# 2008 ARRL June VHF QSO Party Results TOYOTA Rover Plaques Sponsor

### A Wet and Wild Weekend—Were You Prepared?

By: Rick Rosen, K1DS Rick1ds@hotmail.com

What more fun can a few thousand VHF+ operators have than a weekend with plenty of other stations to work and with propagation enhanced by sporadic-E or "E-skip" (Es) on 50 and 144 MHz? The June 2008 VHF QSO Party was thoroughly enjoyed by almost all participants thanks to the substantial hours of open bands from Es, plus the use of CW and digital modes, including FSK441 for meteor scatter and JT65 for EME.



Peanut, Rooster and Steve, N0TU, the 'old goat' on the trail up to Mt. Herman (CO) with a batterypowered FT817, homebrew 6 m dipole, and 5-element 2 m beam. (Photo N0KE)



Grid expedition to FN04xa by members of the West Carleton ARC of Ottawa. Operators included

## Ken VA3KA, Doug VE3XK, Andy VE3NVK, Barney VA3BGB, Dean VA3CDD, Al VO1NO/ and Jeremy.



K9AKS Single Op Portable, QRP, from EN20 in Nebraska with permission set up at the Plattsmouth Airport. Curt had a sore arm after manually turning the antennas all weekend. Note the moon just above the top of the mast. [Photo K9AKS]



The 7th place Multi-Op KB0HH contest station in northwest Oklahoma has four rotating towers: 6 meters, 2 meters, 222/432 MHz, and microwave with multi-beam arrays on 50, 144, 222, and 432 MHz and parabolic antennas for 1296, 902, and 2304 MHz.



Gonzalo XE3N with his TS-2000 and wire delta loop 6 meters above the ground got his call in over 350 logs. [Photo XE3N]



Steve, K4GUN/R started off on Skyline Drive in FM08 with co-pilot and logger Kristine, K4LIG. Stormy weather forced them to move on to the rest of their Mid-Atlantic rove including the four-grid Cheaspeake Bay Bridge and Tunnel. [Photo K4LIG]



What could possibly go wrong at the AA4ZZ multi-op effort after the planning sessions pay homage to Murphy? L-R: Paul AA4ZZ, Joe KI4TZ, Pat N4BH, Ric AA4SC, Bill W4GRW, Ken K4DXA, John K8YC [Photo AA4ZZ]

The date, conflicting with Father's Day, had a few folks limiting their Sunday air time. Preparation was key this year, as much of the middle of the country was inundated by heavy rains and local flooding. Violent storms raced through the eastern half of the country, causing many stations to shut down for several hours due to the wind-whipped conditions on mountain-tops and lightning strikes nearby.

### Preparation

Preparation included checking all the gear for functionality prior to the contest, checking the rover schedules of those who post a route on the various VHF and contesting reflectors, and then having a backup plan for managing anything that needs repair or replacement during the action. The K8GP team reported "We were changing out TS-850s like most people change socks. Dead transverters, dead 2304 amplifier, two flat tires, bad power steering pump..." Fortunately they are experienced with preparation and came with plenty of spares. Their long haul to FM08, Spruce Knob, WV, drained the Grid Pirates' treasury using lots of fuel for their buses and generators.

Getting enough sleep prior to the contest is also useful preparation, as one unnamed operator manning the four stations of a limited multi-operator station in the wee hours of the morning was found asleep at 5:30AM with all four voice keyers on a continuous loop calling CQ!

Dan, K9ZF/R found that his 6 m Moxon had a 7:1 SWR and spent hours trying to fix it then going through his pile of previously used 6 m antennas until he stripped an old beam down to two workable elements. In the process, he used up precious band-opening time and had to shorten his rove by a grid.

The K3LFO/W3DIO rover team described their months-long rover overhaul and station enhancements on the K3LFO website, overcoming some, but not all of the issues that faced them during the weekend. I was especially impressed with the rewiring of their solid-state 400-watt amplifier power supply line with some 00-gauge cable to maintain a steady 14 V for full output.

The KA2LIM limited multi-op group found out the hard way that they should make sure the gear works before it's up on the mountaintop as their 432 MHz high voltage supply to the amplifier was shot and the first replacement was not working either. They managed to get a third amp on-line several hours into the contest, again missing several productive contesting hours. Regarding preparation, Paul, AA4ZZ added,

"We joked that perhaps it was not such a good idea to have our pre-contest planning sessions at a restaurant named '*Murphy's*'.

#### The Bands

Although this question has been asked and answered before, it bears repeating, "What bands do I need to be active on for this event?" The answer is you must have 6 meter capability. That's where everyone will be if that band is open. And since the band was open for a long time on both days of the weekend, there was the post-contest complaint on the various reflectors that scores were down on the higher bands. While it has been suggested that we should have an event without 6 meters, the Midwesterners responded that without 6 meters, there would be no significant activity. We have the August UHF QSO Party, on 222 MHz and up, for that type of a contest.

My personal modus operandi changed for this year. I had been a rover for about 20 years, but because of some changes in our club's needs, became the microwave bands co-captain. I prepared the 903 MHz, 1296 MHz and 24 GHz stations, while my partner co-captain supplied 2.3 through 10 GHz gear. As many of you have probably experienced, a multi-op effort often requires input and gear from a number of different places and it was both a challenge and reward to have the various pieces of the IF rigs, transverters, amplifiers, preamps, feed lines, operating shelter and positions, antennas, towers and rotors fall into place neatly. It was interesting to follow the rovers as they went through their grids and work them through their highest bands from our vantage spot on a 2200' monolith, Camelback Mountain in the Pennsylvania Poconos.

For many in the right places, the action was fantastic on 2 meters, as Es was prevalent throughout the Southeast, Central and Southwestern parts of the country. Grid totals higher than 50 were achieved by 10 stations across a wide geography and included a station in each of the single- and multi-op classes. The moon also became an object of 2 meter reflection as some stations took advantage of the timing and position of the moon during the weekend to make QSOs in very distant grids using both CW and WSJT digital modes. K5QE reported an additional nine grids via EME on 2 m that they would not have otherwise been able to work.

### The Logs

With one of the highest numbers of logs received for the June VHF QSO Party so far in the 21st century, the 2008 event is sure to be memorable for all who participated. There were 1074 logs received and according to the log of W5PR from STX, operating only 6 m, there were at least 1630 participants as each of them were in his log! I'm sure this number underestimates the true number of participants. You can get a rough gauge of the percentage of logs submitted by QSO Party participants by looking at your own log and seeing who is there and if they also have an entry in the full Web database. There are even many postings on the Soapbox Web site (www.arrl.org/contest/soapbox) from stations that did not send in their results for this review. My rule of thumb is that there are at least twice the numbers of participants as submitted logs.



## June VHF QSO Party - Logs Received

*Figure 1*. The trend is good for the June VHF QSO Party as log submissions were the highest since the year 2000.

The breakdown of entries included 659 (61%) in the Single-Operator Low-Power category, 200 (19%) in the Single-Operator High-Power category, 51 (5%) in the Limited Multi-Operator category, 33 (3%) in the Unlimited Multi-Operator category, 35 (3%) in the QRP Portable category, and 96 (9%) in the three new Rover categories. The Classic rovers numbered 62; while the Limited group had 26 entries and Unlimited rovers submitted eight logs.

