



ARRL June VHF Contest

2016 Results

By Bob Striegl, K2DRH (k2drh@arrl.net)

Now that's more like it!

This year's summer 6 meter sporadic E season was not stellar by any account and it looked like the recent trend for disappointing June contest weekends with spotty propagation was going to continue. But no! By all accounts Saturday saw a few Es (sporadic E) openings in the west, many good hours for TX and FL, and windows of opportunity for the Northeast and Midwest. Sunday was even better! 6 meters opened early in the Midwest and was pretty much open to somewhere all day all over the country. Most soapbox reports gushed that Sunday offered the best 6 meter June contest conditions they had experienced since 2010 or 2011. Many reported short double-hop windows, as well.

There was a lot of DX to be had! There was 6 meter Es reported both days into Europe, Africa, the Caribbean

occurred late Sunday afternoon when the band opened simultaneously to EU and to JA, with some Caribbean and SA thrown in too! Dave, VE9CB was away for most of the weekend but finally got on Sunday evening and reported "I managed to work four continents in my first hour!" Stations from the upper Midwest as far SE as FL reported working JA's and EU/AF at the same time. All the while domestic openings were still really cranking and in the same time frame a few 2 meter Es QSO were reported from Michigan to Colorado and New Mexico.

Did all of this 6 meter largess make for a resulting depression on 2 meters and above? Conditions on 2 meters and above for both 2015 and 2016 were largely flat across the board.

Many participants reported a decrease in their 2 meter and above activity due to staying on 6 meters more this year and the overall results do bear that out.

Logs — Up or Down?

Better conditions brought a nice spike upward with 1132 logs submitted this year (1061 in 2015) further closing the gap since 2011 when 1233 were submitted. Overall QSO and grid totals were definitely much better than the past few years on 6 meters but did not approach the record highs of 2010 and remained static on the higher bands. Single-Operator, 3 Band (SO3B) is holding on to its popularity and both

Sponsored Plaque Winners

Division / Plaque Category

Overall Single Operator, High Power
Overall Single Operator, Low Power

Winner

WØUC
K2DRH

Plaque Sponsor

Michigan VHF - UHF Society
Jeff Klein, K1TEO
W3ZZ First Log Award - Memorial by
Tim K3LR and Dave W9PA
Northern Lights Radio Society
AA4ZZ Team & CDXA, Ken Boyd K4DXA
Memorial
"In Memory of Tim Ertl, KE3HT,
Microwave DX Addict"

Overall Single Operator, Low Power, Rookie
Overall Single Operator, 3-Band

KD9GKL
K1TO

Jarred Jackson, KF2MR
Mt Airy VHF Radio Club
Potomac Valley Radio Club
Northern Lights Radio Society
Memorial to Mike Bruck, W5MRB, From
His Friends
Northern Lights Radio Society
NY2NY - In Memory of W2GFF &
W2HBA
Pacific Northwest VHF Society

Overall Multioperator

W2SZ
K8GP/R (K1RA,

Overall Rover

W8ZN, ops)
VE3SMA/R

Overall Limited Rover

(+VE3RZ)

Atlantic Division, Single Operator, 3-Band

K3UHU

Atlantic Division, Rover

K2TER/R (+KV2X)

Dakota Division, Single Operator, Low Power

WBØHHM

Delta Division, Single Operator, High Power

W5ZN

Great Lakes Division, Single Operator, Low Power

WZ8T

Hudson Division, Single Operator, Low Power

WB2JAY

Northwestern Division, Single Operator, 3-Band

K7BG

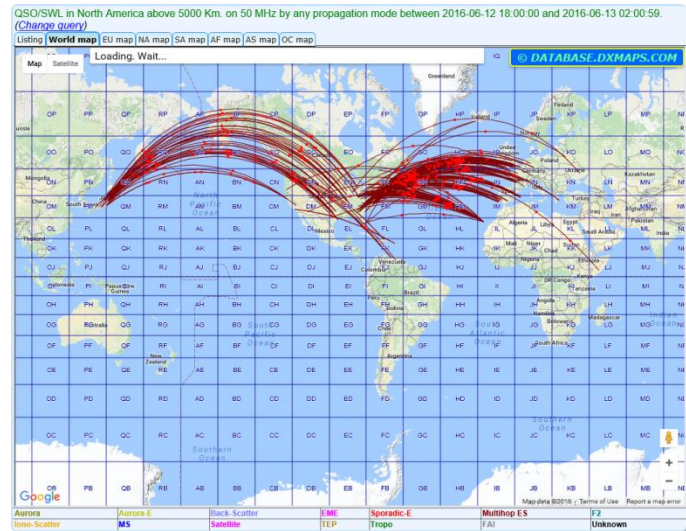
Roanoke Division, Rover

K8GP/R (K1RA,
W8ZN, ops)

Thanks to the generous support of the listed clubs, we are pleased to list the winners of the Sponsored June VHF Contest plaques below. For more information on plaque sponsorship or to order a duplicate plaque, contact ARRL Contest Branch Manager Bart Jahnke, W9JJ, at 860-594-0232 or w9jj@arrl.org. Plaques cost \$75, which include all shipping charges.

multioperator (LM, UM) categories are staying steady with the log increase being mostly felt in the SOLP and SOHP categories. The rebound of the Classic Rover (R) continues with 47, up from 38 last year and almost equal to the 49 in 2011. Hopefully this healthy trend continues. However like last year the number of Limited Rovers (RL) continued to stay a bit lower again this year with 34 compared to 42 in 2012. Unlimited Rover (RU) remains static at less than a dozen.

Despite much better conditions this year, few existing Division scoring records were broken. In fact, no SO or MO overall category records were surpassed with the notable exception of Ryan, KK4OSG, operating SOFM and posting a 7K score that more than doubles his old category record from last year. Of course Division and Section record scores for the newer Single-Op, 3 Band (SO3B) and Single-Op, FM Only (SOFM) category and the new Canadian ARRL sections continue to be in flux. The previous contest score records are available for review on the ARRL website at www.arrl.org/contest-records and will be updated with any new records set in 2016.



Doing a search of DX Sherlock on QSOs over 5000km during Sunday afternoon's openings yielded this amazing map. (Map courtesy of DXmaps.com)

So — What About Conditions?

As noted before, 6 meters was good for many parts of the country on Saturday and pretty awesome just about everywhere on Sunday. As predicted by perennial SOHP top finisher Jeff, K1TEO the NE really seemed like it took off for most of the test as attested by the big numbers posted from K1WHS (UM), W2SZ (UM) and Emil W3EP. Texas had their usual good rounds of Es posting some of the highest numbers and K5TR (UM); Chuck, W5PR; and K5QE, (LM) made the most of them. CO was on fire as attested by the score of Jay, W9RM.

