Dan Henderson, N1ND

ARRL Regulatory Information Specialist



W4OC and N4GG in "full concentration" mode at HP1XX, where the finished in second place in the Multi-Two category.



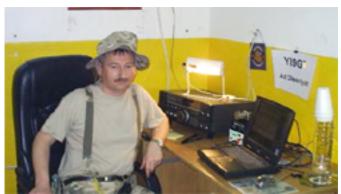
John, K4BAI, deep in concentration scouring the bands operating as PJ4A, where he posted a third place overall finish.



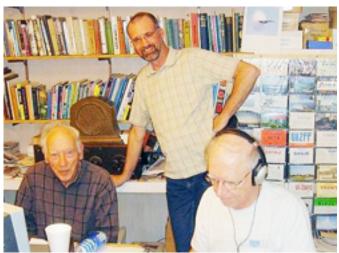
Pete, N8PR at C6AHR.



FS5KA M/M Team (Rear L to R) Dima (RA9USU-N2OW), David (K3LP) and Krassy (K1LZ) (Front L to R) Chip (N2YO) and Kamal (N3KS)



Zen YI9GT (SP3GTS)took a respite from his duty station in Iraq to participate in the contest.



Bob, W7LR, Gene, KB7Q, and Fred, KE7Q during the last hour of the contest.



CN2WW was put on the air from Casablanca by (L-R) Phil F6IFY, Pat F6IRF, Mohamed CN8PA, and Nico SV3SJ.

Conventional Wisdom (CW)... Any contester with years of experience can share with you a wide variety of "tricks of the trade" when you discuss contesting strategies. Each top operator has their own idiosyncrasies. Some of these were passed down from mentors and Elmers, often while learning the ropes at a competitive multi-operator station. Some they discovered with some luck or some skill while keeping their "buns in the seat" over the course of a 48-hour contest weekend. And this kind of CW certainly takes a seat whenever there is a major CW (continuous wave) contest in full swing.

Take the 2007 ARRL International DX CW Contest – this year held February 17-18. The participants knew that this year represents the end of sunspot Cycle 23 – and would produce few opportunities on 10-Meters, with 15-Meters also suffering from a dearth of propagation. So when they started their strategic planning for this grueling 48 hour endurance contest, you can rest assured that they had to have a workable plan of action.

One of the first pieces of contest CW passed on to me years ago was "to be as competitive as possible, you have to maximize your QSO and multiplier totals on the highest band open. A quick look at the number of QSOs by Band from the past few years certainly show that contesters will "practice what they preach" in this case.

Table 1, shows "QSOs by Band" for the years 2002 thru 2007. It's real clear that 10-Meters is just like the little girl who had a little curl right in the middle of her forehead. As Longfellow wrote – "When she was good, she was very good indeed. And when she was bad she was horrid." Many of you will remember 2002 was a good year for 10-Meters – 31.6% of all QSOs reported in electronic logs were made on that band. When you fast forward you find only 1.2% of the total QSOs for this year's contest were made on the band. Even when you factor in that total reported QSOs on all bands declined by over 700,000 between those two years, it is still dramatic proof that in the good years, follow the wise old adage.

Though not as dramatic, you can definitely tell from the data that 15-Meter suffers in the lean sunspot years, though not as dramatically as its 10-Meter cousin. Even with the decline in total QSOs taken into account, there was a decline from 26% of all QSOs to 19% on 15 between the two years – a total of 267,000 fewer QSOs.

Most people would assume that in the lean years that the QSO machines simply more to the lower bands, further crowding them, which would lend an advantage to the "CW" that "Loud is good." Table 1 only partially supports this maxim. Operation on 20-meters is something akin to "how many angels can you fit on the head of a pin." In percentage terms, as "CW" tells us, it is the most crowded band when propagation is in the tank on 10 and 15-meters, rising from 24% of total QSOs to 37% of total QSOs. However even though it's percentage of QSOs increased, the raw number of contacts still declined by 7%, a total of about 30,000 contacts. What is traditionally a crowded band remains crowded – and does suffer some small effects from reduced propagation.

"CW" says that in lean sunspot years, you had better be ready for the lower bands – 160, 80 and 40-Meters. The 40-meter band showed the largest raw QSO increase with over 60,000 more contacts being completed there in 2007 as compared to 2002. When you throw in the 52,000 QSO increase on 80-Meters and the 16,000 QSO increase on 160, there is definitely credence to the emphasis shifting to the low bands as sunspots disappear. But remember that the 128,000 QSO surge on those bands is more than offset by the 853,000 QSO decline on the high bands.