### Conditions

At the start of the contest a large band of precipitation, along with some high energy cells and lightning extended from the northern border of Alabama up to the western border of New York state. Relentlessly moving northeast, it had some of the stations in its path temporarily shutting down and engaging lightning protection. Jim, W4RX in Virginia gave this account, "About an hour into the contest, the storm hit. Not an ordinary storm. One particularly violent cell settled in right over Mount W4RX. I had St. Elmo's fire on the element tips, with a constant discharge that pinned the S-meter for about 15 minutes. I finally decided that this could be life threatening and stopped operating."

Jeff, K1TEO in Connecticut described the storm activity at his QTH, "I was off for about two hours. I stupidly reconnected during a lull in the storm, or so I thought, to get W1RT/R in FM27. When we got to 903 my XYL came in and told me the lightning was right on top of us. I got off quickly and just in time. Three minutes later a bolt hit with a huge explosion within 200 feet of my house. I have no idea how, but everything survived. After the storm moved far enough away I reconnected only to find 6 m and 2 m unusable with S9+ QRN... my tower was discharging. It was only the antennas on my big tower. Probably a nice 'connection' between the cloud and tower…took over an hour to go away…missed 3 prime hours…"

Some had greater difficulties. Howard and the W3CQH gang traveled 11 hours to get set up on Mt. Mitchell in North Carolina, properly getting all the gear and permits in advance. "Two minutes before the start of the contest, the heavens opened! And it was miserable! The lightning and thunder danced all around and over us! The rain fell straight down, at a 45-degree angle, and at a 90-degree angle from top center, and the wind was gusting around 40-50 mph, the fog swept in and we couldn't see 15 feet in front of us, from 2

PM until about 6 PM. We were able to get the gear under plastic protection. We got the updated weather report that we were going to get this garbage throughout the weekend, and decided to tear it all down and go home! We were all cold and soaked to the bone, even though we had rain gear. At 9:30 PM we finished packing it all up and left for a 15-hour drive home!" More storms showed up in the Midwest on Sunday, causing additional time-outs and disconnects.

Almost everyone was happy and excited to have some 6 m Es, and as reported by the stations in the Texas and surrounding Midwest areas, the band was open the entire contest. There was also an excellent enhancement on 2 m Sunday morning and some aurora facilitated QSOs during the weekend. Stations in the middle of the country reported consecutive contacts from the East and West Coast in their 6 m log without moving their antennas. As many of you remember the great conditions of 2006, this year's 6 m QSO numbers on that band came close, with 137k QSOs reported in the submitted logs, as opposed to 143k QSOs on that band two years ago.

With so much activity occurring on 6 m, how do you make time to lend an ear to the other bands? This was the dilemma faced by stations using a multi-band radio, unable to listen to more than one band at a time. This was especially an issue for those in less densely populated areas, where all of the activity on bands 2 m and up usually took place right on the calling frequencies. John, AA5JG passed on his advice, "(I) definitely realize the benefit of having separate radios for 6 m and 2 m...I caught quite a few 2 m stations (including 2 m Es) while working the 6 m openings because I could listen to both."

As always, one of the caveats of VHF+ contesting is to always listen to 6 m for openings, as that's where everyone will be when the "magic" is being made. Ivars, KC4PX found the band was open in all directions most of the weekend from EL98 and made a special effort to try to beat his 6 meter grid total of 263 grids from the 2003 June VHF contest. He reported the best experience during the contest was beaming the 7-over-7 M2JHV beams towards the West Coast, running a pileup of 7's, and having 1's, 2's and 3's breaking in, too, and all with S9+20 signals. He said it did not make any sense to QSY and work the upper bands due to the pileups he had on 6 meters, adding, "Just wait until Japan and Europe signals are S9 next year." Rover entrant Steve, K4GUN reported, "K5QE and a few other big gun stations in the Gulf Coast area seemed to have a permanent opening to the Central Atlantic area. Between K5QE and W5PR, I don't think there were more than a couple of hours when I couldn't hear one of them."

Northeast and West Coast contesters were not as fortunate as those in more southern and central US locations, as the 6 m Es QSOs were less available. As a gauge of the different conditions, we can compare the 6 m results of multi-operator station K5QE, operating from EM13 in Texas, to the multi-operator W2SZ group in western Massachusetts in FN32. The Texas group had 1345 6 m QSOs in 245 grids, while the Mt. Greylock gang logged 889 QSOs in 153 grids on 6 m. The top 24 grid gatherers on 6 m with 199 through 280 grids were mostly in a band of states from Florida through New Mexico, plus others from Colorado, Iowa and South Dakota. The 25th station in the 6 m grid ranks was K1TOL in Maine, with a single-band entry and 194 grids. Despite the differential in 6 m propagation, the top honors in overall score in the Single-Operator High-Power, Multi-Operator, Limited Multi-Operator and QRP categories went to stations on the East Coast, due largely to the population density and activity on the higher frequency bands. Two meters provided some nice long-haul openings for the central part of the country on Sunday.

Comments from stations that found the openings included this note from N4QWZ in Tennessee, "My June test e-skip report – 144 MHz DM53, 54, 64, 65, 74, 84, 89, 95 - all new grids!! Worked KB0HH EM06 on 144MHz and 432MHz at 685 miles tropo. To top the day off on 6 m as I was working pile of 1's and 2's, EA8BPX in IL18 called me. The best June contest ever!"



Figure 2. Sunday 2 m QSOs made using tropospheric propagation (blue=14:00 UTC, red=18:00 UTC)

Also noted on June 15 was a report of two long-haul 222 MHz contacts between W5UWB in EL17, Texas, and N0VZJ in EN35, Minnesota, and between AA4ZZ from EM96, North Carolina, and W5DDR in DM84, New Mexico.

Digital modes were again popular for stations that either made schedules in advance of the contest for some DX grids, or for those who planned to use EME. Even without the ability to have elevation, there were QRO stations workable in random mode at moonrise and moonset using CW or WSJT modes. Even though these digital contacts often took more time and planning, they were greatly satisfying to those who could put some DX grids on the VHF bands in their log. Chet, N8RA put it this way, "Was it efficient to stay up until 3 AM doing meteor scatter? Probably not, since these new grids are worth only about 12 more contacts. Staying up that late caused me to sleep in past the alarm clock. Would I have been better off being up earlier and being a bit sharper on Sunday? Probably. But looking at the grid map on 2 m with the cluster of worked grids contiguous around mine, and then that one wayyyyy out there? Priceless!" Mary, KV2M had unique local conditions which she reported in the South Jersey Radio Association newsletter; a chipmunk got into the shack when she left the door open a crack. It took a chunk of prime operating time to chase the critter back out.

#### **Record Setting and Breaking**

Many operators, recognizing the unique opportunity on 6 m took full advantage of running it long and hard. The stations with favorable 6 m conditions, well aware of the chances they had to top previous records, stayed in their seats to milk the last drops of propagation. Log checking and scoring algorithms caused a modest reduction of submitted totals of grids and QSOs. Many operators posted their results on the Web in the days and weeks after the QSO Party. Submitted logs were reviewed and validated through the contest software and the official results are included here. Eight division and 26 section and DX records were set.

