

2010 ARRL June VHF QSO Party Results

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A 6 Meter Bonanza and Working the System

Where The Action Was

There hasn't been a contest in recent memory that kept so many bandswitches stuck on 6 meters. Regardless of rig, antenna, or power output, if you were on the air during this contest weekend and were tuned to 50 MHz, you were busy making plenty of contacts in numerous grids as Figure 1 shows. Stations in the middle of the country had an advantage with propagation in all directions. Twenty-two percent of the 1202 log entries had totals of over 100 grids on 6 meters. Forty logs showed 200 or more 6 meter grids and two Single-Operator, High Power (SOHP) stations and one Multioperator (MO) had over 300 6 meter grid multipliers. With 1202 log entries representing 237,386 contacts, the activity set some all-time records, and this is not even a high sunspot number year. Only 23 of all the submitted logs lacked a 6 meter entry.

Some of my favorite Soapbox comments focus on the ease and surprise that comes when a station can be worked with low power and limited antennas when the "magic band" is open for such long periods. Hams who might have decided to drop in on the contest to see how conditions were progressing were enticed to stay and play long and hard this weekend because of the great propagation. Les, N1LF reports from his Alabama home that despite a healthy dose of problems before the contest and the stifling heat, by 1 PM on Sunday merely using a 100-watt transceiver and an indoor antenna for 6 meters he managed to work VUCC and eventually wound up with 126 multipliers. He had a ton of fun! This was the theme of many of the comments from the participants: what fabulous conditions on the "magic band."

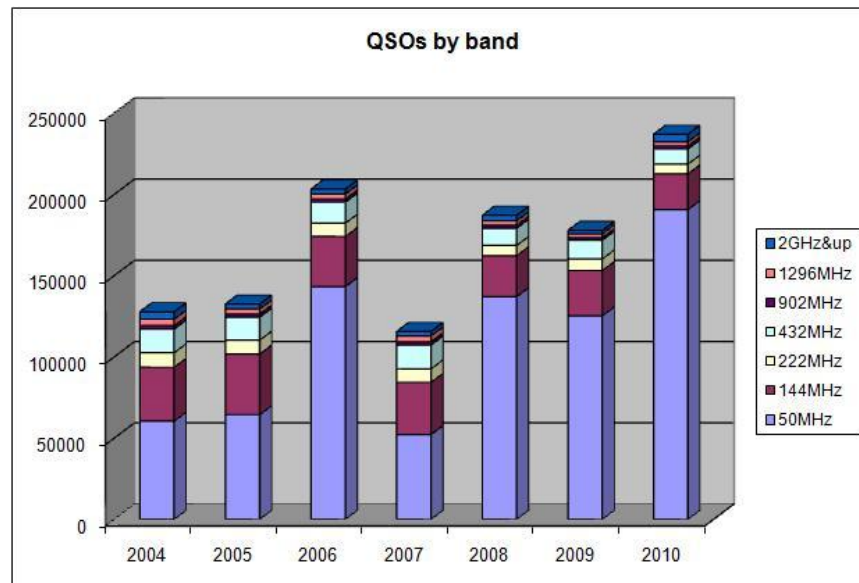


Figure 1 - QSOs by band for the years 2004 to 2010.

Record Setting Activity

Looking back over the records since VHF contest scoring has moved from ARRL section to grid square multipliers, the records set this year are likely to last for many years to come. This was clearly a big scoring year as there were 39 section category records broken as shown in the table below! These records have been faithfully managed by Curt K9AKS for the past 10 years. The plan is to have these records posted on the ARRL Web site in the near future.