The list of reasons for this variance includes a wide range of thoughts, but don't overlook a couple of the most obvious. First, the casual to mid-level contest participant is not going to spend a full contest period "in the chair." Since 160-80-40-meters are primarily nighttime bands, you rarely see the more casual participant burning the midnight oil, unless they are searching to pick up some low band DX countries for DXCC or chasing some award. Second, the antenna systems necessary for serious DX contesting on the three lower bands put the casual or space limited operator at a disadvantage. Those of us who have been "city lot dwellers" have pretty much come to grips that extensive arrays of aluminum, four-squares and beverages aren't going to happen, so we tend to "call it a night" after working the loudest of the DX stations. It isn't a lack of competitive drive – it often comes down to the practical limits of our station setup. The casual operator is committed to meeting their goals for the contest – which generally start with getting on for a few hours and working what can be easily worked. Some will get caught up in the excitement of the contest and will extend their operating time, which adds their fun as well as the strength of the contest. Other casual operators will work until the face the first serious challenge or glitch, then will "knock off" and pursue other activities during the weekend. Don't see these guys short however – whether they make 1 contact or hundreds, they add depth to the contest for all operators.

To add one more perspective to some of the raw numbers, look at the total number of entries received. In 2002, the 1,782,513 contacts were reported from a total of 2384 logs – an "average" of about 748 QSOs per submission. The total number of entries for the 2007 ARRL International DX CW contest came to 2576, down a couple of dozen from 2006, and accounted for 1,057.523 contacts (an average of only 410 QSOs per entry).

If you flash back to the end of sunspot Cycle 22 in 1996 and look at a few numbers you get a good idea of some of the relative trends in our hobby. In 1996 the ARRL received a total of 1505 entries for the International DX CW contest, so we have an increase in participation of almost 60% in 2007. The total QSOs eleven years ago was 640,703 – which means a whopping 178% increase even at the bottom of Cycle 23. But those numbers still equate into only 426 QSOs per log – not a statistically significant

difference from the 410 QSOs per log average in 2007. The "CW" from this seems to be that even with more operators participating, in years at the bottom of sunspot cycles, QSOs are hard to come by whatever your strategies.

#### The Great Thinkers

Once you sort through the various adages, thoughts, and pieces of "CW" you accumulate, it still comes down to determining who can parlay those guideposts into a successful contest weekend. While perusing the Top 10, Division Winner, and Continental Winner boxes, you will see the accumulated wisdom of thousands of hours of contest operation by skilled operators who have honed their experiences by testing the conventional wisdom passed on to them by others.

#### **W/VE Winners**

The general consensus in contesting circles is that the Single Operator High Power category is where one tests their mettle against the best of the best. Once the dust settled, in 2007 two emerged with scores over the 4-million threshold. Scott, W4PA, journeyed to a "fortress of solitude" in the frozen north and operated as VY2PA and battled against Andy, N2NT who challenged all comers from his home "fortress" in New Jersey. Congratulations to Scott who followed up his 2006 victory in the category from the DX side of the contest by post a winning final tally of 4.86-million. Andy's 4.02-million points enabled him to finish as the runner-up for the second straight year. Alex, LZ4AX, continued a fine run of great finished operating from K3CR, the Penn State University club station, as he edges out Jon, AA1K for third place. When he isn't busy handling duties for the IARU and ARRL, Dave, K1ZZ tries to operate as much as possible. He was "home" the weekend of this contest and was able to post a fifth place finish, edging out the sixth place operator, Ken, K6LA, who was operating with his VY2TT callsign. Rounding out the top ten in the category were Ron, VE3AT, operating as VC3O, Dick, WC1M, Yuri, VE3DZ, and Lew, N2LT. The category accounted for 261 of the total 1290 W/VE entries in this year's contest.

Ed, N1UR, was able to pull off the repeat win in the Single Operator Low Power category. Though his score declined a bit due to propagation, Ed continues to post strong effort after strong effort in the category that is traditionally the most popular. This year almost one of every three entries on the US side was submitted for this category (402 total). Ed's 1.63-million points was able to best a great effort by Marv, N5AW, who was the runner-up. It is interesting to note that Marv's second place finish flies a bit in the face of CW as he competes from his QTH in the South Texas ARRL section. "CW" does generally hold true that New England and middle Atlantic stations have an advantage because of their closer proximity to Europe, but Mary frequently defies the norm, as his fourth place finish in 2006 will attest. Only 28K points separated third and fourth places in this category, as Maury, W3EF, edged out Jim, KS1J – a case where 20 more multipliers held off 60 additional QSOs. Scott, VE1OP, was the top Canadian in the category with his fifth place overall finish while Pete K2PS posted just over 1-million points with to take sixth. Seventh through tenth place finishers were Merrill, WK2G, Dennis, N3DG, Mike, W1JO and Tom, N4KG. The Single Operator QRP category generated 63 entries, but less than 10K points separated the top three stations after the log checking magic was worked. Doug, KR2Q, Bob, K3PH, and Jeff, N8II ended up 1-2-3 in the category. Bob held a slim 13 QSO lead on Doug and 26 over Jeff, but that wasn't quite enough to offset Doug's 8 more multipliers. Jeff tied Doug with 244 multipliers. The middle Atlantic states of New Jersey, Pennsylvania, and West Virginia can toast these excellent operators. QRP is always a challenging category, as it is not only being able to hear the stations but being heard that matters. Persistence is a key element to winning this tough class. Bill, K2EK, hung tough to claim fourth place and George, K2DM took, fifth place. The battle for sixth place was taken by Bill, K4CIA, who eeked out a mere 7,839 point margin over Doug, W9WI – (that translates to 6 more QSOs and 3 more multipliers). The West coast makes a top ten box appearance - rare in most categories - thanks to the great showing by Frank, W6JTI, who slips into eighth place by a slim 7,248 points over Doug, VA3DF, whose 20 multiplier advantage was not quite enough to offset Frank's 63 QSO lead. Dan, N8IE, was just another 5,121 points behind Doug. Barry, W2UP, is no stranger holding his own in the Single Operator Assisted category, as he always seems to find a way to parlay his skills into a great showing. He can add the title of 2007 category winner to his resume, as he was able to take top honors with 3.97-million points. A strong contest was also posted by runner-up Noah, K2NG, another familiar resident in this rarified company. Rick, K3OO, and Bud, AA3B, both broke the 3-million point barriers with their respective third and fourth place finishes, while John, WE3C held off a good challenge from Mike, N1IW, for fifth place. Also placing in this category top ten