FL was once again a hotbed of Es with DX openings to the Caribbean, EU, and even JA. Austin, N4WW and Bob, N4BP took advantage of this to rack up big 6 meter numbers and the conditions vaulted Dan, K1TO to the top of the SO3B category. The Es openings that occurred in the Upper Midwest were not quite as deep or intense for Paul, WØUC; Bob, K2DRH, and W9XA (UM) on both days. They moved all around the country while spanning from Asia to Africa yielding lots of grid multipliers. While 6 meters was not quite as kind to the far western portion of the country as it was the SW and NE, most stations did enjoy several good hours.

Unlike last year when only 9 stations broke 500 QSOs on 6 meters, a whopping 52 cleared that hurdle this time out. About two-thirds of them were located in the NE or in the SE. Four stations made it over 1000, two of them in TX where they are used to handling those big pileups in the June contest. However K1WHS worked the hardest with 1262 QSOs / 229 Multipliers which highlights just how good the 6 meter prop really was from the NE this year. K5QE in STX wound up with a strong 1188/241. This is fantastic 6 meter prop for most of us but has proven somewhat business as usual for Marshall's crew. TX has single-hop access to most of the major ham population centers of the country and is often favored with some of the best Es conditions of the contest. Austin, N4WW in NFL had 1175/186 with an iron butt in the chair effort that outdid all of his competitors. FL has also proven to be a major Es prop center during a lot of June contests. Congratulations, Austin, on finally working a VE4 — they are pretty rare for all of us! Despite struggling with thunderstorm noise that put him off the air for a few hours, Chuck, W5PR parlayed his STX location and operating skills to come up with 1123/208. All in all, not the really huge 6 meter numbers of 2010 or even 2011 but pretty well distributed around the country and a whole lot better than anything most of us have seen since then!

Once again there were no outstanding troposcatter enhancements reported on the other bands. Fewer stations reported working more than 100 QSOs on 2 meters than last year; 23 versus 28 and a lot less than the 35 in 2014 when some areas had above-average conditions on 2 meters. Many speculated correctly in their soapbox comments that 2 meter QSOs might have been somewhat harder to come by due to the outstanding openings on 6 meters. The intense Es during late Sunday afternoon did however spawn a few 2 meter contacts between MI and NM/CO, however they were very limited and the opening was short-lived.

As expected, 14 of the top 2 meter totals were multis: W2SZ was on top with 309 Qs in 51 grids, slightly down from last year. W3CCX (UM), K1WHS (UM) and K2LIM (UM) all posted QSO totals over 200. Most notable on the list however was Ryan, KK4OSG (SOFM) who worked 100 FM QSOs from his mountaintop location. Top 2 meter grid totals go once again to K5QE (LM) with 120 followed by Joel, W5ZN (SOHP) with 96. Since their locations are not in a hotbed of 2 meters and up activity, both use EME to acquire those high grid totals and enjoy the new rules that allow them to line up mostly European QSOs off the Moon via a chat page.

This time out, only one station had 100 or more QSOs on 222: W2SZ (UM) topped the list at 105. Five stations had 432 QSO totals over 100: four multiops, once again with W2SZ on top at 151 (significantly down from last year). K8GP/R (R) is also on this list at 110 (with 98 on 222). No enhancement was reported by anyone above 432, except in the upper Midwest where conditions seemed to be better than usual. Higher grid totals on 902/3 and 1296 than anywhere else in the country were reported by WØUC (SOHP) and K2DRH (SOLP) in the upper Midwest.

Updated Rules — One Year later

The first time the new VHF+ rules came into effect was during the 2015 June contest, and a year later they are still making an impact in the quality of VHF contesting for most participants. EME and meteor scatter operators now announce their CQ frequency and set up skeds on the online chat pages like Ping Jockey (www.pingjockey.net) and ON4KST (www.on4kst.com). Rovers can now announce where they are via the web, too. What seems most effective in most parts of the country is direct cell phone contact via voice or text to line up the antennas and then run the bands. A lot easier than guessing where they are and hoping the rover turns your way long enough that you can get their attention, especially in the parts of the country where rovers are likely to be a couple hundred miles away or more! Folks can line right up with each other after getting someone's attention on a chat page to make longer-distance QSOs where randomly pointing would not allow them to even hear distant stations unless they coincidentally just happened to be pointing back at exactly the same time.

Surprisingly, there were not a lot of comments in the soapboxes this year as to what worked for folks and what did not. Once again from my QTH the ON4KST Chats and Ping Jockey pages were particularly useful, as were WØUC's web-based Google spreadsheets of upper Midwest stations on the air. This spreadsheet includes detailed itineraries and cell numbers to contact the

rovers. The real time APRS VHF propagation map at aprs.mountainlake.k12.mn.us continues to be a useful tool, although it didn't show any good prop for this contest.

Traditional DX clusters and websites that map individual 6 meter and 2 meter spots were great for showing overall regional trends and DX openings but most individual domestic spots don't seem all that useful. Propagation varies too much from area to area and the spots attract multiple stations that can't hear each other (and you probably can't hear either) to the same exact frequencies. So don't think you're going to ride the band map in N1MM and pick out new multis like you can on HF! Self-spotting seems particularly useless and it's good to see that it's not often done. The exception may be DX spots, but my philosophy has always been that if you are chasing DX during a domestic band opening you are losing ground. But I did have to work JA7QVI just to say that I did! Looking at all the stations available was a lot of work and sometimes more distracting than it was worth!

Band Designators

In order to keep VHF+ contest tables and listings brief, the ARRL uses the following table of abbreviations and single-letter designators to indicate band.

<i>Band</i>	<i>Abbr.</i>	<i>Des.</i>	<i>Band</i>	<i>Abbr.</i>	<i>Des.</i>
6 or 6 meters	6M	A	10 GHz	10G	I
2 or 2 meters	2M	B	24 GHz	24G	J
222 MHz	222	C	47 GHz	47G	K
432 MHz	432	D	75 GHz	75G	L
902 MHz	902	9	119 GHz	119G	M
1.2 GHz	1.2G	E	142 GHz	142G	N
2.3 GHz	2.3G	F	241 GHz	241G	O
3.4 GHz	3.4G	G	Light	Light	P
5.7 GHz	5.7G	H			

Single Operators

Single-op stations that get on the air during contest time know they will find others and have some fun. At the same time they give the more serious contesters a lot more stations to work. Unlike in the past, the VHF+ bands have become very quiet unless there is a contest or a net. It's not much fun to call CQ and get no answer, so stations still log on to the ON4KST low band, VHF, UHF and microwave chats every day (and more on the weekends). Chatrooms for 50/144/432 MHz in Region 2 are busy, especially when there is some hope of enhancement or Es. There they make real time skeds, so lots of folks are already comfortable using ON4KST as a contact initiation tool during the contest.