Table 1 – Se	Table 1 – Section and Division Records Set in 2008						
CALL	CAT	SEC	SCORE	QSO	MULTS	DIVISION	
K5RQ	SO-LP	WCF	202384	973	208	Southeast	
K3FM	SO-LP	MS	193817	877	221	Delta	
K4LY	SO-LP	SC	144826	544	227	Roanoke	
AA4W	SO-LP	NFL	135740	609	220		
W6ZI	SO-LP	OK	99424	433	208		
N4QWZ	SO-LP	TN	95545	380	197		
W9ZRX	SO-LP	NC	89880	535	168		
CO2OJ	SO-LP	CO2	59792	404	148		
WA3EOQ	SO-LP	MDC	55977	272	141		
W3PAW	SO-LP	WPA	54002	273	134		
W4PJP	SO-LP	GA	49968	342	144		
XE3N	SO-LP	XE	38413	359	107		
W5PR	SO-HP	STX	443360	1630	272	West Gulf	
K1RZ	SO-HP	MDC	440622	919	273		
KC4PX	SO-HP	SFL	392040	1306	297	Southeast	
W4WA	SO-HP	GA	196605	626	257		
XE2WWW	В	XE	121218	681	178	Int'l	
AE5T	LIM-MO	LA	218400	975	224	Delta	
KH7Y	LIM-MO	PAC	270	18	15		
K5QE	UN-MO	STX	1122051	1943	449	West Gulf	
K0DI	UN-MO	LAX	217404	726	198		
K9AKS	SO-QRP	NE	36120	240	140		
K6VCR	SO-QRP	SDG	35588	290	82		
N3LL	SO-QRP	WCF	5850	90	65		
N3AWS	SO-QRP	MS	5432	97	56		
WC4V	SO-QRP	KY	1287	37	33		

A new record was set for the highest number of 6 m QSOs in a June QSO Party Single-Op High-Power category: W5PR, with 1630 contacts. The previous record of 1212 was set by N5HHS 10 years ago. This previous high-water mark was also topped this year by WD5K with 1388 QSOs, and by KC4PX with 1281 QSOs. The Unlimited Multi-op K5QE team also set a QSO record for their category this year with 1345 contacts, besting the 2006 W2SZ result of 1168.

Looking at the Single-Op High-Power grid-multiplier records, KC4PX topped his previous 6 m record of 263 grids from 2003 with an extraordinary catch of 280 grids this time. W5PR with 272 grids also topped the old record and WD5K tied it with 263 grids. The Single-Op Low-Power record set in 2006 by Wisconsin's K9MU 1094 QSOs in 229 grids still stands.

#### Single-Operator

There are three single operators who have maintained their top spots in their respective categories for several years in a row. Setting the pace in the low-power category, Bob, K2DRH in Illinois led with a score of 328k, using eight bands through 3 GHz and scoring 120k more than his nearest competitor. Using the old saw, "neither wind nor rain nor dark of night..." often describes Bob's experience with the contest as he catalogued all the problems he had in maximizing his station's performance on his contest Soapbox entry. Difficulties included equipment failure including a lightning surge that fried a computer prior to the contest, express delivery of replacements, weather related delays, local QRN and changing propagation. In somewhat of an operating contrast, K5RQ operating from West Central Florida came in second place using only 6 m and scoring 202k, with a hefty QSO count of 973 and 208 grid multipliers. K3FM was 3rd in the low-power category with 198k points, operating from Mississippi with 6 m and 2m. Our 4th place station, WB1GQR (W1SJ, op) from Vermont scored 191k in a 7-band effort, while in 5th place, N4BP amassed 166k from south Florida, as a single-band 6 m op.

In the high-power group, Jeff, K1TEO managed to accumulate almost 658k points from his Connecticut OTH to stay in the top spot for yet another year. If 6 m openings were lacking in the northeast, they were compensated for by higher band activities. What is so remarkable about his score is the number of grids that he is able to add from bands above 432MHz. With pinpoint 6-digit grid aim, he is able to "run the bands" with microwave-capable stations. He added 228 QSOs on 903 MHz through 10 GHz and in the process scored an additional 124 multipliers. Taking second honors from South Texas, Charles, W5PR took advantage of the 6 m propagation and scored a whopping 443k points using a single band. This was also the greatest number of QSOs made by any single-op in the contest, and more 6 m QSOs than any multi-op station in this activity. In third place, Dave, KIRZ operating out of Maryland was only 3k points behind, with a total of 440k points. Several rovers have pointed out over time that both Jeff and Dave have a great knack of being able to locate their microwave signals and rapidly run the bands. Large multi-operator stations, on the other hand, are often slower to accomplish a run, as they can be backed up with other OSOs, and there are often multiple hand-offs between operators on different bands, complicating the process. Fourth place was won by KC4PX from South Florida, who also had a magnificent 6 m total of 1281 QSOs in 280 grids and garnished that with additional 25 contacts on bands B, C, D, and E. Our fifth place winner was WD5K with another one-band wonder-score on 6 m from North Texas, putting 1388 calls from 263 grids in his log.

QRP portable participants are a hardy group. They adhere to a special set of station requirements, and better results are often achieved from being in a high spot in a densely populated area and using several bands. Rules for this group include: 10 W PEP output or less, use of a portable power source, portable equipment and antennas, operation from a location other than a permanent station location, and they may not change locations during the contest period outside of the original 500-meter diameter permitted circle. Soapbox often brings us some interesting stories about hikes and drives up mountain trails. This year we note pictures of NOTU with his pack goats carrying the gear. Topping the score list again in this class, KA1LMR from New Hampshire doubled the score of his nearest competitor with an 8-band 78k result. Even with QRP power, he logged 217 QSOs and 82 grids on 6 m and 92 QSOs on 2 m with 19 grids. In second place with 36k points, K9AKS operated from the Nebraska plains near a small airport, which provided a good horizon in all directions. Here was another adventure that capitalized on the great 6 m conditions with 203 QSOs and 111 grids, supplemented by a few additional contacts on bands B, C, D, and E. Following in third place with 35.5k points, K6VCR in San Diego used a 10-band set-up and had multiple contacts on the microwave bands to boost his score. From Arizona, N7IR managed to capture the 6 m magic and most of his 35.2k score is accounted by his 228 6 m QSOs in 119 grids for fourth place. On the East Coast in Connecticut, K1ZE scored 23k with a 7-band effort securing fifth position.

#### **Multi-operator**

Much planning and preparation goes in to the VHF multi-operator operations, and many factors need to be addressed. As in HF radio contests, there are the basics: power, radios, antennas, people, food, sanitary facilities and rest quarters. Operationally, there is always concern about mountaintop weather and local QRM from harmonics, IMD (intermodulation distortion) and commercial communication installations that have also taken advantage of the high spots. Many of the groups entering this category have spent several years honing their plans and skills to address all the obstacles, and continue to dominate the top spots in the

competition. Getting into the million-point range requires some propagation enhancements and likely a few rovers who will add multipliers from otherwise sparsely active grids.

Battling it out in the top two Unlimited Multi-Operator spots as they have for many years, W2SZ, the Mount Greylock Expeditionary Group, bested K8GP, the Grid Pirates, by having more QSOs, especially the higher point variety from the microwave bands. The specific band scores (QSOs x points per QSO x grids) are quite different between these two VHF titans, and deserves some further comparison. Despite the better score advantage of K8GP on 6 m and 2m, the larger W2SZ group and their rovers were able to add the enormous number of QSOs and multiplier grids on the microwaves, even though their 10 GHz gear was visited by Murphy part way through the fray. Entering the national top-three circle was the multi-op team from K5QE. For the past several years this South Texas group's activity had posted previous section records and scored in the 500-600k range. With the efforts to make this a fixed contesting superstation, the judicious tracking of rovers, and the addition of excellent 6 m and 2 m propagation, they broke the 1 million-point barrier. The fourth place Mt. Airy VHF Packrats, W3CCX, redesigning many of their stations this year, were in a contest rebuilding mode, yet had a respectable 887k total. The K3YTL team continues to grow in band capability and scooted home with 5th place.