(in order of finish) were Barry, W3FV, Elmer, W8AV, Jim, N3BB, and Dennis, K5YA. This category boasts the second most entries among W/VE stations with 21% of all participants (277 total).

The Single Operator Single Band specialists come to their various categories for a variety of reasons. Some are students intrigued by the characteristics and dynamics of working on specific bands. Others choose to participate as a single band entry for personal reasons (don't have the time to do a full all-band effort or decide dedicating a maximum effort to an all-band contest isn't their goal for the weekend.) Whatever the reason, the efforts to maximize their scores will see them employ the same skills and techniques as those in other categories. Congratulations to these great operators, who took top honors on the various bands: 160-meters, Ted, KT1V; 80-meters, Robye, W1MK; 40-meters, Brian, N2MF; 20-meters, Michael, W1MU; 15-meters, Neal, K4EA; and 10-meters, Richard, K5NA.

A look at the "CW" over time tells us that the Multi-Operator categories on the W/VE side are sure to be a strong battleground with great stories to tell. And 2007 proves to be no different among the titanic callsigns that populate the band year after year. After being displaced in 2006, the W3BGN callsign once again reigns supreme in the Multi-Single category. Steve's pool of talent included Pete, NO2R, and Tom, K2TW. They easily outdistanced the operators at KT3Y, who managed to hold on to second place by a mere 852 points over the K8AZ crew. The difference between second and third place was KT3Y's 208 more QSOs held off the 34 multiplier advantage of K8AZ. Also finishing in the Top Ten in this category – the most popular of the three multioperator categories- was K2QMF, W4MYA, W2ZQ, W2XL, NE3F, K9SD, and W9SZ.

This year the Multi-Two category was dominated by the NY4A entry. Using a PVRC Club call, Guy, K2AV, Jim, K4QPL, Bruce, N1LN, and Howard, N4AF, racked up almost 6-million points from their NC QTH. They did finish 7 multipliers behind fourth place finisher N0NI's multiplier total of 454, but finished 1299 QSOs ahead of category runner-up W4RM (who finished only 2 mults behind the winner). Rounding out the Top Ten in the category were K0TV in third places with N3AD, NK7U, K2AX, K3DI, W2CG and K2BA taking places five through ten respectively. The NK7U entry from Oregon was the best finish in any of the multioperator categories by a station west of the Rocky Mountains.

Conventional wisdoms says when you hear some particular call signs you can automatically guess what category they entered. You always associate W3LPL and K3LR with the Multi-Multi category and with top performances. The W3LPL station operators of K1HTV, N11N, K3KU, A13M, K3MM, N3OC, K3RA, K3RV, N3UA, WR3Z, KD4D, K4ZA, K4ZW and W3LPL had a score to settle, having been displaced as champions one year earlier by the determined crew of K3UA, K1EA, N2NC, K1AR, N2NL, N6MJ, VE3EJ, VE7ZO, N3GJ, and N3SD all pounding brass at the K3LR station. This was yet another epic contest. In the end Frank, W3LPL and crew regained the title as their 166 more QSOs offset Tim, K3LR and company 's 14-multiplier advantage. The final score difference was a mere 49,121 points. That's less than 4 QSOs more per hour for the contest. The "CW" about keeping your rump in the chair seems to hold true in a tight contest. Hot on the trail of these perennial top finishes were what stations that could be dubbed "the usual suspects": KC1XX, K1XM, K1KI, W2FU, NQ4I, K1TTT, K5GO and K1RX, all of them well known multioperator stations.

#### **DX Leaders and Continental Winners**

You will always find a lot of great W/VE operators who choose to run this contest from the DX side. And who can blame them? The decision to spend the third weekend in February either at some warmer location in the Caribbean, Central or South America versus the winter cold of most of the mainland US is for many a "no brainer." But don't be fooled. These guest operators to warmer climates don't check their contesting CW with the customs officers when they leave the states. Besides their radios, amplifiers, and operating permits, they take with them years of experience and knowledge that will mean the difference between making a top score box and being an also-ran.