Stations with 100-200 W bricks have always provided the bulk of contest activity since well before the SOLP category was established, so it's no surprise that once again it proved to be most popular with almost 500 logs. SOLP category has been big hit since it was introduced back in 2000, however it has experienced some erosion since the inauguration of SO3B in 2013 which now accounts for 133 logs. There are lots of ways to field a good SO station, whether it be from home or portable to a hill or mountaintop. For many VHF hams it's still the best way for them to be competitive and maybe earn a place in the Top 10.

Somewhere along the line contesters have to take that first step and submit a log. The Single Op, Low Power, W3ZZ First Log Memorial, sponsored by Tim, K3LR and Dave, W9PA, goes to Christy Tapp, KD9GKL. Well done, Christy, and welcome to the ranks of VHF+ contesters!

Top 10 — Single Operator, Low Power

Call	Score
K2DRH	463,939
AF1T	266,160
WB1GQR (W1SJ, op)	185,436
K1KG	134,945
KT1R	127,400
NØLL	125,883
N4OX	98,840
VE1WOW	93,285
K2PS	92,710
KX4R	84,804

With good 6 meter prop to the upper Midwest and 7 more bands with good numbers Bob, K2DRH took first place in SOLP by a considerable margin, thanks in part to the increased microwave activity contributed by ACØRA/R and the Northern Lights Radio Society (NLRS) rover pack. Tearing away from 6 meters and losing a run frequency to go band hopping is always difficult but a multiplier total of 347 speaks to the success of this strategy. For the first time since the SOLP category was initiated, 464K was also the highest score of any Single-Operator category. The rest of the Top 5 were all from the Northeast where 6 meters was really hot and Dale, AF1T used those conditions to move up to 2nd place by almost doubling his 2015 score with 266K. In his soapbox comments Dale confessed that he neglected 2 meters and up in favor of the great 6 meter conditions. WB1GQR manned by Mitch, W1SJ atop Mt Equinox in VT took 3rd place with 185K using 8 bands through 3.4 GHz. By contrast, Warner, K1KG in MA moved up to 4th place with 135K and said that he may have spent too much time on 2 meters. Finally Lou,

KT1R in ME was happy that 6 meters hours allowed him to attain a score of 127K and land in the Top 5 this year.

Top 10 — Single Operator, High Power

Call	Score
WØUC	364,500
W5ZN	277,173
W9RM	244,713
W5PR	233,584
K1RZ	219,387
N4WW	218,550
K1TR	217,012
K4PI	186,303
WDØT	171,216
K1GX	168,365

Year after year, the Single-Op, High Power (SOHP) category attracts the big guns of VHF contesting. The most consistently successful erect huge and complicated stations with multiple bands to compete in this category. Some prefer to run higher power and be louder to attract more stations. Others live where the relative scarcity of VHF stations to work on 2 meters and above makes it necessary for them to parlay great 6 meter conditions into the Top 10. This year mixes all of the above.



Paul, WØUC, took full advantage of the good propagation this year to win the Single-Operator, High Power category from Wisconsin. Read Paul's suggestions on increasing participation later on in this writeup. (Photo courtesy of Paul Husby, WØUC)

The top SOHP spot this year goes to an operator who put together a big contest station in Wisconsin over 20 years ago and has been a major player in the upper Midwest ever since with many Top 10 finishes. Great 6 meter prop plus the influx of more microwave-carrying rovers in the area helped Paul, WØUC attain an excellent grid total of 324 and claw his way to the top of the Big Dog heap this year with 365K. Paul is very active in the NLRS contesting community and publishes an activity spreadsheet on the web for area stations every contest, as

well as the real-time Upper Midwest VHF+ spotting page. (www.w0uc.com/spots.html) Second place for SOHP goes to another perennial top finisher both in the single-op and multiop categories, Joel, W5ZN. Joel commented that he'd forgotten how much work a single-op effort was! Nevertheless, he was on his way to a 277K finish where both 6 meter Es and 2 meter EME played a big part in his success. Jay, W9RM used his excellent pileup and logging skills (a 0.1% error rate) as well as good 6 meter openings to nail down the 3rd spot again with 245K. Chuck, W5PR moved up to 4th place with a 6 meter-only effort, making the highest QSO total of the Top 5 and 234K points. Dave, K1RZ in MDC took 5th with his 10-band station and score of 219K.

Top 10 — Single Operator Portable

Call	Score
NV4B	13,288
WØPV	5,292
AI6EA	4,559
WB2AMU	4,472
W6BJB	4,238
NØJK	3,795
W6KKO	3,003
W4DVE	2,200
K7ALO	1,360
KE7UQL	1,240

The Single-Operator Portable category stations are harder to hear with QRP, as well as contending with restricted access, unfriendly authorities, and challenging weather when hauling their stations to their favorite hill or mountaintop. It takes a lot of dedication and determination to keep doing this. This year's Top 5 contains a completely different cast of characters than last year. In fact none of last year's Top 5 even entered this category this year, attesting to the difficulty of doing it year after year. Chris, NV4B has been contesting from Woodall Mountain in MS but found a new spot on Town Hill in AL at about the same elevation. That turned out to be the charm that he needed to take first place this year. Chris started an hour and a half late due to a thunderstorm and had some equipment difficulties that were handily offset with good 6 meter openings to post a score of 13K. Chris also posted a golden log with no errors or score reductions. John, WØPV took advantage of Florida's 6 meter openings from his portable site with a 6 meter-only effort that netted him 5K. John, AI6EA on Blue Ridge (DM14) in southern California wrote a cryptic "A contest can have many challenges" in his soapbox but still managed 3rd place with 4.5K just edging out Ken, WB2AMU who was nipping at his heels less than 100 points behind in 4th. Ken operates from (FM30) NLI and has authored books and articles about 6 meters. Brad, W6BJB is new to both contesting

and ham radio having been licensed less than a year at the time of the contest. He did a multipurpose portable operation from Triunfo Lookout (SOTA)/Santa Monica Mountains NRA (NPOTA) and was close behind at 4.2K to take fifth. Jon, NØJK, the *QST* "World Above 50 MHz" and *NCJ* "VHF-UHF Contesting" columnist went to a nameless hill west of Lawrence, KS and used mostly 6 meter Es to challenge the Top 5.

We also received a nice note from SOP entrant, Dave, K6DVD. "My first entry in a ham contest in over 30 years was the recent June VHF event. I live just over the coastal mountains from the Pacific Ocean in Santa Barbara County so I packed up my ATV for a trip to the top in grid CM94. The weather at the summit (2700 ft) was heavy fog but I had fun working SSB on 50, 144, and 432 down the coast as far as Mexico (370 km). The radio is a Yaesu FT857 and the 4-element 6m antenna is home brew from TV antenna parts."