Table 2 –	Table 2 – Unlimited Multi-Op Band Breakdowns											
Band	А	В	С	D	9	E	F	G	Н	Ι	J	K-P
W2SZ	136,017	22,080	11,760	23,736	12,540	14,136	13,464	11,484	6,532	984	240	0
K8GP	144,714	46,956	10,578	30,480	4,278	5,100	3,168	1,820	672	1,120	8	96
K5QE	348,355	15,939	6,014	8,610	2,688	2,352	1,352	640	0	0	0	0
W3CCX	110,432	22,516	10,064	14,948	2,376	4,752	1,120	756	448	448	4	36
K3YTL	81,600	15,275	6,120	8,768	510	2,508	336	0	0	0	0	0

In the Limited Multi-Operator category, stations submit a four-band entry. Operation on additional bands is allowed, but those QSOs are treated as in a check-log. This allows reasonable competition between groups that take advantage of the increased activity on the lower VHF bands and where the microwave activity may be sparse or limited by the group's gear. Using the great advantage of the 6 m conditions to take first place in this category, again, are the K5TR multi-ops from South Texas with 577k points and a huge total of 1344 6 m QSOs in 264 grids. The AA4ZZ team in North Carolina challenged, but was in second place in this grouping with 458k points, building a solid number of QSOs and grid multipliers across all four lower bands. The W3SO operation netted third place scoring 358k from their mountaintop perch in Western PA. Just behind in fourth place were the W4IY multi-ops with 355k. The difference between these two groups was the number of QSOs made by the W3SO group on the higher-point bands of 222 and 432 MHz. The W4NH 4-band operation, also from NC, earned 5th place with 307k.

### **Rovers**—in three categories

This is the first June QSO Party with the three categories of rovers; Classic, with 1-2 operators and all gear and antennas carried in the vehicle; Limited, with the number of operating bands limited to four; and Unlimited, where the number of participants, bands and rover tactics have little restriction. How did this rules change and the unusually high spike in gas prices shape the entries and the competition? Ninety-five (95) rovers submitted logs for this event. The overall number of rover entries is similar to previous years (98 rover entries in '07 and 96 rover entries in '06). Despite the \$4-plus per gallon gas prices, there were several rovers out on the roads, keeping the grid multipliers up, especially on frequencies above 432 MHz. One clever rover, Mike, K7MDL decided to park his full-size rover truck and go minimal with a dual-sport motorcycle for a new twist to roving at far lower cost. He prepared by scouting out the usual mountainous high spots, but still found patches of snow covering the roads as high as 2700' in the Seattle-area mountains. He used an FT-817 into two verticals mounted on a bar bolted to the luggage rack. Gabor, VE7DXG had a similar experience and prospected useable rover sites in the CN79-89 and CO60-70 grids as he found lots of snow at higher elevations on Mt. Arrowsmith. Apparently gas prices were not a serious challenge as the number of grids covered by the rover bunch did not seem to change much from previous years. One wily rover group found a way to maximize their scores simultaneously in all three categories. Starting with the Classic Rover category, in which there were 61 entries, N6NB/R was top scorer with 281k points, covering 15 grids with a group of similarly-equipped rovers who operated in a fashion to enhance their scores and also garner top spots in the Limited and Unlimited Rover categories. There are further details of this group's activity on the Soapbox Web page under "N6NB/R", and also on the N6NB home page (commfaculty.fullerton.edu/woverbeck/n6nb.htm). A majority of the stations entering Classic Rover category used six bands or more, with many having 8-10 bands in use. Eight of the top ten scorers in this category had a two-operator entry. AE5P/R and N5AIU/R were each on the air with gear from 6 m through 13 cm, each roved 10 grids, and scored the second and third places in the Classic Rover category with 160k and 154k points respectively. KD4VRY, operating as AH8M/R, representing the SFL section, placed 4th using the "bottom" six bands with a nice score of 136k. In 5th place we had VE3NPB/R representing ON with a score of 111k with 11 bands on board and tracing a route through nine grids. Rounding out the 6th through 10th places in the Classic Rover category were: W1RT/1 covering 14 grids with a score of 109k, WD0ACD/R with 97k from 11 grids, K2TER/R with 94k, K2QO with 74k and KC3WD/R with 67k. There was a broad geographic availability of rovers, and hopefully almost all fixed stations have some rover entries in their logs. Rovers can compare their own scores to the average of 31k for this group.

In its premiere, there were 25 entries into the premier event of the Limited Rover category—stations who were using four bands of their choosing with the same power limits as for Single-Op Low-Power. The intention of developing this category was to allow stations who were somewhat limited in their gear, or newcomers to roving with rigs which included 1-4 VHF bands, to compete with each other and not with those stations equipped with a whole array of VHF-UHF and microwave bands. Finding a unique opportunity within this new category, using the four bands from 2.3 GHz through 10 GHz, and moving with the team of other rovers, KG6TOA/R topped this category with a score of 97k, traversing 15 grids. In second place with 36k, W3DHJ/R took advantage of the great 50 MHz openings in the Midwest and using only two bands and roving through only four grids, had a 135-grid multiplier. K4GUN/R with partner K4LIG copped third with a 10-grid band-ABCD activity and a 24k score. In 4th place K6EU/R had 22.8k points and a mere few hundred points behind, AG4V/R, who maximized his score focusing on 6 m multiplier grids. The average score in this group was 13k.

It is likely that the rovers found fewer fixed stations with whom to "run the bands" as so many were preoccupied with the grand openings on 50 MHz and found it harder to break away for the time it takes to make the "run." Steve, VE3SMA/R reported from his perspective with the following note, "This June's contest provided (at least on Sunday in this area) an outstanding example of what can happen when 6 m is good. Practically the only stations to be heard on 2 m were multi-ops. Everyone else was on 6 m and not paying any attention to the other bands, so CQ-ing on 2 m was singularly unproductive. Since I was running 2 watts to a dipole on 6 m, CQ-ing there was also singularly unproductive!"

The new Unlimited Rover category allowed stations to use almost any type of configuration, operator contingent and any number of QSOs with other rovers, including tandem roving or grid-circling. A total of eight entries were received in this class, and these averaged 101k points, with a top score of 385k by W6TE/R traveling with partner K6MI. Second place was N6MU/R with 280k. Each of them carried 10 bands and roved through 15 grids, apparently tracking with the other top entries from the Classic and Limited rover classes. In 3rd was N5AC/R, who, with W5RSH and KE5BUZ covered five grids in the NTX area with nine active bands.

These new categories of contest rovers will hopefully satisfy many participants. In time we are sure to see more feedback on the effects of the new classes; how the competition can still be managed and scores maximized in each group with specialized roving tactics—proudly promoted by some, and decried by others.