Table 3 – New Section Records				
CALL	CAT	SEC	SCORE	ADDITIONAL OPERATOR CALL SIGNS
KL7UW	SOLP	AK	165	
K4WI	SOLP	AL	243,312	
K5NTT	SOLP	AR	76,653	
K1IM	SOLP	CT	218,519	
WB4SLM	SOLP	GA	310,786	
NØLL	SOLP	KS	252,280	
AE5T	SOLP	LA	244,024	
N0PB	SOLP	MO	87,493	
W0KT	SOLP	NE	35,840	
AF1T	SOLP	NH	224,812	
WB2WIK	SOLP	ORG	240,812	
WY3X	SOLP	SC	315,744	
N1IBM	SOLP	SNJ	46,760	
N4QWZ	SOLP	TN	185,220	
VP9GE	SOLP	VP9	97,133	
K5RQ	SOLP	WCF	255,496	
W3PAW	SOLP	WPA	182,965	
N5XTR	SOLP	WTX	138,370	
XE2K	SOLP	XE	48,510	
N4LR	SOHP	GA	215,100	
K9EA	SOHP	IN	164,970	
K1RZ	SOHP	MDC	481,730	
K1TOL	SOHP	ME	242,136	
KB5AAB	SOHP	MS	208,608	
N2GHR	SOHP	NLI	217,371	
KC4PX	SOHP	SFL	475,020	
K5TR	SOHP	STX	702,702	
N5LZ	SOHP	UT	87,552	
W6SAI	LM	AL	215,830	(K4CWW, KD9Q, KV4T, ops)
W5ZN	LM	AR	606,832	(+ KX9X, NN1N, W9WI)
K8GP	LM	VA	675,920	(K1HTV, K1RA, K1TR, K3MM, N2NAR, N4SV, NW5E, W3ZZ, W4XP, W8ZN, ops)
KA2LIM	LM	WNY	325,238	(+ KB2YCC, WA3CSP, W9KXI, N2LID, N2SLN, NX2W, N2IK)
WA7JTM	MO	AZ	254,286	(+ N7AMA, WW7B, W7NS)
WØEEA	MO	CO	494,256	(+ AA9D, N9BD, N9KC)
KBØHH	MO	OK	385,125	(+ KC5DPT, KAØKCI, K5TDN, N5VYN, KDØEZV)
N6TEB	MO	SJV	301,466	(+ K6WCI & KE6HPZ)
VQ5M	MO	VP5	99,957	(KD2JA & WB2REM, ops)
K9AKS	QRP	CO	38,592	
KJ5RM	QRP	NTX	19,470	

In the Single-Operator, Low Power (SOLP) category, Dave K5RQ in WCF made 1172 QSOs, besting the previous record set in 2006 by K9MU. Webster, WY3X, had fewer QSOs on 6 meters, but beat the previous SOLP record also held by K9MU by scoring 268 grids on this band. For the SOLP entrants, George, K5TR topped the old record by 253 contacts, making 1883 6 meter QSOs in 310 grids. That's just about 1 contact per minute for the entire 33 hours of the contest. Our ex-ARRL President W5ZN's MO team with a total of 295 grids beat the previous record for this category of 269 grids. The KN5O team ran a close second with 292 grids on 6 meters. I hear a drum roll for the

efforts of the K5QE MO team that managed to put 1834 contacts on 6 meter in their logs with 337 grid multipliers that tops their two previous year efforts when their team also set records in this category.

For single-band 6 meter entries there were 328 in the SOLP group and 59 in the SOHP group. [Note that there are no single-band categories – Ed.] The top three scores for each of the power groups were similar – in the 250,000-point range. Power output was not as much a factor

as was location, antenna, conditions and operating skill. There were another 29 6 meter single-band entries from all the other Multioperator, Portable QRP and Rover categories, so that 1/3 of the total logs received were exclusively 6 meter operation.

This year's 1202 entries surpass last year's total of 1135 by a nice margin. Of course, when the bands are productive, more operators are encouraged to submit their logs. As I have discovered and mentioned many times before, there are usually twice the number of active stations on for the contest activity than there are logs submitted. Taking a look at the 6 meter QSO totals, you can see that there were over 1800 contacts on just one band in the K5QE log.

DX Activity

We were all pleased to see the increased number of XE stations active and submitting their logs this year. All 8 were active on 6 meters and added a total of 1649 contacts on that band. Jose XE2K was also active on bands BD9. (See the table of band designators below.) Three single-band entries on 6 meters were received from Brazil with a total of 85 contacts. Ed, KL7UW had 5 bands ready and KL7/KB7Q operated on 6 – between them they had 24 QSOs on 6 and 1 QSO on 2 meters. Massimo, KH6ZM added another 45 6 meter contacts from HI. NP2B (NP2X, op) gave us 195 two-ways from KP2-land, while Julio, NP3CW managed to add 7 more 6 meter contacts from PR. We also received 6 meter logs from VP2MRT, VP9GE and VQ5M who added to the excitement with a total of almost 1800 contacts from the Caribbean. As always, the VE stations were very active; 61 logs were entered from VA/VE/VO.

