19	6	OR	CN85	W0B0GZ	6	4,060	77	58	NE	EN00	CO3VR	6	4,902	88	57	EL83	HL3AMO	A	4,032	98	42	PM36							
AF7GL	A	21	4	3	WA	CN96	NØPOH	6	2,698	71	38	CO	DM79	CO2QU	6	4,743	96	51	EL83	HL2AHL	A	160	16	10	PM37							
W2RIC	A	16,471	182	91	AZ	DM33	KABMMI	A	2,562	64	42	KS	EM28	W0DMT	6	1,575	48	35	MO	EM48	W0DMT	6	110	11	11	DS3EXT						
KC7V	A	10,147	140	73	AZ	DM33	KC0VDY	A	989	44	23	CO	DM59	KF0M	6	900	38	25	KS	EM17	HI8RD	6	3,600	76	48	FI68						
NR7T	6	7,700	115	70	UT	DN38	KF0M	6	900	38	25	KS	EM17	W0GWN	6	546	27	21	IA	EN42	HI8LAM	6	110	11	11	FK68						
K7PT	A	7,434	132	59	AZ	DM43	KF0M	6	900	38	25	KS	EM17	W0GWN	6	546	27	21	IA	EN42	W0GWN	6	60	11	11	PM37						
K7CW	6	6,950	142	50	WA	CM87	KAOUV	A	384	24	16	MO	EM38	W0GWN	6	546	27	21	IA	EN42	W0GWN	6	60	11	11	PM37						
AL1VE	6	5,655	96	65	OR	DN02	KB0INES	6	270	19	15	MN	EN34	W0GWN	6	546	27	21	IA	EN42	W0GWN	6	60	11	11	PM37						
KA6BIM	A	3,534	94	38	OR	CN73	KOBJ	A	210	17	14	KS	DM99	W0GWN	6	546	27	21	IA	EN42	W0GWN	6	60	11	11	PM37						
K9DR	6	3,105	70	45	WY	DN62	KNOV	A	120	13	10	MN	EN34	W0GWN	6	546	27	21	IA	EN42	W0GWN	6	60	11	11	PM37						
KY7M	A	3,060	68	45	AZ	DM33	KSOAA	A	56	9	7	KS	EM28	W0GWN	6	546	27	21	IA	EN42	W0GWN	6	60	11	11	PM37						
N7NW	A	1,701	64	27	WA	CN87	KOKEX	A	30	6	4	MO	EM29	W0GWN	6	546	27	21	IA	EN42	W0GWN	6	60	11	11	PM37						
WR7AY	A	1,620	56	32	OR	CN87	W0DREW	A	25	6	5	MO	EM37	W0GWN	6	546	27	21	IA	EN42	W0GWN	6	60	11	11	PM37						
WA8ZNC	A	1,376	44	32	OR	CN79	NA5B	A	2,752	269	168	MS	6	MS	6	MS	6	MS	6	MS	6	MS	6	MS	6	MS	6					
KB8MA	A	13,272	126	84	MI	EN71	KG9OV/R	A	39,064	186	152	IL	7	7	7	7	7	7	7	7	7	7	7	7	7	7						
AA8MA	A	1,196	41	26	OH	EN80	A55PR/R	A	21,090	188	111	NM	4	4	4	4	4	4	4	4	4	4	4	4	4	4						
KE8QE	A	476	24	17	OH	EN91	KD8RTT/R	A	3,496	67	46	KS	4	4	4	4	4	4	4	4	4	4	4	4	4	4						
N8QE	A	390	28	13	OH	EN91	KF2MR/R	A	2,960	51	40	NY	2	2	2	2	2	2	2	2	2	2	2	2	2							
K8BF	A	96	12	8	OH	EN91	N6UTC/R	A	2,448	57	34	CA	3	3	3	3	3	3	3	3	3	3	3	3	3							
WB8WUA	A	48	8	8	OH	EN91	KOBARK/R	A	1,652	37	28	PA	2	2	2	2	2	2	2	2	2	2	2	2	2							
K9NW	6	11,297	146	79	OH	EN79	AG6RS/R	A	1,612	49	31	CA	3	3	3	3	3	3	3	3	3	3	3	3	3							
W3HKK	A	1,600	52	32	OR	CN80	KAT7RA/R	A	1,479	54																						

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