#### **Club Competition**

The group of VHF aficionados in the Midwest grew. The number of logs and scores for the Society of Midwest Contesters increased: 71 logs submitted for an aggregate score of 1.8M points. This is 16 logs and

700k points greater than their 2007 submission and has them as the only entry and top spot in the Unlimited Club category. Will it be long before we find additional Midwesterners capturing more top categories and besting some of the scores from stations on the coasts? Kevin, W9GKA the VHF coordinator for the SMC says that they favored the June VHF QSO Party because it was the most "HF-like" of all VHF contests, and we had been successful in attracting our HF club members into the contest because of their new-found HF + 6 m capabilities. The combination of the newer transceivers and the arrival of the club competition really energized the June contest. Their club members also activated several very rare grids on 6 meters.



### June VHF - Club Logs

*Figure 3.* The Society of Midwest Contesters made a major effort to attract HF contesters to the party this year and put together a fine Unlimited Club score.

In the Medium Club category there were 28 entries. Topping the list with 35 logs and 2.7M points, the Potomac Valley Radio Club, led by the K8GP contribution takes top honors again. In second place, moving up one place from last year with 20 logs and 1.4M points, we had the North East Weak Signal Group. Third honors go to the Mt. Airy VHF RC with 16 logs and 1.2M points. Advancing several rungs up the club competition ladder, the Grand Mesa Contesters of Colorado submitted a score of 930k in 12 logs, while the Florida Contest Group was close behind in fifth place with 869k from 11 logs.

Led by the contribution of multi-op K5QE's 1.1M, the Local Club competition was won by the Nacogdoches ARC (TX) with only five entries but a huge score of 1.4M points.. In the second spot was the Murgas ARC (PA) with 759k. The Eastern Connecticut ARA placed third with 218k.

The club competition encourages participation. Of the 1074 log entries, 435 or 40% entered as a clubaffiliated station. Much of the growth we get in VHF activity is supported by various club activities, rover development, building projects, club sponsored conferences, tune-up clinics and antenna range testing. If you are not already affiliated with a VHF-active club, go through the list of clubs on the competition list and find one that interests you and join in to share the VHF experience.

#### VHF-DX

It's always an excitement to have a call in your log from a DX entity. Thanks to the participation of many stations in Canada, Mexico, the Caribbean and even those across the Atlantic Ocean, DX appeared in the logs and contest submissions. With a single-band 6 m entry, CO2OJ had a 60k score, setting a record for entries from Cuba. EA8BPX had 27 6 m QSOs in 21 grids in his log entry. Canada was well represented with 43 logs from seven provinces in all operating categories. There were 11 entries from Mexico, with 10 of them submitting single-band logs, having enjoyed the 6 m enhancements. Tim, NU6S added this comment, "Never heard so many XE's on six." Notably, Jorge, XE2WWW as a Single-Band high-power single-op scored 121k with 681 QSOs on 6 m in 178 grids. With this score, he set a new high-score record

for stations from Mexico and the international participants. Zalo, XE3N another single-op in the low-power category, set a record for Mexico with 38k points, all from 6 m!

### **Preparing for the Future**

It is not too early to prepare for the next VHF contest and other on-the-air VHF activities. There are many local and regional VHF nets that meet on-the-air weekly and often include bands all the way up the microwave spectrum. Look for a VHF-focused club in your geography if you need some support and camaraderie. Check out the various VHF regional conferences, hamfests and the ARRL publications that cover theory, construction and operating techniques. The January VHF SS will test your station and skills. The VHF Spring Sprints (**www.svhfs.org**) offer a concentrated one-band-at-a-time experience to check your gear and propagation. Here we are at the nadir of the sunspot cycle, yet we are finding excitement on-the-air. Things can only continue to get better as the indexes improve over the next few years. The next ARRL VHF QSO Party will be held on June 13-14, 2009, and like the Boy Scouts, make sure you're prepared!

## 2008 ARRL June VHF QSO Party Results

**Sponsored Plaque Winners** 

Thanks to the generous sponsorship of numerous clubs, individuals and Toyota - the Principal Rover Plaques Sponsor - we are pleased to announce the following winners of a plaque for their efforts in the 2008 ARRL June VHF QSO Party. The ARRL wishes to thank the plaque sponsors for their continued commitment to the ARRL Plaque Program. Without their support and dedication, the Plaque Program would not be possible.

Plaque sponsorships are \$75, which includes shipping to the winner. If you are interested in sponsoring a plaque, please contact Sean Kutzko KX9X, ARRL Contest Branch Manager, at (860) 594-0232, or via email at <u>kx9x@arrl.org</u>.

Plaque Category	Winner	Plaque Sponsor
Single Operator High Power First Place	K1TEO	Southeastern VHF Society
Single Operator High Power Third Place	K1RZ	Kevin Gliot, NZ1I
Single Operator High Power Fourth Place	КС4РХ	W5UWB - In Memory of John Chambers, W6NLZ
Single Operator Low Power Third Place	K3FM	Kevin Gilot, NZ1I
Single Operator Low Power Ninth Place	K4EPS	Vince Pavkovich, NØVZJ
Single Operator QRP Portable First Place	KA1LMR	K9NS, Mt. Frank Contesters
Multioperator First Place	W2SZ	Randy Stegemeyer, W7HR
Multioperator Second Place	K8GP	Mt. Airy VHF Club
Limited Multioperator First Place	K5TR	K1TEO, W2GKR, W2GKO, KA1FVG
Rover First Place	N6NB/R	Southeastern VHF Society
Rover Second Place	AE5P/R	Northern Lights Radio Society

Rover Third Place	N5AIU/R	Dayton Amateur Radio Association
Rover Fourth Place	AH8M/R (KD4VRY, op)	W3IY Memorial by the Potomac Valley Radio Club
Rover Fifth Place	VE3NPB/R	Toyota
Rover Sixth Place	W1RT/R	Toyota
Rover Seventh Place	WDØACD/R	Toyota
Rover Eighth Place	K2TER/R	Toyota
Rover Ninth Place	K2QO/R	Toyota
Rover Tenth Place	KC3WD/R	Toyota
Limited Rover First Place	KG6TOA/R	Dave Glenn, N6TEB
Limited Rover Second Place	W3DHJ/R	Les Rayburn II, N1LF
Limited Rover Third Place	K4GUN/R	Toyota
Limited Rover Fourth Place	K6EU/R	Toyota
Limited Rover Fifth Place	AG4V/R	Toyota
Limited Rover Sixth Place	KK6MC/R	Toyota
Limited Rover Seventh Place	K6JRA/R	Toyota
Limited Rover Eighth Place	AF6AV/R	Toyota
Limited Rover Ninth Place	N4JDB/R	Toyota
Limited Rover Tenth Place	KR1ST/R	Toyota
Unlimited Rover First Place	W6TE/R	Connecticut AM Society
Unlimited Rover Second Place	N6MU/R	Toyota
Unlimited Rover Third Place	N5AC/R	Toyota
Unlimited Rover Fourth Place	KRØVER/R	Toyota
Unlimited Rover Fifth Place	KR5J/R	Toyota

Unlimited Rover Sixth Place	N1MU/VE3/R	Toyota
Unlimited Rover Seventh Place	W3BC/R	Toyota
Unlimited Rover Eighth Place	N3UW/R	Toyota

### Top Ten

### Single Operator, Low Power

K2DRH	328,338
K5RQ	202,384
K3FM	193,817
WB1GQR (W1SJ, op)	191,952
N4BP	165,870
K4LY	144,826
AF1T	143,550
AA4W	135,740
K4EPS	135,026
KB9TLV	113,960