Table 1 – Band Designators		Table 2 - Category Designators	
<i>Designator</i>	<i>Band</i>	<i>Designator</i>	<i>Category</i>
A	50 MHz	SOLP	Single-Operator, Low Power
B	144 MHz	SOHP	Single-Operator, High Power
C	222 MHz	QRP	Single-Operator, Portable
D	432 MHz	R	Rover
9	902 MHz	RL	Limited Rover
E	1296 MHz	RU	Unlimited Rover
F	2304 MHz	MO	Multioperator (Unlimited)
G	3456 MHz	LM	Limited Multioperator
H	5760 MHz		
I	10 GHz		
J	24 GHz		
K	47 GHz		
L	75 GHz		
M	119 GHz		
N	142 GHz		
O	241 GHz		
P	Light		

Running the Bands

The excitement on 50 MHz is often to the dismay of the Multioperator stations that sit on the other bands seeking contacts and to the rovers who are trying to do several things at once; drive, operate multiple bands and encourage their contacts to “run the bands.” This year's contact totals on 144, 222, and 432 MHz reflect that angst as those bands were down 20% in total QSO numbers from last year. The surprise though is that totals on the microwave bands were up as much as 100%. This was largely due to the efforts of a team of 9 Rovers each equipped with at least 10 bands, travelling together across 9 grids on the West Coast, working each other and some fixed stations. Operating within the confines of the new Rover category rules they kept contacts between each other below the maximum of 100.

Although there were reports of modest 2 meter tropo openings, those reports are far out-

shadowed by the sporadic E (Es) conditions on 6 meters. Mike, K7ULS on Powder Mountain in Utah caught some 2 meter openings with QSOs to OK, KS, WI, MI and IN. He managed this in spite of 60 mph winds and snow in June. The Multioperator team at KA2LIM in FN12 in upstate NY reported a 2 meter QSO as far south as Alabama in EL49. Tom, N4HN reported a 2 meter contact from EM95 North Carolina to EM25 in Oklahoma. Marshall's team at K5QE also reported working many FN grids from their STX QTH in with an extended 2 meter Es opening to the NE. Their 2 meter grid count also benefitted greatly from the EME activity contribution of an additional 28 grids.

Comedy, Tragedy, or Drama - The Show Must Go On

With all the planning and rehearsal, stations were primed for action. There was the "almost tragedy" as Sebastian, W4AS experienced a power failure four minutes before the start of the contest. Luckily it lasted only a minute and he had three more minutes to regain his composure and got everything restarted. He also found the secret to following the drama of the 6 meters Es with his band-scope using the SDR-IQ. This enabled him to watch the more distant beacons for indications of improved conditions and spotting the frequencies of active stations. Many participants have adopted this tactic as more software-defined radios (SDR) and their unique programs have become available. This technique has become especially valuable for the higher bands. The frequency calibration of microwave signals is more difficult, but the search for a contact is much easier when you watch the band scope and see the signal and its trace in the waterfall display.

The KA2LIM team reported visits by Murphy with problems on their 432 MHz and 222 MHz stations which required swapping out rigs as soon as they started operating on those bands. They attempted to raise their microwave tower, succeeded in having the mast bend a bit, and in the attempt to get it straighter wound up having it bent over. Lest this comedic scene be lost, they snapped a picture of it to use as their contest QSL card.

Zack, W9SZ, a long-time rover, found himself in a tragi-comedy when he rushed to get his rover ready. He was beset with a downpour just as he was about to hit the road. Compounding his troubles were missing parts as he rushed to get moving. To add to his luck, he was hit with another storm on Sunday. He managed to get everything packed and stowed just as the 50 mph winds hit and rain started. Needless to say there was a lot of mud to clean out of his vehicle and gear. The WA7JTM MO team in Arizona loved the 6 meter opening, but also had to manage against big winds and snow flurries in AZ!



K7ULS operated from Powder Mountain, UT, reporting, "What a contest! It was well worth the 60 mph winds and snow."

The team of Kim, KB1DFB and Jay, W1UJ had a great time with their LMR (Last Minute Rover) setup. They lashed a series of halos and squalos to a bar over the cab of their pickup and operated in from popular New England grids. The key to their enjoyment was the density of activity in their geography and the elevations they chose.

Brian, ND3F and David, N3XUD teamed up as Rovers and encountered some stormy weather that made them pack up and move almost as soon as the activity started. When they got to their last grid they found their stack of radios had fallen over and the amplifiers were not able to be keyed. Brian quickly assessed the situation and resolved it by pulling out the RCA connectors used to key the amps. He used the old “touch-to-talk” method of grounding the center pins in color sequence when running the bands.

The Furlanders Contest Team in the North Carolina mountains experienced a seized pulley in the cooling portion of their large field generator that then started to steam up and was shut down. Their high power operation went to low power using back-up generators. Lessons learned—always have a plan B and spares.