Top 10 — Single Operator, 3-Band

Call	Score
K1TO	132,132
N4OGW	66,495
AD5A	66,150
WDØBGZ	49,539
K7BG	34,809
KK4MA	34,272
KE7GRO	28,842
N7IR	27,810
AE8M	26,226
VA2NQ	19,320

This is the fourth year for the two new single-operator categories. SO3B kept its 10% gain from last year. SOFM remained on par with 15 log submissions. Once again the operators who enter these categories are still setting new Section and Division records that will be posted on the ARRL website. This year's 6 meter prop favored TX again but Roy, AB5EB was not around this time to defend his SO3B title. The Top 5 were distributed all around the country and surprisingly none were from the NE. Dan, K1TO (WCF), a 3-time WRTC champion bitten by the 6 meter bug, had his way with the 6 meter Es to rack up the top score in this category this year. Dan's 6 meter-only effort netted him 858 Qs in 154 grids for a score of 132K and a new Southeast Division record. Dan was also thrilled to work JA7QVI with 100 W and a 7-element beam at 55 feet for his first JA on 6 meters. Tor, N4OGW in MS decided to stay home rather than go QRP Portable again this year and racked up 66.5K to take 2nd place despite sadly losing his one and only 432 QSO to a NIL. Once again, I cannot stress how important it is to log accurately since it can hurt someone else's score when you become careless. Mike, AD5A's casual

approach and limited antennas netted him enough points to take 3rd with 66.1K from STX in a close finish with N4OGW. Al, WDØBGZ (NE) and Matt, K7BG (MT) rounded out the Top 5 with 49K and 35K respectively.

Top 10 — Single Operator, FM-Only	
Call	Score
KK4OSG	6,976
KI6JJW	1,215
N9VM (N1VM, op)	430
W7AIT	308
K2JB	186
W6IA	182
NA6AA	129
N4STG	102
W6CT	22
ADØMJ	16

In many parts of the country VHF FM activity is very sparse. Entries in the SOFM category have tended to cluster around the population centers and the Top 5 have QSOs on all of the bottom four bands. Additionally, four of them turned in “golden logs” with no mistakes — must be the high-fidelity audio. The scores are definitely going up and this year one op reached the 100-QSO level on 2 meters, no mean feat for any single operator. This top score in the SOFM category was submitted by GA station Ryan, KK4OSG who shattered his old category record yet again with a 7K golden log. None of the other Top 5 stations from last year repeated. Steve, KI6JJW from EB posted a score of 1.2K to take second. N9VM (Vic, N1VM) and Chip, W7AIT, both from SJV, placed 3rd and 4th, followed by Dean, K2JB from NC.

What About the DX?

While there are few DX log submissions since this is essentially a North American VHF contest, a lot of stations had QSOs with European, Caribbean, South American, and even African stations, as well as quite a few from Japan. There were 20 DX logs submitted this year and several more stations reported QSOs on 3830scores.com, including JA7QVI. EA8DBM from the Canary Islands in Africa had the highest score of all non-NA stations this year with an astounding 286 Qs in 106 grids (8 on 2 meters) for 40K! Canadian participation jumped back up from last year’s 47 to 72 stations, surpassing the 70 logs submitted in 2012. The XE contingent continues to grow with 7 logs and some different players. Javier, XE2CQ edged out Jorge, XE2X followed by countrymen XE2JS, XE2NBW, XE2OK, XE2S and XE1AO, but there were more stations from Mexico around the bands. Three stations submitted logs from Cuba CO3VR, T43S, and CO3JA. Logs from Alaska dropped to just one from stalwart Dale, KL7XJ and there were none from KH6 this year. NP2X kept up

the demand for VI along with KP3W for PR. FS/K9EL, YV6CR, 8P2K, EA4DE, MDØCCE and YO6BHV round out the rest.

Top 10 — DX	
Call	Score
Single Operator, High Power	
EA8DBM	40,916
XE2CQ	11,110
YV6CR	992
FS/K9EL	342
Single Operator, Low Power	
XE2X	8,777
CO3VR	5,922
XE2JS	2,501
CO3JA	1,036
XE2NBW	675
8P2K (8P6SH, op)	30
XE2S	16
EA4DE (EA4FTN, op)	1
Unlimited Multioperator	
T43S	2,146
XE2OK	256

Multioperators

The Unlimited Multiops (UM) make QSOs from 6 meters to daylight and some like W2SZ are always pushing the limits of the technology on the microwave bands. Whether fixed or portable it’s a huge effort to keep everything going that takes many people. Unfortunately many of the old guard are no longer on the air because they have reached the limits of their manpower and resources. The Limited Multiops (LM) range from a few operators manning a home station to huge efforts with many ops and multiple antenna systems. Multiops provide a place where folks without a station can have the fun of operating while enjoying the company of other hams who also enjoy VHF+ contesting. While it’s sad to see the passing of so many huge efforts like K8GP over the years, it’s also encouraging that a few new ones are starting to take their place and will hopefully rise to prominence.

Top 10 — Limited Multioperator	
Call	Score
K5QE	629,241
AA4ZZ	344,226
N2NT	277,907
W3SO	255,524
N8ZM	184,386
W4IY	173,428
W2LV	154,602
KW7MM	138,627
W4NH	134,784
NV9L	130,788

The K5QE juggernaut from the STX flatlands pulled way ahead of the pack to win the Limited Multioperator (LM) category for the 4th year in a row since switching from the UM category in 2013. While not only having some of the best 6 meter numbers of the contest they continue to moon the competition on 2 meter and 432 EME, even attempting 222 EME. They amassed an astronomical grid total of 411 on the bottom 4 bands for a final score of 629K. AA4ZZ from their mountaintop near Boone NC moved up again with good 6 meter numbers, this time to second place with a total of 344K. N2NT in NNJ rebounded into the Top 5 again with 278K and 3rd place thanks to some of the best numbers on 2 meters in the contest despite a sticky transverter relay. W3SO, Wopsononock Mountain Operators, in WPA held fast despite predictions of thunderstorms on the mountain and moved up a slot to fourth place with 256K. Finally N8ZM in OH squeaked into 5th this time out with 184K.

W9XA (UM), a new IL multiop hosted by the new ARRL Central Division Director, Kermit, W9XA.

Rovers

Rovers make the contest even more fun and keep things interesting when the bands are flat. It's even more interesting to try and keep a 6 meter run frequency and run the bands with a rover at the same time. It's a lot of work setting up an effective station in a vehicle. Antennas can run the gamut from simple loops to multiple Yagis on rotating masts that rival a home station. Classic Rovers (R) can bring as many bands as the multiops to multiple locations and the grid multipliers start to flow into your log like good scotch whenever you line one up to do a band run. It's very encouraging that the number of Classic Rovers is actually increasing and the other rover categories are holding their own. The new rules changes make it even easier to find them, too.