### Single Operator, High Power

K1TEO	657,815
W5PR	443,360
K1RZ	440,622
KC4PX	392,040
WD5K	365,044
K9MK	305,109
KMØT	304,007
K4SN	261,711
WB9Z	248,940
WA2FGK (K2LNS, op)	242,536

## Single Operator Portable

KA1LMR	78,078
K9AKS	36,120
K6VCR	35,588
N7IR	35,242
K1ZE	23,534
N8XA	11,658
N3LL	5,850
N3AWS	5,432
KQ6UP	5,088
WA4A	4,600
	0.0700000000

Limited Multioperator	
K5TR	577,638
AA4ZZ	458,136
W3SO	358,154
W4IY	355,100
W4NH	307,515
AE5T	218,400
AB5GU	208,848
WA7JTM	189,750
WØLSD	186,534

Multioperator W2SZ K8GP K5QE W3CCX K3YTL WØEEA KB0HH KØDI N2NK WØKVA	1,907,504 1,434,157 1,122,051 887,415 454,210 396,644 289,250 217,404 174,167 155,672
Rover N6NB/R AE5P/R N5AIU/R AH8M/R (KD4VRY, op) VE3NPB/R W1RT/R WDØACD/R K2TER/R K2QO/R KC3WD/R	281,436 160,398 154,364 136,136 111,166 109,070 97,760 94,677 74,936 67,200
Limited Rover KG6TOA/R W3DHJ/R K4GUN/R K6EU/R AG4V/R KK6MC/R K6JRA/R AF6AV/R N4JDB/R KR1ST/R	97,328 36,585 24,462 22,876 22,134 14,016 13,824 12,172 11,502 11,480
Unlimited Rover W6TE/R N6MU/R N5AC/R KR0VER/R KR5J/R N1MU/R W3BC/R N3UW/R	385,336 280,875 65,230 22,035 20,992 16,030 9,760 5,920

2008 June VHF QSO Party - Club Competit	tion	
Unlimited Club Society of Midwest Contesters	71	1827380
Medium Club Potomac Valley Radio Club North East Weak Signal Group Mt Airy VHF Radio Club Grand Mesa Contesters of Colorado Florida Contest Group Florida Weak Signal Society Northern Lights Radio Society Carolina DX Assn North Texas Microwave Society Yankee Clipper Contest Club Roadrunners Microwave Group Contest Club Ontario Northern California Contest Club Rochester VHF Group Pacific Northwest VHF Society South East Contest Club Alabama Contest Group Central Arizona DX Assn Mad River Radio Club Frankford Radio Club Frankford Radio Club Central Texas DX and Contest Club Oklahoma DX Assn Raritan Bay Radio Amateurs Tennessee Contest Group Bergen ARA Contest Club Du Quebec Kentucky Contest Group North Coast Contesters	35 20 16 12 11 17 6 11 15 6 18 12 6 23 6 5 7 6 4 4 3 10 9 7 4 4 3	2766272 1407723 1198399 930086 869515 841428 777331 649520 576503 455157 407505 396625 337173 326630 307952 265685 134096 86860 67408 51588 47474 41885 33449 30125 23798 20496 14827 12362
Local Club Nacogdoches ARC	5	1452607
Murgas ARC Eastern Connecticut ARA Chippewa Valley VHF Contesters Badger Contesters Low Country Contest Club 10-70 Repeater Assn Portage County Amateur Radio Service Maritime Contest Club Steel City ARC Downey ARC Meriden ARC Ashe County ARC	587773443443	759705 218447 198055 123485 84911 57051 12672 6595 64255 12868 10831 2559

### Multiplier Leaders By Band

Single Operator Low Power	
50 MHz	
K3FM K5RQ AA4W N4BP K2DRH K4EPS K4MM W9ZRX K2DEL (WA2SEI, op) WA5LFD N4JK K1RQ K4WI CO2OJ W5WVO	214 208 208 190 187 171 169 168 162 160 158 156 156 148 144
144 MHz	
N4QWZ K4EQH K2DRH W6ZI KCOTPP K4LY WB5ZDP N8RA WB1GQR (W1SJ, op) W9GKA VE3KZ W5DDR WA3EOQ W4SHG N9SS W0RT K3TC	54 51 43 42 40 33 33 29 29 27 26 25 25 25 24 23 23

### 222 MHz

K2DRH WA3EOQ N4QWZ WB1GQR (W1SJ, op) K4LY W4SHG KB9TLV W9GKA K1KG WB2SIH WA2VNV WB5ZDP AF1T K8MR K2KIB WB3IGR W3PAW	24 21 19 18 18 17 17 16 16 14 14 13 13 13
432 MHz N4QWZ K2DRH K4LY W6ZI K4EQH K99TLV W4SHG WB5ZDP W9GKA WA3EOQ WB1GQR (W1SJ, op) W0RT WB2SIH W3PAW N4TUT VE3KZ	31 26 24 22 22 21 21 21 21 20 18 18 18 17 16 16

902 MHz **KB9TLV** 11 10 WB1GQR (W1SJ, op) NOKP 9 9 WA3EOQ W4SHG 9 WB5ZDP 8 W3SZ 8 8 AF1T 7 7 **W3PAW** NN1D K2DRH 7 WB2SIH 7 WA3QPX 6 5 5 NGOR K2KIB **KOMHC** 5 1296 MHz K2DRH 14 KB9TLV 12 WA3EOQ 11 WB1GQR (W1SJ, op) 11 W4SHG 11 10 WB5ZDP NOKP 10 NN1D 9 9 W3SZ WB2SIH 9 8 NGOR 8 7 K6TSK W3PAW 7 N4QWZ 7 AF1T 7 N4TUT 7 K4LY

Single Operator High Power

50 MHz	
KC4PX W5PR WD5K K4SN K5AM N2IC KM0T K4EA WJ9B NN5DX K9MK K1TOL N0KE W4SO K9CT	280 272 263 241 239 236 234 220 203 203 199 194 189 187 183
144 MHz	
K8TQK K1TEO K0CIY K5LLL WB9Z K1RZ WA2FGK (K2LNS, op) K4QI W2KV W4WA W4RX K9CT KA1ZE KM0T KN4SM KG5MD	55 50 43 41 38 38 38 37 36 35 34 32 31 31 30 30
222 MHz	
K1TEO K8TQK WA2FGK (K2LNS, op) K1RZ W4ZRZ KA1ZE WB9Z K4QI K9CT K9EA VE3ZV K5LLL W4RX WB2RVX WZ1V W4WA	38 33 27 26 24 24 22 21 21 21 21 20 19 19 19 18 18

432 MHz	
K1TEO K8TQK WA2FGK (K2LNS, op) K1RZ W4WA K4QI W4ZRZ KA1ZE W4RX KN4SM WB9Z K9CT K9EA WB2RVX N2GHR K5LLL	39 34 30 28 27 27 27 25 24 23 23 22 20 19 19
902 MHz	
K1TEO WA2FGK (K2LNS, op) K8TQK K1RZ W4ZRZ WZ1V K9EA K1GX N2GHR K9MK VE3ZV K5LLL W0ZQ KE2N WB9Z	30 20 14 12 10 10 10 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
1296 MHz	
K1TEO WA2FGK (K2LNS, op) K8TQK K1RZ K4QI W4ZRZ WZ1V N2GHR W4WA W4RX W0ZQ WB9Z K1GX K3AX K1IIG	31 22 17 14 14 13 13 13 13 12 11 11 10 9