High or Low Power?

I have always been interested in how a station decides on high power or low power, since many have higher power capability than the current limit separating the categories. Yet they choose to reduce drive or remove amplifiers from the operation for the contest. If a contester added one of the surplus cell site 902 MHz amps to their station, does it make sense to use it and enter into the High Power category, even though the rest of the bands fit into the Low Power category?

There are also issues involving measurement of the power, and of course, the honor system of reporting. Is it output power at the antenna connector of the amplifier or at the antenna? Is it average output, peak-to-peak SSB or key-down CW? [*It's PEP transmitter power output – Ed.*] I have watched the category Top Ten over the past several years and see the same players have been in the same positions in both of the Single-Operator categories. Following the contest, the VUAC will be evaluating various options to see if there is a popular opinion about power levels, especially given the changes in availability of amplifiers for higher microwave bands. My sense is that a liberalization of the microwave power levels for the Low Power operators would allow contacts over greater distances and encourage more activity on those bands without handicapping the Low Power category on the lowest four bands. If you are a VHF contester, please make your opinion known to your VUAC representative.

Single-Operator Category

Although we generally focus on the highest scoring stations in these reports, thanks go out to all of the stations who got on the air to make this a fun weekend. Always remember that it takes two to make a QSO! Even with the finest equipment, best operators and superb conditions, there has to be activity to make this weekend of on-the-air action engaging. 132 SOLP and 12 SOHP logs submitted had 25 contacts or less so if you think you had a thin log, you were in good company. Seven SOLP and 7 SOHP logs had over 1000 QSOs. Some concentrated on a single band to get those numbers, while others used 10 bands to make those totals.

In the SOLP category, Bob, K2DRH in IL again topped the list with 374k points with his 8-band effort. In second place from SC, Webster, WY3X garnered 315k points using only bands ABD, racking up 1009 6 meter contacts in 268 grids. Vic WB4SLM in GA placed third with 310k with another big 6 meter effort, yet finding enough time to add contacts and grid multipliers on bands through 2.3 GHz. In 4th place, Rich, W5SXD from NTX had 299k with a 6-band station but the basis of the big score was again an over-1000 QSO result from 6 meters.

Rounding out the top five is Dave, K5RQ, from WCF with a single-band 6 meter total of 255k from 1172 QSOs in 218 grids. Rounding out the Top Ten for SOLP we have NØLL, K4LY, N3LL, AE5T and K4WI, with scores between 243k and 252k. The small margin of difference was the mix of QSO points on the higher bands and their additional multipliers, since all of them had quite substantial 6 meter contact and grid totals.

George, WB3IGR reports, “Great 6 meter opening this contest! Lots of new grids!”



George, K5TR rocked the SOHP world with 702k points based upon a 1883 QSOs and 310 grids on 6 meters plus an additional 87 QSOs on bands BCD along with 41 grid multipliers. In second place, Jeff, K1TEO managed 579k with contacts on bands through 10 GHz. Third place went to Dave, K1RZ with 481k, also a ten-band effort. Both Jeff and Dave had similar 6 meter totals in the 500-contact range, giving the indication that 6 meter Es did not bless the Mid-Atlantic and Northeast as much as it did for the rest of the country. The one exception to that is Lefty, K1TOL in ME, who turned in a single-band log with 1121 6 meter QSOs in 216 grids, capturing 10th place in SOHP. Ivars, KC4PX from SFL ran up a score of 475k for 4th place, with a huge 6 meter run of 1507 contacts in 314 grids, and 1 additional 2 meter contact. 5th place was captured by Herb, K2LNS operating the WA2FGK station in EPA and garnering 473k points, also with a ten-band station. K2EK in NFL placed 6th with 326k on a strong 6 meter total of 1316/241. W6OAL from CO was in 7th place with 265k and an 8-band effort. In 8th place from STX we had W3UUM with 259k and 9th place from NTX was WD5K with 251k, again with lots of 6 meter contacts from the Es epicenter.