Top 10 — Unlimited Multioperator

<i>Call</i>	<i>Score</i>
W2SZ	830,720
W3CCX	560,170
K1WHS	486,189
K2LIM	352,660
K5TR	311,922
W9XA	301,576
WQØP	195,999
KV1J	186,714
NØSZ	150,570
VE3WCC	141,372

Top 10 — Limited Rover

<i>Call</i>	<i>Score</i>
VE3SMA/R (+ VE3RZ)	63,376
KD5EUO/R	58,968
K2QO/R (+ W2TAU)	54,934
WW7D/R	42,834
K2EZ/R	24,984
W3ICC/R (+ W2PED)	23,976
AE5P/R	22,734
KK6MC/R (+ N5SJ)	20,274
W3DHJ/R	17,670
KS4S/R	14,280

W2SZ, Mt Greylock Expeditionary Force, (See the story at the end of this writeup about the history of W2SZ!) posted their 26th June VHF win in the UM category with 830K, the only top station to post a score lower than last year. While their 6 meter numbers were disappointing considering the great conditions that most of the NE enjoyed, their 144, 222, and 432 MHz totals were the best of the test. Additionally their microwave totals were considerably down from last year. The Mt Airy VHF Radio Club (aka Pack Rats) on Camelback Mountain pushed W3CCX to a 2nd place finish with 560K with somewhat disappointing 6 meter numbers. After last year's hiatus, K1WHS in ME came back strong despite not turning out a serious effort due to insurmountable problems with 432 and the microwave equipment. Huge pileups on 6 meters were the saving grace that put them in 3rd place with 494K. K2LIM (WNY) switched from LM to UM this year and put in a respectable score of 362K for fourth-place. K5TR is again in the Top 5, placing 5th with 312K in their second UM outing with somewhat subdued totals on 6 meters but great 2 meter totals for their area, none of which was made via meteor scatter or EME. Close on their heels with 302K was

Steve, VE3SMA/R lightened his load from previous years and downsized to the Limited Rover category (RL) this year on a seven-grid rove with a goal to break the Canadian RL record. He took Tony, VE3RZ with him to run 6 meters as he drove and worked the other bands. They wound up not only shattering that record by putting in a score of 63K, but placed first in the category.



The K8GP/R early on Sunday morning. Now that's a rover's dream vehicle! You can read more about the adventure at www.k1ra.us/roving/k1ra-k8gp-rover-arri-june-vhf-2016. YouTube video is also available. (Photo courtesy - Andy Zwirko, K1RA)

Kyle, KD5EUO/R in der Funkwagen romped through 8 grids on 3 bands in STX, logged a lot of 6 meter Qs when the band was open, and added mults to K5TR's score. His 59K effort was enough to move him into 2nd place. Mark, K2QO/R and his partner Paul, W2TAU took third again with a 55K, 8-grid, 600-mile rove through the Atlantic Division in WNY. Here's an encouraging quote about the Rochester VHF Group (RVG) from his soapbox comments on 3830scores.com:

“Another highlight was the rover dinner in Leroy, NY on Sunday. Six rovers joined in (K2TER, KF2MR, N8KH, W2HRY, K2LDT and yours truly K2QO). I've heard that this was typical of "back in the day" but maybe we are creating a NEW "back in the day". Let's hope! I think all the kudos go to KF2MR/R and K2TER/R.”

Darryl, WW7D/R ran 8 grids in the Northwestern Division with 43K for 4th and Andrea, K2EZ/R did a 12-grid run-and-gun romp to nail down 25K and another place in the Top 5.

Top 10 — Classic Rover

Call	Score
K8GP/R (K1RA, W8ZN, ops)	305,760
ACØRA/R	139,944
VE3OIL/R	112,578
NØLNO/R (+ KØDAS)	89,526
K2TER/R (+ KV2X)	78,207
K4SME/R (+ N2CEI)	61,401
KF2MR/R	55,530
VE3WJ/R	52,854
WØZQ/R	51,198
KCØSKM/R (+ KCØYGW)	48,870

In the Classic Rover category (R), Grid Pirates Terry, W8ZN and Andy, W1RA returned with the K8GP/R, bigger and badder than ever. They roved 5 grids in the Roanoke Division up in the mountains with 10 bands and the results were spectacular. Their amazing totals on both 6 and 2 meters netted a final score of 306K. Wyatt, ACØRA/R outfitted his truck with 9 bands of gear to do a 10-grid rove in the Midwest Division much to the delight of the other NLRS rovers and SO winners WØUC and K2DRH. His 140K score was enough to take second place with some pretty impressive microwave totals. After his day in the sun last year, Russ, VE3OIL/R dropped from first to third despite improving his score to 113K. He added 24 GHz to his arsenal of 11 bands on another 9-grid jaunt though Canada in parallel with Murray, VE3WJ/R. Bill, NØLNO/R with 7 bands joins the Top 5 this year at fourth place with 90K on a marathon 13-grid route through NLRS territory. He was accompanied by Rod, KØDAS the ARRL Midwest Division Director. RVG Atlantic Division rover Bill, K2TER/R, with Tom, KV2X riding shotgun, took 5th with 83K using 9 bands, including 47 GHz, through 5 grids.

Top 10 — Unlimited Rover

Call	Score
WØZF/R (+ KØBBC, AEØEE)	20,962
K6EU/R	17,040
WE7X/R	16,590
K6VHF/R (+ W6BVB, WY6DX)	14,112
W9YOY/R	10,896
KJ1K/R (+ WB2VVQ)	8,568
KD5IKG	7,938
K7ATN/R	6,156
W3HMS	5,580
N6GKJ	850

Ten entries this year in the Unlimited Rover category (RU) made it moot to submit a Top 10 score. This category encourages multiple operators, unlimited bands, pack roving and grid circling to rack up massive scores while still being fair to the Classic Rovers. However, the intent of this category is often not being realized by the entrants who earn certificates. Dave, WØZF/R with Matt, KØBBC and Bill, AEØEE joined the UM ranks with the NLRS rover pack on the bottom four bands on an 8-grid trail through the Midwest Division. Their efforts produced a first-place score of 21K that tripled the old division record of 7K. Tom, K6EU/R doing his solo 4-grid circle in the Pacific Division with the bottom 4 bands dropped back to second despite increasing last year's score to 17K. Rod, WE7X/R lit up 3 grids in the Northwestern Division by adding 902/3 MHz to the bottom 4 bands. Rod actually posted a slightly higher raw score than Tom but lost more during log checking and settled for third with 450 points less. Alex, K6VHF/R took Vlad, W6BVB and Vlad, WY6DX with him to man the bottom four band plus 1296 MHz across 9 grids in the Southwestern Division for a fourth-place score of 14K. And Rans, W9YOY/R took the same bottom four bands plus 1296 MHz on a 9-grid run through the Central Division with 12K to round out the Top 5.