A win in the ARRL DX CW Contest in the Single Operator High Power category from off-shore is one of the top honors in the contesting community. And in 2007 the winner – and only op to crack the 5-million point barrier was John, W2GD, who operated as P40W in Aruba (South American winner). John is no stranger to the category, holding numerous Top Ten finishes among his accomplishments. John edged out

another John, K6AM, operating as ZF2AM (North American winner), by about 140K. Close on their heels was another of the veritable icons of the contesting world, John, K4BAI, operating as PJ4A. Believe it or not, though he has operated off shore many times in numerous contests, this was the first time John had every chased the brass ring as a single operator in an ARRL International DX CQ Contest. Finishing fourth, only 130K behind John, was yet another of the top US contesters, Mike, KH6ND. Operating as KH7X, Mike continued to demonstrate his talent as the continental winner Oceania. Other continental winners in the category included EA8MQ (Africa), JH4UYB (Asia), and OK5R (OK1RI, op) (Europe). A total of 14% (183 of the 1276) of all DX entries claimed this category.

Almost as competitive was the Single Operator Low Power category. Aruba was definitely the destination as Andy, AE6Y, operates as P49Y to take the overall category and South American title by a comfortable 463K points over Dennis, K7BV, who operated from HI3TEJ. Dennis's score was enough to secure top honors for North America in the contest over third place finisher Kurt, VP9/W6PH. Close on Kurt's heels was Al, WP3C, a scant 25K behind. Other continental winners include EA8CN (Africa), JA2AXB (Asia), CT6A (CT1ILT, op) (Europe), and KH6NF (KH6SH, op). Just as from the W/VE side, this category was the most popular among DX participants, with 396 entries received, 31% of all DX stations submitting logs.

In any contest the Single Operator QRP category takes a mixture of skill, luck, experience, and some would say, a bit of "insanity." These are the guys who struggle to be heard, sometimes needing the patience of Job to be successful. But they also know that the rush of adrenaline they experience with almost every completed contact is worth the effort. YV5YMA operated as 4M2L and was able to patiently outdistance runner-up HB9BMY by a score of 358K to 153K. Both stations earned continental winner status for South America and Europe respectively, as did JR4DAH (Asia) and V31YN (North America). There were no SO QRP entries from Africa or Oceania, reflected by the small total of only 32 entries in the category. For years one of the smaller categories from the DX side has been Single Operator assisted. "CW" tells us this is due to the lack of one of the basic elements necessary to enter in the category – access to an internet connection or packet spotting network. With access to spotting information growing all the time, the number of participants in this category continues to grow as well. About 10% (125) of all DX entries were Single Op Assisted in 2007. The top three slots all hail from different continents as well. Stefano, IK2QEI, operated as CN3A and won the overall category with the top score from Africa of 2.82-million points. Second place and top score from South America was claimed by Martin, LU5DX, operator of LU4DX for the weekend. Oceania winner Fred, W6YM, brought the NH6P station home for 3rd place in the category. Rounding out the continental leaders in this category was JF2QNM (Asia), OE4A (OE1EMS, op) (Europe) and FM5JC (F5JKK, op).

Our Conventional Wisdom tells us that from the DX side, the Single Operator Single Band categories should usually come down to the stations with the best OSO totals. This is because there are a limited number of multipliers available by the nature of this contest. "CW" is borne out by the fact that in 5 of the 6 single band categories the multiplier totals of the top 3 stations were within 2 of the other stations on that band, and in 2 cases all 3 of the top scores worked the same number of multipliers. So the difference between the top scores here will be the ability to keep QSO rates going. Congratulations to the stations who took top honors in the six single band categories: 160 - Gerd, V31YN; 80 - David, 6Y1V; 40 - Bob, N4BP operating C6AKQ; 20 – Mauri, EA8/OH4NL; 15 – Carl, P49V; and 10 – Juan, LU1HF. New record scores are hard to find when this contest is conducted at the bottom of the sunspot cycle. So it was a bit surprising to see several new continental records made in the Single Operator Single Band categories this year, but there were several. Congratulations go to Jyrki, EA8/OH6CS and his fellow countryman Mauri, EA8/OH4NL, who set new African continental records for Single Band 40-meters and Single Band 20-meters respectively. Two new Asian Single Band records were also set in 2007, with Yas, JA8NFV, setting a new standard for 160-meters from Asia while Kasuo, JH1OGC, raised the bar with a new 80-meter record. And don't overlook Jeff, KU8E, who spent the contest operating from PJ4 and set a new South American Single Band 160-meter record. The complete list of continental leaders is included elsewhere in this write-up. Congratulations to all of these hard-working operators.