Multioperator Action

The Limited Multioperator (LM) category had 52 entries and the K8GP Grid Pirates topped the list with a score of 675k. Their 6 meter totals were 779/201 from VA, but they bolstered that with a giant total of 463/71 on 2 meters, 115/39 on 222 and 216/44 on 432. Their outstanding 2 meter, 222 and 432 totals were a result of a colossal array of antennas in addition to their station location at 1800' ASL (Above Sea Level) and a team of experienced, savvy ops. For 2 meters they employed three Large Vertical Arrays (LVAs) each consisting of eight 6-wavelength Yagi antennas, each stack being set at the major direction of population, with another pair of FO-12 Yagis rotatable atop the 140' tower. You can find their whole June VHF story and pictures at the [K8GP Web site](#). In 2nd place, the W5ZN team scored 606k, taking advantage of their AR location in the 6 meter Es with a 1317/295 total on the magic band. NR5M was 3rd with 421k from STX, also in the eye of the Es and 1299/239 on 6 meters. The Wopsonock Mountain team of W3SO caught the 4th spot with 408k and their strength was also the contribution of bands BCD as their 6 meter totals were limited to 705/179. Ted, KN5O in LA turned in a single-band 6 meter entry of 1342/292 to place 5th in the category, although in a sense, he really wasn't a Multioperator. He dutifully followed the rules and reported his score as a Multioperator as he had the cluster running on his desktop even though he really didn't need it

or use it as he had his hands full working the crowd on 6 meters. [*Good job, Ted! – Ed.*] The 6th place LM team was KA2LIM with 325k, also with a big 2 meter score using an LVA array. The remainder of the top ten for LM included W4IY with 312k from VA; W4NH with 304k from NC; AA4ZZ with 274k, also from NC; and W2LV with 260k from NNJ.

Rover Category Mélange

Rovers are still increasing in numbers and finding great joy in the ability to be operating from coastal and hilltop locations and from otherwise inactive grids. There were a total of 94 Rover entries this year, similar to past June contests. Traditional Rover entries numbered 42, Limited Rovers (RL) 42, and Unlimited Rovers (RU) 10. The LR category allows up to two operators and use of bands ABCD.

Kudos to Al W5LUA and Tony WA8RJF who manned the W5HN Rover. Their 88k points from NTX topped the RL list. The combination of a 4th band and a few more contacts on bands BCD gave them an 8k point advantage over 2nd-place NO5LA, operated by Dallas, K1DW and Ed, N5KGV who logged an amazing 482 6 meter contacts in 161 grids. I wonder if the rovers really had to move to follow the Es? Third place goes to Mike W6YLZ who appears to have tracked along with the SCCC pack rovers and ran up a 61k score with lots of QSO points and multipliers well distributed across four bands. He had a limited 6 meter grid count of 43 that paled in comparison to the others in the top five who all tripled that amount. Tim, AL1VE had 60k for a 4th-place finish and Jim, KK6MC in NM had 59k for 5th place.

The story of the Rover category leader board is best told from [Wayne N6NB's Web page](#). The Southern California Contest Club had a group of 15 operators in 10 vehicles and also worked with two fixed multiband stations, one MO and the other SOLP. Nine of the vehicles entered the Rover category and they captured the top eight spots. Each vehicle had 10 bands, with three of them also equipped for 24 GHz. With scores between 224k and 299k, the order of finish was: Carrie, W6TAI; Wayne, N6NB with Arnold, N6HC; John, N6MU with Pete, NI6E; Bob, KK6KK with Bob, KG6TOA; Art, W6XD; John, K6MI; Martin, N6VI with Joe, K6ZMW; and W6TE with Larry, W6KYO. Ninth-place scorer Murray, VE3NPB with Russ, VE3OIL used 11 bands + LASER and scored 126k. They appeared to track together with Steve, VE3SMA who had a similar setup and came in 10th with 98k.

The Unlimited Rovers have many options, and ten entrants chose this category. Topping the list was the team of Brian, ND3F and David, N3XUD, operating the N3IQ rover. They had a busy rove with a 180k score based upon a 10-band station with 551 contacts and 146 grid multipliers. WA3PTV had a 65k score also using 10 bands. The NN3Q team Russ with Al, K3WGR had nine active bands and turned in a healthy 60k for 3rd place. All of these stations operated across grids in the Mid-Atlantic States area.

As a result of the appearance of a group of multiband rovers on the West Coast with strategy and tactics to maximize their scores in selected categories, the game has changed: Select a rover category for your submission that optimizes chances for getting into the Top Ten. The rover categories have evolved into three tiers. It is possible for a rover to submit a score into any of the three categories, depending on how they see their chances of getting near the top of the leader board-- if they have not operated more than the bottom four bands or used more than two operators or made more than 100 contacts with another rover.

When the Unlimited Rover category was added to the possible rover categories, it appeared that it was in response to the grid-circling pack rovers, giving them their own category.