Promoting Activity by Paul Husby, WØUC

We all like to see newcomers in the contests, but task #1 is getting existing stations on the air! I'm lucky to be part of an active VHF+ club, Northern Lights Radio Society. But even that is no guarantee of action in a VHF contest; many of our ops have migrated to the world of 10G+, and it takes some prodding to turn them out on the low bands.

Before the contest: Preferably a couple months before, but more typically a couple weeks before, I talk up the contest on regional email reflectors for NLRS and the Badger Contesters. For many years I've set up a spreadsheet on Google Docs with one tab for Fixed Stations and one for Rovers to post their operating plans. Everyone has editing access, so I only need to do some occasional clean-up. The more detailed the rover plans, the better – you will find that people with detailed posted plans consistently top the results. Check out the sheet for this contest at tinyurl.com/JuneVHF2016.

During the contest: I am still learning how to make best use of the new spotting and coordination rules, but I am definitely working people I would have missed before! Access to the ON4KST chat page lets me force some of those stations 400+ miles out to turn and look my way,

and I get 4-band contacts with grids I did not get before. But there is a lot of traffic on that page, and your query can scroll off the bottom pretty quick. (Hey, take a minute and read the Help section! The correct command is “/cq callsign msg” to get the whole line to light up in orange! Your target is way more likely to see your message.)

I told my son I wanted a local real-time chat page, and he created the page at: www.w0uc.com/spots.html. It is just a simple spreadsheet where people can spot themselves, rovers can announce new grids, etc. New entries are highlighted for 5 minutes to help catch your eye. It is rover-friendly: instructions can be collapsed, rovers can enter via simple SMS texts, and they can map their phone number to their call sign. Check it out! If you think you have current propagation into our area, you are welcome to spot yourself!

After the contest: I long for the old days when the full results were in *QST*; it hurts that newcomers can't easily look and see, huh, there *are* people around here on those bands! Still, it is important to get people to submit logs, both for promoting activity, and as evidence of stations actually using our valuable spectrum. Club competition is good for getting members to submit logs. At the Northern Lights Radio Society annual VHF gathering I give out a nice door prize based on contest entries: for each ARRL VHF+ contest you submit a log, you get one chance in the drawing. (This is for anyone who registers for the conference, come join us at *Aurora '17!* (details at www.nlrs.org) Reminders on the local email reflectors are also posted as the log submission deadline approaches.

Promotion is a constant battle; you can't let up!

Club Competition

This year saw only one club muster the required 51 logs to make it into the Unlimited category — the Society of Midwest Contesters who just keep doing a great job of turning out lots of stations, which fills up everybody else's logs, too. Nice job, SMC!

An even nicer job was performed by the Medium category-topping North East Weak Signal Group. NEWS submitted the top total of all clubs in any category, using only 22 logs. That's quite an effort and a testament to the quality of stations and operators in the NEWS group.

The Florida Weak Signal Society takes home the Local category gavel with a nice score from seven submitted entries. It's great to see the clubs encouraging member activity which benefits everyone.

Affiliated Club Competition

<i>Club</i>	<i>Score</i>	<i>Entries</i>
Unlimited		
Society of Midwest Contesters	1,287,750	68
Medium		
North East Weak Signal Group	1,711,293	22
Potomac Valley Radio Club	1,437,673	46
Northern Lights Radio Society	1,121,011	18
Florida Contest Group	978,305	20
Yankee Clipper Contest Club	784,204	22
Mt Airy VHF Radio Club	699,827	20
Georgia Contest Group	558,300	9
Roadrunners Microwave Group	553,637	6
Grand Mesa Contesters of Colorado	534,313	13
Contest Club Ontario	531,380	23
Pacific Northwest VHF Society	468,254	43
Carolina DX Association	467,199	8
Frankford Radio Club	353,049	12
Alabama Contest Group	345,605	10
Arizona Outlaws Contest Club	314,912	28
CTRI Contest Group	193,131	4
Rochester VHF Group	186,439	11
DFW Contest Group	132,538	10
Central Texas DX and Contest Club	124,555	6
Northern California Contest Club	117,439	19
Rochester (NY) DX Assn	109,122	5
Mad River Radio Club	103,058	7
Southern California Contest Club	90,803	18
Tennessee Contest Group	76,465	7
Big Sky Contesters	62,539	3
Minnesota Wireless Assn	46,227	10
Western Washington DX Club	43,164	3
Saskatchewan Contest Club	30,496	3
North Coast Contesters	30,376	4
Contest Group du Quebec	17,648	3
South Jersey Radio Assn	13,058	4
Willamette Valley DX Club	12,001	3
South East Contest Club	11,429	4
Local		
Florida Weak Signal Society	232,208	7
Maritime Contest Club	151,638	3
Badger Contesters	126,540	7
Michigan VHF-UHF Society	98,784	4
Bergen ARA	94,895	8
Bristol (TN) ARC	21,654	5
Contoocook Valley Radio Club	18,232	3
NorDX Club	13,197	3
Lodi ARC	12,690	3
Pottstown Area ARC	6,054	6
Meriden ARC	2,552	3

meters in less time during another VHF contest, but always abandon my run frequency in this contest when there are 2 meters and up mults to be had because it's worth a lot more points. I also hunt and pounce for multipliers on 6 meters because some big stations in rare grids will run almost exclusively and you will miss them. Strategically, it all comes down to what you want to achieve: Huge numbers on one band, the adrenalin rush of high rate, or ultimately winning your category/division/section. While you may prevail operating only on 6 meters, it's not really likely in the long run when a competitor takes a broader approach. Like it or not, success requires a balance and you have to adjust your actions to match the conditions and your situation — and that's what makes this contest truly great. So join us again next year on June 10-12 and let's see what we get!

Epilogue

Most of us finally got what we were hoping for this year, some big 6 meter prop. But this is not a 6 meter contest, much as some would like to see a 6-meter only category. (Band winners are issued certificate endorsements) Some also learned that to neglect the other bands for 6 meters is a sure way to lose ground to someone else. In my personal experience I've run well over 1000 QSOs on 6