While all are generally hotly contested, the Multi-operator categories always tend to concentrate on the Multi-Single and Multi-Two categories on the DX side. Three stations managed to top the 3-million point

mark among the 44 Multi-Single entries submitted in 2007 (the largest multi-operator category). Congratulations are in order to K8DD, who operated as HK1/K8DD and was joined by AC8W to win this competitive category and the top South American category score by a comfortable margin of about 540K points over the competitive LR2F team with LU1FAM, LU2FA, LU5FF, and LW8DQ operators. The other continental category leaders here were CN2WW (Africa), JA8RWU (Asia), TM6M (Europe), KL2R (North America), and ZM1A (Oceania).

One of the more interesting races to watch unfold in 2007 would have to be the Multi-Two contest, which is always among the most hotly contested categories. It was a full-bore effort between the PJ2T team of W8TK, W0CG, WA4PGM, K8NZ, WA9S, N1ZZ, NP2L, W9EFL and N8LGP and the team of W9RE, N5OT, W4OC and N4GG operating from HP1XX. Again, it was the additional QSOs making the difference, as the PJ2T were able to overcome their rivals minute advantage of 1 more multiplier with 108 more QSOs – that's just a little more than 2 an hour for the duration of the contest. Both groups are hardware eligible as PJ2T is the winning score from South America while HP1XX is top score from North America. Round out the continental winners in the category were EF8M (Africa), 9A7A (Europe), and KH6LC (Oceania). There were no category entries from Asia.

Only six entries total were received in Multi-Multi category, but that does not lessen the outstanding efforts of any of the six. Leading the way were two highly competitive teams – FS5KA which included K3LP, K1LZ, N3KS, N2OW and N2YO and J7OJ manned by K5KG, J79XX, K1XX, WI9WI, KK9K, and W9IU. Both topped the 7-million point barrier with Saint Martin team edging out the Dominica group by a scant 108K points. In doing so they also claimed the continental win for North America. Other continental winners this year include OM8A (Europe), JA3YBK (Asia), and VK9DNX (Oceania).

As always, there is far more to this contest than can be written up in a brief summary article for QST. If you are an ARRL member be sure to check out the expanded results article available on the ARRL Web site. And of course everyone should review the ARRL Online Soapbox for this (and all ARRL) contests. If you haven't visited or posted to the Online Soapbox, you should consider doing so. It is a great place to share YOUR conventional wisdom and to maybe pick up a few nuggets to add to your own bag of tricks. Next month will feature the final wrap-up of this contest for 2007 as the always entertaining and very capable Ward Silver, NOAX, will bring you the details for the second half of this combined contest – the 2007 ARRL International DX Phone Contest results. Sure to catch your attention will be the final results of the ARRL Affiliated Club Competition for this year. Judging from the scores at the half-way mark, there will be another clash between the two titans – the Yankee Clipper Contest Club and the Frankford Radio Club – for supremacy in the Unlimited club category. But lurking just in the shadows should these stalwarts slip up are several. An interesting race also appears to be shaping up in the Medium club category where just over 1-million points separates the two clubs after the CW weekend. It is impossible to pick the winning clubs right now regardless of the club category. So stay tuned.

So that's a wrap for the third weekend in February 2007. By February 16-17, 2008 there are indications that we could begin to see the reappearance of the missing sunspots, as we transition from Cycle 23 into Cycle 24. We will all be happy to see their return – after all, they will help all of us adjust our CW as we prepare for one of the premier CW contests of any calendar years. Keep pounding the Brass and 73!

## US Top-Ten

CALL	SCORE
Single Operator High Power	
VY2PA (W4PA, op)	4,863,075
N2NT	4,026,048
K3CR (LZ4AX, op)	3,445,200
AA1K	3,315,510
	3,128,625
K1ZZ	
VY2TT (K6LA, op)	3,042,660
VC30 (VE3AT, op)	2,793,168
WC1M	2,766,510
VE3DZ	2,653,992
N2LT	2,642,400
Single Operator Low Power	
N1UR	1,636,128
N5AW	1,283,040
W3EF	1,208,088
KS1J	1,180,608
VE10P	1,061,346
K2PS	1,035,990
WK2G	804,408
	773,244
N3DG	
W1JQ	754,965
N4KG	742,716
Single Operator QRP	
KR2Q	509,472
K3PH	501,972
N8II	499,956
K2EK	464,223
K2DM	334,764
K4CIA	287,793
W9WI	279,954
W6JTI	249,744
VA3DF	242,496
NSIE	237,375
	20.,0.0
Single Operator 160 Meters	65,391
W4ZV	55,944
	31,584
VE2TZT	
K4PI	25,938
W5UN	23,187
KK4SI	16,929
W4DR	16,464
W3GH	15,066
W2VO	14,196
W8LRL	13,932
Single Operator 80 Meters	
W1MK	263,349
K1LZ (LZ1YQ, op)	252,252
NY3A	135,792
KU1CW	134,385
K9ES	104,922
KD2I	87,087
TABLE	01,001