That also allowed the more traditional rovers to compete against each other by making the rounds of several grids and making contact with the fixed stations. VHF and microwave activity is different on the West Coast, however. For many years the June VHF activity was more limited than the East Coast and central states and there were very few microwave contacts being made in the west. (The big exception is during the 10 GHz and Up contest weekends where the microwavers and dishes are out in abundance, using the Sierra Nevada mountain ranges and coastal tropo to run up incredibly large QSO numbers and contact distances.) More than one longtime rover has voiced displeasure at the activities of the pack rovers and their ability to win the three roving categories with their tactics. This year they put together their scores and topped the Medium club category. Has the VUAC response been appropriate? Has the Unlimited Rover category really served its purpose? Is it getting to be more of a game to decide how to conduct and submit your roving activity to get recognized in the results? No matter what your opinion may be about the West Coast rover group activities, it is clear that they have established themselves as a controversial force in the VHF contests. They have attracted a few more like participants to the shorter wavelengths with the “bands in a box” stations. When it comes to adding up the numbers of contacts on bands FGHIJ, they accounted for 57% of all the QSOs made on these bands. In addition to 6 meter activities monopolizing the weekend, the reduced number of microwave capable rovers on the East Coast also contributed to the limited number of microwave contacts made by all other stations.

Portable Operations

Single-Operator Portable entries get a lot of respect from me as they venture out to locations where they can hear well, but can transmit low power only, restricted to 10 W and required to use a portable power source, portable equipment and antennas. For several years, Chris, KA1LMR in NH has been on the top of the QRP list, and his score of 115k with a 6-band effort put him there again. He had 389 contacts in 120 grids on 6 meters. That is a testament to what can be done when the band is making its magic. A long way back in 2nd place, Curt, K9AKS had 38k using 4 bands in CO, capturing 238 QSOs on 6 meter with 129 grids. Jory, KJ5RM was 3rd in QRP with his NTX score of 19k on bands ABD. W4RXXR was 4th from VA with 11k on 5 bands. Rounding out the top five of the 20 entries in this category was Ken, WB2AMU in NLI with a 4-band entry of 10k.

Reading the Soapbox entries of the QRP gang often makes me jealous of the sheer joy that they have from finding a hilltop and setting up limited-power gear and making plenty of 2-way communication. Jory KJ5RM reported that he operated QRP in the 100-degree Texas heat but was undeterred as he managed a nice log on three bands. The winds played rotor for his small beams on 6 meters and 2 meters, and he even managed a few 432 MHz QSOs with a rubber-duckie antenna and set a NTX QRP record with his 19k point score.

Aggregate Club Scores

Adding all the club entry logs together totaled 508. Considering that there are many MO entries in the club category, I estimate that 50% of all the contestants submitting logs are also members of ARRL Affiliated Clubs. Uncontested in the Unlimited category with 58 contributors, the Society of Midwest Contesters amassed 1.4 million points. In the Medium category, the Southern California Contest Club scored 2.8 million points, with 2.2 million of those points

scored by their pack rovers. All told they had 21 contributors. The Potomac Valley Radio Club was second in the category by a mere 90k points and a 2.7 million total representing 34 participants. The Florida Contest Group with their 18 stations produced a 3rd-place score of 1.4 million. The Murgas ARC topped the Limited Club entry list again, with the score of WA2FGK as their main contributor. Their three stations had almost 1 million points total. The second-place club in the Limited Club category was the Chippewa Valley VHF Contesters and their 4 entries totaled 320k. In 3rd place we had the Eastern Connecticut ARA with 6 logs and 135k total score. What is remarkable about all the club entries is that they have stimulated growth of VHF and microwave activity and generated greater group participation in these and other on-the-air events. Any of the clubs listed represent a brotherhood of helping hands and technical support. If you are a VHF beginner, or merely seeking to improve your station or operating skills, these clubs are excellent resources. Information about these clubs and contacts can be gleaned by looking at the ARRL Affiliated Club listings or using an on-line search engine.

In Closing

I am grateful to all the stations for sending me reports of their successes and their frustrations. Without all of the reports and posts on the ARRL Soapbox, it would be difficult to make a contest summary. Even if you didn't see mention of your call and activity here, take solace in the fact that you were a participant in one of the most exciting June VHF QSO parties of the decade. I would also like to thank Jani, my XYL, for her editing skills and support.

If you missed the magnificent conditions this time around, you'll get your next opportunity on June 11-13, 2011. This year's contesters will be looking for increased participation and as exciting, if not better propagation.

73, Rick K1DS