Regional Leaders														
West Coast Region			Midwest Region			Central Region			Southeast Region			Northeast Region		
Pacific, Northwestern, and Southwestern ARRL Divisions; Alberta; British Columbia, and NT RAC Sections			Dakota, Midwest, Rocky Mountain and West Gulf ARRL Divisions; Manitoba and Saskatchewan RAC Sections			Central and Great Lakes ARRL Divisions; Greater Toronto Area, Ontario East, Ontario North, and Ontario South RAC Section			Delta, Roanoke, and Southeastern ARRL Divisions			New England, Hudson and Atlantic ARRL Divisions; Maritime and Quebec RAC Sections		
Call	Score	Cat	Call	Score	Cat	Call	Score	Cat	Call	Score	Cat	Call	Score	Cat
KE6QR	16,483	R	ACØRA/R NØLNO/R (+ KØDAS)	139,944	R	VE3OIL/R	112,578	R	K8GP/R (K1RA, W8ZN, ops) K4SME/R (+ N2CEI)	305,760	R	K2TER/R (+ KV2X)	78,207	R
VE7JH	16,284	R	WØZQ/R	89,526	R	VE3WJ/R	52,854	R	AG4V/R	61,401	R	KF2MR/R	55,530	R
N6ORB/R	12,420	R	KCØSKM/R (+ KCØYGW)	51,198	R	KF8QL/R	41,376	R	W4PH/R	44,036	R	WA3PTV	42,600	R
KE7MSU/R	8,374	R	KCØP/R	48,870	R	W9SNR/R	29,920	R	W5VY	10,792	R	WA3RGQ/R	34,320	R
WB6BET	990	R	KD5EUO/R	26,675	R	NA9US/R (+ NG9H)	2,400	R	KS4S/R	9,230	R	NN3Q/R (+ K3WGR)	13,860	R
WW7D/R	42,834	RL	AE5P/R	58,968	RL	VE3SMA/R (+ VE3RZ)	63,376	RL	N2MH	14,280	RL	K2QO/R (+ W2TAU)	54,934	RL
N6GP/R	8,802	RL	KK6MC/R (+ N5SJ)	22,734	RL	K9ILT/R	7,056	RL	W3ICC/R (+ W2PED)	3,380	RL	K2EZ/R	24,984	RL
K6LMN/R	4,293	RL	W3DHJ/R	20,274	RL	K8DOG/R	5,562	RL	WA5KBH/R AI4GR/R (+ AJ4FV)	1,292	RL	W1RGA/R	23,976	RL
K6ACJ	612	RL	WK7G	17,670	RL	WD9HBF/R	4,950	RL	NL7CO/R	627	RL	N2DXT/R	9,384	RL
K6EU/R	17,040	RU	WØZF/R (+ KØBBC, AEØEE)	7,200	RL	K9JK/R	4,060	RL	W5ZN	110	RL	W1RGA/R	7,722	RL
WE7X/R	16,590	RU	KD5IKG	20,962	RU	W9YOY/R	10,896	RU	N4WWW	277,173	SOHP	KJ1K/R (+ WB2VVQ)	8,568	RU
K6VHF/R (+ W6BVB, WY6DX)	14,112	RU	W9RM	7,938	RU	WØUC	364,500	SOHP	K4PI	218,550	SOHP	W3HMS	5,580	RU
K7ATN/R	6,156	RU	W5PR	244,713	SOHP	K9EA	67,340	SOHP	N4BP	186,303	SOHP	K1RZ	219,387	SOHP
N6GKJ	850	RU	WDØT	233,584	SOHP	WA8RJF	62,271	SOHP	N4PN	149,569	SOHP	K1TR	217,012	SOHP
K7CW	75,604	SOHP	K5AND	171,216	SOHP	K8MM	61,225	SOHP	N4OX	142,374	SOHP	K1GX	168,365	SOHP
N7CW	43,155	SOHP	KMØT	141,559	SOHP	K8TQK	56,917	SOHP	K2PS	98,840	SOLP	WA1T	164,016	SOHP
N7NW	37,310	SOHP	NØLL	135,240	SOHP	K2DRH	463,939	SOLP	KX4R	92,710	SOLP	N3HBX	146,020	SOHP
W7MEM	36,738	SOHP	KI5YG	125,883	SOLP	W9GA	75,175	SOLP	N4QWZ	84,804	SOLP	AF1T	266,160	SOLP
W7FI	36,057	SOHP	AA5AM	59,400	SOLP	VA3ZV	36,192	SOLP	KC4PX	65,676	SOLP	WB1GQR (W1SJ, op)	185,436	SOLP
WA7JTM	83,248	SOLP	WBØHHM	55,350	SOLP	VA3ST	28,659	SOLP	NV4B	53,568	SOLP	K1KG	134,945	SOLP
VA6AN	26,145	SOLP	AI5I	46,843	SOLP	WS9V	26,400	SOLP	WØPV	13,288	SOP	KT1R	127,400	SOLP
K2GMY	22,080	SOLP	NØJK	40,166	SOLP	VE3LVW/P	270	SOP	N4ZAK	5,292	SOP	VE1WOW	93,285	SOLP
WJØF	20,700	SOLP	KØNR	3,795	SOP	AE8M	26,226	SO3B	KC8KSK	378	SOP	WB2AMU	4,472	SOP
KC6ZWT	16,147	SOLP	N1HOB	455	SOP	KB8UUZ	11,026	SO3B	K1TO	70	SOP	KQ2RP	798	SOP
AI6EA	4,559	SOP	AD5A	6	SOP	N8CGY	10,692	SO3B	N4OGW	132,132	SO3B	N1PRW	693	SOP
W6BJB	4,238	SOP			KB9IIZ	9,360	SO3B	K4MA	66,495	SO3B	K6PFA	640	SOP	
W6KKO	3,003	SOP							34,272	SO3B	AE3J	456	SOP	

W4DVE	2,200	SOP	WDØBGZ	49,539	SO3B	WB9TFH	6,042	SO3B	KZ2I	13,778	SO3B	VA2NQ	19,320	SO3B
K7ALO	1,360	SOP	K5ND	17,000	SO3B				N3CMH	5,856	SO3B	K3UHU	17,100	SO3B
			KBØHNN	8,701	SO3B	N8ZM	184,386	LM				N3ALN	12,675	SO3B
K7BG	34,809	SO3B	KC5JSV	7,171	SO3B	NV9L	130,788	LM	KK4OSG	6,976	SOFM	K1VUT	10,710	SO3B
KE7GRO	28,842	SO3B				W9RVG	60,885	LM	K2IB	186	SOFM	N1DID	10,650	SO3B
N7IR	27,810	SO3B	ADØMJ	16	SOFM	W9VW	45,633	LM	N4STG	102	SOFM			
K6MI	17,810	SO3B	AKØEM	14	SOFM	KC8AAV	27,495	LM	K3TW	4	SOFM	K3BLF	1	SOFM
WØOGH	15,996	SO3B	KG5FHU	6	SOFM									
						W9XA	301,576	UM	AA4ZZ	344,226	LM	N2NT	277,907	LM
KI6JW	1,215	SOFM	K5QE	629,241	LM	VE3WCC	141,372	UM	W4IY	173,428	LM			
N9VM												W3SO	255,524	LM
(N1VM, op)	430	SOFM	NØEO	80,214	LM	VE3RB	9,350	UM	W4NH	134,784	LM	W2LV	154,602	LM
W7AIT	308	SOFM	WØFRC	4,004	LM	NØMO	2,574	UM	WN2E	41,080	LM	WA2CP	101,386	LM
W6IA	182	SOFM	K5LRW	850	LM				W4COV	912	LM	W1QK	80,480	LM
NA6AA	129	SOFM												
			K5TR	311,922	UM				W4UAL	52,705	UM	W2SZ	830,720	UM
KW7MM	138,627	LM	WQØP	195,999	UM				N4SVC	36,366	UM	W3CCX	560,170	UM
K7TM	29,440	LM	NØSZ	150,570	UM				N4JQQ	20,079	UM	K1WHS	486,189	UM
W6FM	19,197	LM	KC5MVZ	8,520	UM				K4HZ	14,872	UM	K2LIM	352,660	UM
N5CR	19,178	LM							W4AAQ	1,725	UM	KV1J	186,714	UM
NN7AZ	2,688	LM												
K7VHF	53,820	UM												
K6HS	34,498	UM												
N6KN	31,248	UM												
K6ARP	20,775	UM												
N6MI	12,238	UM												