Single Operator Portable

119 111 82 70 65 56 54 45 36 32 30 29 27 23 14
19 15 12 12 11 11 9 9 8 8 8 7 7 6 5 5 5 5
11 8 5 4 4 3 3 1 1 1 1

432 MHz	
KA1LMR K1ZE K9AKS N6FD N6RZR K6VCR WA4A KQ6EE KQ6UP N2YTF VE7IHL WA7MLD WA9TKK N6GRJ WB2AMU N8XA	13 8 6 6 5 5 5 5 5 4 4 2 2 2 2 2
902 MHz	
KA1LMR K1ZE N6FD K6VCR	5 4 2 2
1296 MHz	
KA1LMR K1ZE K9AKS N6FD K6VCR KQ6EE N7IR K10G	6 3 3 2 1 1
Multioperator	
50 MHz	
K5TR -L K5QE W0EEA WA7JTM -L WD0T -L AE5T -L W0LSD -L AB5GU -L AA4ZZ -L KB0HH W4NH -L W0KVA K8GP W4IY -L N4LR -L	264 259 236 227 221 218 212 206 204 188 187 181 178 156 156

### 144 MHz

K8GP K5QE AA4ZZ -L W3SO -L KB0HH W3CCX W4NH -L W2SZ W4IY -L K3YTL K5TR -L WQ0P W0VB -L N2NK W1QK -L K9SG	86 69 59 56 53 52 49 48 48 47 46 45 41 35 35
222 MHz	
K8GP W2SZ W3SO -L W3CCX K5QE K3YTL W4IY -L AA4ZZ -L KB0HH W3KWH K3EOD W1QK -L W4NH -L N2NK KB1DFB -L	43 42 35 34 31 30 29 27 24 22 21 21 20 19 18
432 MHz	
K8GP W2SZ W3SO -L W3CCX K5QE W4IY -L AA4ZZ -L K3YTL W4NH -L KB0HH WQ0P K3EOD W3KWH N2NK W1QK -L VE3WCC	60 46 37 35 35 34 32 29 29 26 21 20 20 19 19

#### 902 MHz

 $38 \\ 23 \\ 18 \\ 16 \\ 12 \\ 10 \\ 9 \\ 9 \\ 8 \\ 6 \\ 6 \\ 4 \\ 4$ 

 $\begin{array}{c} 38\\25\\22\\19\\16\\13\\12\\10\\9\\7\\6\\6\\6\\6\\6\\6\\6\end{array}$ 

-L denotes Limited Multioperator

### **QSO Leaders By Band**

Single Operator Low Power 50 MHz K5RQ N4BP K3FM K4EPS K2DRH AA4W WA5LFD W9ZRX K2DEL (WA2SEI, op) K4MM N4JK K1RQ KR4WM WB1GQR (W1SJ, op) CO2OJ 144 MHz WB1GQR (W1SJ, op) WB2CUT N8RA K4EQH

973

873

869

732

651

588

555 535

510

509

487

474

450

414 404

218

134

134

129

99

95

88

86

85

77

69

67 50

48

42

35 34

33

32

32

31

30

28

24

24 24

K2DRH 107 K3TC 103 AF1T 102 N4QWZ 100 WB2SIH NU6S W6ZI **KCOTPP** WB5ZDP WE6T KB9TLV 222 MHz WB1GQR (W1SJ, op) KB9TLV AF1T WB2SIH WA3EOQ K2DRH K1KG WA2VNV N4QWZ WB5ZDP W4SHG W9GKA K4LY

W3PAW K2KIB

#### 432 MHz

WB1GQR (W1SJ, op) KB9TLV K2DRH NU6S AF1T WB2SIH N4QWZ N4TUT WB5ZDP W4SHG K4LY K1KG W9GKA WA2VNV K1YQP	87 69 64 59 49 49 45 45 43 42 41 38 38 37
902 MHz	
AF1T KB9TLV WB5ZDP WB1GQR (W1SJ, op) W3SZ WB2SIH NN1D W3PAW WA3EOQ N0KP W4SHG WA3QPX K2KIB K2DRH WA2VNV	23 19 18 17 14 14 12 12 12 11 11 11 8 8 8 8 8
1296 MHz	
WB1GQR (W1SJ, op) K2DRH AF1T KB9TLV WB5ZDP WB2SIH K6TSK W4SHG WA3EOQ N0KP N0KP N0KP N0KP N1D W3SZ N4TUT W3PAW KC6SEH	31 25 24 22 21 17 16 15 15 14 14 14 13 13

Single Operator High Power

50 MHz	
W5PR WD5K KC4PX K4SN W4SO K9MK K5AM NN5DX N2IC AC5TM K4EA K1TOL WJ9B KM0T XE2WWW	1630 1388 1281 1074 924 858 848 845 788 780 766 765 745 736 681
144 MHz	
K1TEO K1RZ W2KV W4RX N2GHR WA2FGK (K2LNS, op) K8TQK WB2RVX WB9Z K5LLL KE2N K0CIY K8EB W1GHZ W1RZF KC6ZWT	275 195 141 137 129 118 112 110 106 99 95 94 84 83 83
222 MHz	
K1TEO K1RZ WA2FGK (K2LNS, op) N2GHR K8TQK K6ZWT W1RZF W4RX WB2RVX KE2N W4ZRZ WB9Z W1GHZ KA1ZE K4QI K9CT	99 83 60 44 43 43 41 35 34 34 32 31 31

432	MHz
K1T	FO

K1TEO K1RZ WA2FGK (K2LNS, op) W4RX W4ZRZ W4WA K8TQK N2GHR WB9Z WB2RVX W1RZF K4QI KC6ZWT KN4SM K9CT	124 100 72 66 63 56 55 53 53 51 50 47 45 42
902 MHz	
K1TEO K1RZ WA2FGK (K2LNS, op) K9MK K1GX K1GX KE2N N2GHR K8TQK KA5BOU WZ1V W4ZRZ K1IIG KC6ZWT VE3ZV K5LLL	59 45 35 16 16 16 16 14 13 12 12 12
1296 MHz	
K1TEO K1RZ WA2FGK (K2LNS, op) W4RX N2GHR W4ZRZ KE2N WB9Z K8TQK WZ1V W0ZQ K1GX WB9SNR K1IIG WB2RVX	68 58 38 27 25 22 21 20 19 19 19 19 18 17 17
Multioperator	

### 50 MHz

K5QE	1345
K5TR -L	1344
AE5T -L	968
W2SZ	889
AB5GU -L	867
K8GP	813
W3CCX	812
AA4ZZ -L	803
W0EEA	789
W0LSD -L	710
WA7JTM -L	706
W4NH -L	691
WD0T -L	681
K3YTL	680
W4IY -L	671
144 MHz	
K8GP	546
W2SZ	460
W3CCX	433
K3YTL	325
W4IY -L	306
W3SO -L	305
K5QE	231
N2NK	230
AA4ZZ -L	227
W1QK -L	224
W4NH -L	160
K6LRG	152
K5TR -L	143
KB1DFB -L	133
N2SE -L	130
222 MHz	
W3CCX	148
W2SZ	140
K8GP	123
K3YTL	102
W3SO -L	99
K5QE	97
AA4ZZ -L	79
W4IY -L	65
N2NK	56
W1QK -L	51
K5TR -L	44
K3EOD	42
VE3WCC	41
KB1DFB -L	40
W4NH -L	39
K0DI	39