N2IC		72,675
K1POS		71,190
N5IA		69,708
K1GU		67,410
Single Operator	r 40 Meters	
N2MF		315,576
N2ZX		312,393
W3UA		291,288
K1ZZI		273,758
K5GA		213,408
K8IA		155,394
K90M		155,337
NN3W		135,915
N7DF		128,934
KK+HF		118,341
Single Operator	r 20 Meters	
W1MU		491,628
K7RL		332,100
w7wa		328,671
NA3D		325,920
N4ZR		
		274,590
N9CK		248,400
K1IM		231,360
W8TWA		117,738
W+ZA		106,554
K2MFY		96,390
Single Operator	r 15 Meters	
K4EA		191,769
K4FJ		129,276
K'/AO		87,330
K7MI		79,170
KC7V		50,580
WB4TDH		45,492
KT5E		40,095
K4RDU		27,816
W2FV		19,200
VE2DC		18,900
Single Operator	r 10 Matera	
	I TO Meters	5 102
K5NA		5,103
K4WI		1,053
WB2AMU		48
	r Assisted	
Single Operator		
Single Operator		3 976 963
W2UP		3,976,263
W2UP K2NG		3,687,687
W2UP K2NG K300		3,687,687 3,113,739
W2UP K2NG K300 AA3B		3,687,687 3,113,739 3,070,800
W2UP K2NG K300		3,687,687 3,113,739
W2UP K2NG K300 AA3B		3,687,687 3,113,739 3,070,800
W2UP K2NG K3OO AA3B WE3C		3,687,687 3,113,739 3,070,800 2,299,410
W2UP K2NG K3OO AA3B WE3C N1IW		3,687,687 3,113,739 3,070,800 2,299,410 2,241,000
W2UP K2NG K3OO AA3B WE3C N1IW W3FV		3,687,687 3,113,739 3,070,800 2,299,410 2,241,000 2,071,269
W2UP K2NG K3OO AA3B WE3C N1IW W3FV W8AV		3,687,687 3,113,739 3,070,800 2,299,410 2,241,000 2,071,269 2,004,300
W2UP K2NG K3OO AA3B WE3C N1IW W3FV W8AV N3BB		3,687,687 3,113,739 3,070,800 2,299,410 2,241,000 2,071,269 2,004,300 1,970,712
W2UP K2NG K300 AA3B WE3C N1IW W3FV W8AV N3BB K5YA		3,687,687 3,113,739 3,070,800 2,299,410 2,241,000 2,071,269 2,004,300 1,970,712 1,911,936
W2UP K2NG K3OO AA3B WE3C N1IW W3FV W8AV N3BB K5YA Multi-Single W3BGN		3,687,687 3,113,739 3,070,800 2,299,410 2,241,000 2,071,269 2,004,300 1,970,712 1,911,936
W2UP K2NG K300 AA3B WE3C N1IW W3FV W8AV N3BB K5YA		3,687,687 3,113,739 3,070,800 2,299,410 2,241,000 2,071,269 2,004,300 1,970,712 1,911,936
W2UP K2NG K3OO AA3B WE3C N1IW W3FV W8AV N3BB K5YA Multi-Single W3BGN		3,687,687 3,113,739 3,070,800 2,299,410 2,241,000 2,071,269 2,004,300 1,970,712 1,911,936 4,153,428 3,346,362 3,345,510
W2UP K2NG K300 AA3B WE3C N1IW W3FV W8AV N3BB K5YA Multi-Single W3BGN KT3Y		3,687,687 3,113,739 3,070,800 2,299,410 2,241,000 2,071,269 2,004,300 1,970,712 1,911,936
W2UP K2NG K300 AA3B WE3C N1IW W3FV W8AV N3BB K5YA Multi-Single W3BGN KT3Y		3,687,687 3,113,739 3,070,800 2,299,410 2,241,000 2,071,269 2,004,300 1,970,712 1,911,936 4,153,428 3,346,362 3,345,510 2,682,504 2,109,210
W2UP K2NG K3OO AA3B WE3C N1IW W3FV W8AV N3BB K5YA Multi-Single W3BGN KT3Y K8AZ K2QMF		3,687,687 3,113,739 3,070,800 2,299,410 2,241,000 2,071,269 2,004,300 1,970,712 1,911,936 4,153,428 3,346,362 3,345,510 2,682,504

W2XL	1,615,152
NE3F	1,606,098
K9SD	1,463,670
W9SZ	1,356,552
Multi-Two	
NY4A	5,960,745
W4RM	4,199,910
K+TV	3,714,363
N+NI	3,414,534
N3AD	3,375,756
NK7U	2,392,368
K2AX	2,152,770
K3DI	1,494,465
W2CG	1,443,825
K2BA	1,362,546
Multi-Multi	
W3LPL	8,532,252
K3LR	8,483,040
KC1XX	7,966,659
K1XM	7,415,784
K1KI	6,503,256
W2FU	5,986,596
NQ4I	5,575,176
K1TTT	5,532,072
K5GO	5,072,130
K1RX	4,835,106