#### 432 MHz W2SZ 258 K8GP 254 W3CCX 202 W3SO-L 155 K3YTL 137 K5QE 123 AA4ZZ -L 113 W4IY-L 109 W4NH-L 75 57 **WOEEA** 57 K5TR-L 55 N2NK N9UHF 53 52 W1XM K6LRG 52 52 K0DI 902 MHz W2SZ 110 K8GP 62 K5QE 56 W3CCX 44 K0DI 25 N2NK 23 17 K3YTL K3EOD 17 **KBOHH** 15 WOEEA 12 10 K7RST W1XM 10 VE3WCC 9 W3KWH 9 KV1J 5 N9UHF 5 1296 MHz W2SZ 124 W3CCX 72 K8GP 68 49 K5QE K3YTL 44 30 K0DI 23 K3EOD 19 VE3WCC KB0HH 16 N2NK 15 W1XM 14 W6YX 11 WOEEA 11 K6LRG 9 WW8M 9 KI6MPQ 9

### Single Operator Portable

50 MHz	
N7IR KA1LMR K9AKS K6VCR N8XA K1ZE N3AWS N3LL VE7IHL WA4A KQ6UP WB2AMU WC4V VE3/KL8QVO WA7MLD	228 217 203 176 111 110 97 90 72 61 53 40 34 32 29
144 MHz	
KA1LMR KQ6EE KQ6UP K1ZE K6VCR N6FD K7WA VE7IHL N7IR WA7MLD K9AKS WA5ZEK N6RZR N8XA WA4A W3MEO	92 60 39 38 36 35 31 29 24 24 24 22 18 15 13 13 13
222 MHz	
KA1LMR K1ZE KQ6EE K6VCR N6FD K9AKS N7IR N8XA WA7MLD N0GSZ N2YTF K10G	25 16 14 12 5 5 4 3 2 1 1 1

#### 432 MHz

KA1LMR K6VCR K1ZE KQ6EE N6FD WA4A N6RZR KQ6UP K9AKS VE7IHL WA7MLD N2YTF N8XA WC4V N6GRJ WB2AMU WA9TKK	47 25 24 22 14 9 8 7 7 7 6 6 2 2 2 2 2 2 2 2
NOGSZ 902 MHz	2
KA1LMR K1ZE K6VCR N6FD	9 8 6 3
1296 MHz	
KA1LMR K6VCR K1ZE KQ6EE K9AKS N6FD K10G N7IR	10 10 9 3 3 3 1 1

-L denotes Limited Multioperator

### Division

### A

Atlantic	WA3EOQ	55,977	Α	2008
Central	K2DRH	328,338	Α	2008
Dakota	KOMHC	56,511	Α	2008
Delta	K3FM	193,817	Α	2008
Great Lakes	K8MR	50,553	Α	2008
Hudson	WB2SIH	72,092	Α	2008
Midwest	KOOU	47,596	Α	2008
New England	WB1GQR (W1SJ, op)	191,952	Α	2008
Northwestern	K7BG	25,877	Α	2008
Pacific	NU6S	77,248	Α	2008
Roanoke	K4LY	144,826	Α	2008
Rocky Mountain	NOPOH	71,360	Α	2008
Southeastern	K5RQ	202,384	Α	2008
Southwestern	WJOF	43,146	Α	2008
West Gulf	WA5LFD	106,505	Α	2008
Canada	VE3KZ	46,020	Α	2008

### В

Atlantic Central Dakota Delta Great Lakes Hudson Midwest New England Northwestern Pacific Roanoke Rocky Mountain Southeastern Southwestern West Gulf	K1RZ WB9Z W0ZQ AC5TM K8EB N2GHR KM0T K1TEO K17JA KR7O W4RX K5AM KC4PX K7AED W5PR	440,622 248,940 120,176 141,361 142,096 104,622 304,007 657,815 53,640 40,194 166,200 237,072 392,040 72,581 443,360	88888888888888888	2008 2008 2008 2008 2008 2008 2008 2008
West Gulf Canada	W5PR VE3ZV	443,360 46,080	в В В	2008 2008 2008
		,		

## L

Atlantic	W3SO	358,154	L	2008
Central	N9TF	14,016	L	2008
Dakota	WD0T	180,525	L	2008
Delta	AE5T	218,400	L	2008
Great Lakes	N8ZM	82,654	L	2008
Hudson	N2SE	54,351	L	2008
New England	W1QK	181,536	L	2008
Northwestern	K7TM	3,128	L	2008
Pacific	K4TRT	6,292	L	2008
Roanoke	AA4ZZ	458,136	L	2008
Rocky Mountain	WOLSD	186,534	L	2008
Southeastern	N4LR	62,088	L	2008
Southwestern	WA7JTM	189,750	L	2008
West Gulf	K5TR	577,638	L	2008

### М

Atlantic	W3CCX	887,415	М	2008
Central	N9UHF	85,824	Μ	2008
Great Lakes	N8KOL	66,015	Μ	2008
Hudson	N2NK	174,167	Μ	2008
Midwest	WQ0P	102,985	М	2008
New England	W2SZ	1,907,504	Μ	2008
Pacific	K6LRG	77,520	М	2008
Roanoke	K8GP	1,434,157	Μ	2008
Rocky Mountain	WOEEA	396,644	Μ	2008
Southeastern	W4OZK	37,973	Μ	2008
Southwestern	K0DI	217,404	Μ	2008
West Gulf	K5QE	1,122,051	Μ	2008
Canada	VE3WCC	80,620	М	2008

### Q

Atlantic Delta Great Lakes Hudson Midwest New England Northwestern Pacific Roanoke Rocky Mountain	K2KWK N3AWS N8XA WB2AMU K9AKS KA1LMR WA7MLD N6FD WA4A KI0G	513 5,432 11,658 1,872 36,120 78,078 1,242 3,648 4,600 150	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2008 2008 2008 2008 2008 2008 2008 2008
		4,600		
Southeastern	N3LL	5,850	Q	2008
Southwestern	K6VCR	35,588	Q	2008
West Gulf	N0GSZ	24	Q	2008
Canada	VE7IHL	4,025	Q	2008

R				
Atlantic	K2TER/R	94,677	R	2008
Central	WB8BZK/R	54,184	R	2008
Dakota	KC0IYT/R	30,720	R	2008
Delta	KE5GAQ/R	13,736	R	2008
Great Lakes	KF8QL/R	21,528	R	2008
Hudson	WA2NXK/R	9,000	R	2008
Midwest	WR0I/R	11,607	R	2008
New England	W1RT/R	109,070	R	2008
Northwestern	KI6CG/R	8,772	R	2008
Pacific	N6NB/R	281,436	R	2008
Roanoke	KC3WD/R	67,200	R	2008
Rocky Mountain	KØCS	8,307	R	2008
Southeastern	AH8M/R (KD4VRY,	136,136	R	2008
Southwestern	K6LMN	1,394	R	2008
West Gulf	AE5P/R	160,398	R	2008
Canada	VE3NPB/R	111,166	R	2008

### RL

Atlantic	K3I
Central	K92
Delta	AG
Great Lakes	K8I
Northwestern	AL <sup>1</sup>
Pacific	KG
Roanoke	K4(
Rocky Mountain	W3
Southeastern	N4,
Southwestern	W6
Canada	VE

### RU

Atlantic	W3
Pacific	W6
Rocky Mountain	KR
West Gulf	N5/
Canada	N1