### **Continental Leaders**

	CALL	SCORE
Africa		
Single Operator High Power	EA8MQ	507,906
Single Operator Low Power	EA8CN	1,100,160
Single Operator 40 Meters	EA8/OH6CS	201,951
Single Operator 20 Meters	EA8/OH4NL	325,032
Single Operator 15 Meters	EA8/IZ1GLO (K2LEO, op)	378
Single Operator Assisted	CN3A (IK2QEI, op)	2,822,400
Multi-Single	CN2WW	3,227,010
Multi-Two	EF8M	5,125,788
Asia		
Single Operator High Power	JH4UYB	1,077,600
Single Operator Low Power	JA2AXB	149,265
Single Operator QRP	JR4DAH	40,896
Single Operator 160 Meters	JA8NFV	9,396
Single Operator 80 Meters	JH10GC	63,600
Single Operator 40 Meters	425LA	104,850
Single Operator 20 Meters	JH7XMO	100,650
Single Operator 15 Meters	7K4XNN	54,780
Single Operator 10 Meters	JA70WD	31,700
Single Operator Assisted	JF2ONM	387,090
Multi-Single	JA8RWU	967,824
Multi-Multi	JA3YBK	1,639,440
Europe		
Single Operator High Power	OK5R (OK1RI, op)	2,031,810
	_	
Single Operator Low Power	CT6A (CT1ILT, op)	1,425,525
Single Operator QRP	HB 9BMY	153,816
Single Operator 160 Meters	ON 4UN	37,023
Single Operator 80 Meters	M5X (G4TSH, op)	150,852
Single Operator 40 Meters	HB9FAP	238,773
Single Operator 20 Meters	OH8X (OH8SR, op)	252,225
Single Operator 15 Meters	9A7R	106,272
Single Operator Assisted	OE4A (OE1EMS, op)	1,463,448
Multi-Single	TM6M	2,517,375
Multi-Two	9A7A	2,336,487
Multi-Multi	OM8A	2,711,694
North America		
Single Operator High Power	ZF2AM (K6AM, op)	4,932,414
Single Operator Low Power	HI3TEJ (K7BV, op)	3,713,868
Single Operator 160 Meters	V31YN (DJ4KW, op)	146,547
Single Operator 80 Meters	6Y1V (KY1V, op)	235,770
Single Operator 40 Meters	C6AKQ (N4BP, op)	367,488
Single Operator 20 Meters	J88DR (G3TBK, op)	215,289
Single Operator Assisted	FM5JC (F5JKK, op)	1,085,508
Multi-Single	KL2R	290,490
Multi-Multi	J70J	7,116,522
		.,110,022
Oceania		
Single Operator High Power	KH7X (KH6ND @ KH6YY)	4,621,353
Single Operator Low Power	KH6NF (KH6SH, op)	1,586,184
Single Operator 80 Meters	AH7C	30,528
Single Operator 40 Meters	ZL3WW	221,760
Single Operator 20 Meters	ZL3TE (W3SE, op)	14,385
2 1	, , -F1	-, -, -

Single Operator 15 Meters Single Operator Assisted Multi-Single Multi-Two Multi-Multi	YC1KAF NH6P (W6YM, op) ZMIA KH6LC VK9DNX	4,200 2,148,309 1,314,600 5,215,302 1,226,475
South America		
Single Operator High Power	P40W (W2GD, op)	5,078,862
Single Operator Low Power	P49Y (AE6Y, op)	4,177,656
Single Operator QRP	4M2L (YV5YMA, op)	378,585
Single Operator 160 Meters	PJ4/KU8E	113,544
Single Operator 80 Meters	PT7CG	87,528
Single Operator 40 Meters	PT7AG	228,984
Single Operator 20 Meters	PY2NY	177,840
Single Operator 15 Meters	P49V	343,476
Single Operator 10 Meters	LU1HF	109,869
Single Operator Assisted	LU4DX (LU5DX, op)	2,587,788
Multi-Single	HK1/K8DD	3,816,120
Multi-Two	PJ2T	7,655,172

### W/VE Division Leaders

		CALL	SCORE
-	Multi Transmitter Single Transmitter	W3LPL W2FU	8,532,252 5,986,596
	Multi Transmitter Single Transmitter	WØAIH K9SD	2,582,670 1,463,670
Dakota Multioperator	Multi Transmitter	KØJA	217,005
Delta Multioperator	Multi Transmitter	K5G0	5,072,130
Great Lakes Multioperator	Single Transmitter	K8AZ	3,345,510
Hudson Multioperator	Single Transmitter	K2QMF	2,682,504
-	Multi Transmitter Single Transmitter	RC1XX W1FM	7,966,659 165,750
Northwestern Multioperator	Single Transmitter	W7LR	847,104
	Multi Transmitter Single Transmitter	N6RO W6YX	2,503,137 168,780
Roanoke Multioperator	Single Transmitter	KT3Y	3,346,362
Rocky Mountain Multioperator	n Single Transmitter	W5UR	919,068
Southeastern Multioperator	Multi Transmitter	NQ4I	5,575,176
Southwestern Multioperator	Single Transmitter	KN6Y	80,976
West Gulf Multioperator	Single Transmitter	AD5UU	231,420
Canada Multioperator	Single Transmitter	VE3HG	795,366

# **W/VE Single Operator Region Leaders**

CW	
Northeast Region	
(New England, Hudson and Atlantic Division Maritime and Quebec Sections)	ions;
VY2PA (W4PA, op)	4,863,075 C
N2NT	4,026,048 C
K3CR (LZ4AX, op)	3,445,200 C
AA1K	3,315,510C
K1ZZ	3,128,625 C
N1UR	1,636,128B
W3EF	1,208,088 B
W3EI KS1J	1,180,608B
VE1OP	1,061,346B
K2PS	1,001,340B
KR2Q	509,472 A
K3PH	501,972 A
K2DM	334,764 A
N1TM	221,034 A
AA1CA	201,696 A
Southeast Region	201,090 A
Southeast Region (Delta, Roanoke and Southeastern Division	ns)
N4PN	1,638,336 C
KITO	1,513,071 C
WO4O	1,078,983 C
W5WMU	971,100 C
WJ9B	936,768 C
WK2G	804,408B
N4KG	742,716B
W4AA	642,978B
W4YE	465,831 B
K4FPF	439,812B
N8II	499,956A
K2EK	464,223 A
K4CIA	287,793 A
W9WI	279,954 A
AD4Z	175,380A
Central Region	175,500/1
(Central and Great Lakes Divisions; Onta	rio Section)
VC3O (VE3AT, op)	2,793,168 C
VE3DZ	2,653,992 C
WB9Z	1,304,784 C
K8GL	1,201,086 C

K9QVB	717,606 B
WB8JUI	471,033 B
WA8RCN	384,450 B
N9JF	322,344 B
VE3GSI	310,554B
VA3DF	242,496 A
N8IE	237,375 A
N8WS	45,120 A
K0CD	22,560 A
VA3RKM	5,031 A
Midwest Region	
(Dakota, Midwest, Rocky Mountain and V	Vest Gulf Divisions;
Manitoba and Saskatchewan Sections)	
WX0B (AD5Q, op)	1,593,765 C
KOSR	1,192,464 C
WD5K	643,734 C
K5BG	521,820 C
K0RC	516,789 C
N5AW	1,283,040B
N5DO	641,802B
WB0HCH	365,205 B
K5FP	358,272 B
K5WO	175,329 B
ND0C	96,867 A
WA8ZBT	49,920 A
W7JI	43,800 A
KIOG	40,392 A
W5ESE	31,248 A
West Coast Region	
(Pacific, Northwestern and Southwestern	Divisions:
Alberta, British Columbia and NWT Sect	
K6XX	1,116,864 C
W7VJ	849,120 C
KO7AA	836,418 C
N7CW	744,753 C
K6NA	651,423 C
VE7XF	354,144 B
N6JV	293,763 B
NW7E	245,952 B
N7AN	229,368B
N7ZG	208,065 B
W6JTI	249,744 A
N7IR	226,737 A
VE6EX	144,288 A
W6QU (W8QZA, op)	131,868 A
N6WG	25,854 A
F	23,03 1 1

# **Contest Sponsored Plaques**

Plaque Category	Winner	Plaque Sponsor
W/VE Single Operator High Power	VY2PA (W4PA, op)	Frankford Radio Club
W/VE Single Operator QRP	KR2Q	Tod Olson, K0TO
W/VE Single Operator Assisted	W2UP	Harold Ritchey, W3WPG Memorial K3WW
W/VE Multioperator Two Transmitter	NY4A	Hal Kennedy, W4GG
W/VE 3.5 MHz	W1MK	SM3DMP - W7ACN
W/VE 7 MHz	N2MF	Northern Arizona DX Association
W/VE 14 MHz	W1MU	The QSLMAN - W4MPY
W/VE 21 MHz	K4EA	Carl Luetzelschwab, K9LA
World Single Operator High Power	P40W (W2GD, op)	North Jersey DX Association
World Single Operator Low Power	P49Y (AE6Y, op	Jim Stevens, K4MA
World Single Operator QRP	4M2L (YV5YMA, op)	Jerry Griffin, K6MD/YI9MD
World Multioperator One Transmitter	HK1/K8DD	DX Publishing
World Multioperator Two Transmitters	PJ2T	Tom De Meiss K2TD Memorial
World Multioperator Unlimited	FS5KA	H Stephen Miller NOSM
World 14 MHz	EA8/OH4NL	Jeff Hartley, N8II
Pacific Division Single Operator Low Power	N6JV	Central California DX Club, Inc. W6MEL
Asia Multioperator Single Transmitter	JA8RWU	Yankee Clipper Contest Club
Europe Single Operator High Power	OK5R (OK1RI, op)	Jim George
North America Single Operator High Power	ZF2AM (K6AM, op)	Potomac Valley Radio Club
Additional CW Plaques		
W/VE Multioperator Single Transmitter CW	W3BGN	Northern Illinois DX Association
World 21 MHz CW	P49V	Caribbean Contesting Consortium
Canada Single Operator Low Power CW	VE1OP	Contest Club Ontario
Japan Single Operator Low Power CW	JA2AXB	Western Washington DX Club