Early RPI Radio Club VHF Contest History

By Dick Frey, WA2AAU

Slide Mountain – Catskill Mountains, New York

The recent era of RPI (Rensselaer Polytechnic Institute) Radio Club VHF contesting history began in June 1969 when the club decided to compete seriously in the ARRL June VHF QSO Party. A leading multi-operator station at the time was W2JKI who operated from a fixed station located in the hills just east of Troy, NY. The location was good but by no means the best around, but Bill made up for that with huge antennas hung on very tall towers, much like K1WHS has in recent times. In fact, Bill was using a Very Large Vertical Array long before Dave gave it a name.

We at W2SZ decided to beat W2JKI by choosing a much better location closer to New York City, Philadelphia, and Washington, and with a much better view toward Boston. What better place than the tallest of the Catskill Mountains, Slide Mountain. At 4180 feet there was nothing higher from NE through South, West, and around to North again. We made a couple of survey trips up the mountain to check it out with a neat little battery operated 6M AM rig. The climb was reasonable, only about 3 miles from the county road to the summit. Most of it was on a jeep trail used to service a fire tower that had been taken down. Propagation was marvelous with very strong signals to Boston, NYC and Philly.

So this was a great spot. There were even 2 lean-tos at the summit for shelter! Let's see, we could put 6 and 2 meters in one and 220, 432, and 1296 in the other with enough room for the operators to sleep as well. The challenge was getting the equipment up the hill on the jeep trail. We managed to find a ham in Windham, NY that had a 4-wheel drive truck for servicing CATV systems. But we still needed permission to use the jeep trail. The state forest ranger told us only state vehicles were allowed on the wild forest land near the summit but we were able to get permission to use the jeep trail that was on private land at the lower elevations. We even investigated using pack animals to transport the equipment, but that was much more trouble that it was worth.

Our CATV maintenance friend could take us up to within about 0.7 miles of the summit. There we unloaded all the gear and started to hand carry it. About 0.5 miles of the

trip were very nearly flat, so it was not too bad. The worst task was carrying the 2 generators up the last 0.7 miles. We used 2 poles on the shoulders of 2 people with a generator suspended between. Also carrying the 5-gallon cans of gasoline was no fun at all. We carried them strapped to hiking pack racks. They were lighter than water but still plenty heavy! Luckily, nobody was a smoker.

The radio gear had been made during the last semester to be lightweight and portable. A special power amp was made for 6M using a pair of 8122s. It could be carried with its power supply by a single person. Compact power amps were also made for 144, 220, and 432 MHz. My job was to build a complete 220 transmitter and receive converter. I built a PA with a pair of 4CX250B's driven by an exciter ending in a 6360 dual tetrode. The power supply used a pair of TV transformers and measured only 12" x 12" x 8". Surprisingly that thing worked for many years before one of the transformers developed a HV short to case.

Unfortunately, (or perhaps fortunately in the long run), the contest turned out to be a disaster, mostly due to 4 solid days of rain, Thursday, Friday, Saturday and Sunday. Also when we got to the summit, we found another group of ham radio operators camped out in one of the lean-tos we had planned to use for half our group. All 6 of us were jammed into a single lean-to with the radio gear for 5 bands. 1296 never made it on the air, but the other 4 bands worked pretty well, considering.

The weather was so wet that we soon had no dry wood for cooking. We took to using raw gasoline in a wide-open container as a fire source. It actually worked, but looking back, WOW, how could we DO that?! By Monday we were desperate for a good meal. We had packed steaks for a victory celebration!?? But we still didn't have any dry wood, and grilling steaks over a gasoline fire didn't appeal to us one bit. Looking around, we saw our 4 sad 2-meter cubical quads with their wood spreaders. They hadn't worked very well in the really wet weather, but the spreaders had been varnished (and so the wood inside was dry).

After getting permission from the guy who made the antennas to sacrifice them for one last good meal on the mountain, we set the spreaders afire with a little bit of gasoline and waited for the gasoline and varnish to thoroughly burn off. We then proceeded to grill the steaks over a nice wood fire... boy they tasted good after four days of gas-flavored food. As we hauled all the

equipment down to meet our CATV truck on Monday, the clouds broke up and we had sun for our departure... far too little and far too late.

The contest results were mediocre at best. We managed a score of 16,524 points in the multi-operator category with W2JKI winning with nearly 4 times that at 63,609 points. W1DC/1 was right behind JKI with 63,163. W1DC/1 would be a competitor for years to come.

Mount Greylock, Massachusetts

With the pain and discomfort of the Slide Mountain expedition fresh in our minds we pondered where we could go with a lot less effort involved. Mount Greylock in western Massachusetts was suggested. Hey, it even has a paved road to the summit and there is a lodge building on top called Bascom Lodge. It is not quite as high as Slide Mountain and it is further away from NYC and points south, but it has an excellent shot down the Hudson River valley to the south and out the Mohawk River Valley to the West. It is also pretty darned close to the rest of New England to the East. We were psyched! This was great! And, no kidding? We can actually DRIVE up to the top?

So we planned over the summer, fixed the equipment that had failed. We built some new 2 meter antennas. (Yum, that steak was good...) Come September, off to Mt Greylock we went. We got to the hilltop only to discover we were again, not the first ones there! Oh no, not again! The Berkshire Hilltoppers from the surrounding towns had taken up residence on "their mountain". You could hardly blame them! So we sat down and had a chat. The Hilltoppers only had (low power) AM rigs for 6 and 2 meters. On the other hand, we had high power CW/SSB equipment for 6 and 2 meters and we also had serious stations for 220 and 432 MHz CW running 300 - 600 watts output. We came to an agreement to work together... BUT it would be under a Berkshire Hilltoppers callsign - W1KZS held by Ernie Curry of Pittsfield. I guess we can live with that.

The results were much, much better. W1KZS/1 managed a score of 39,712 points with 529 QSOs in 68 sections. The winner, W1DC/1, had 59,340 points with 777 QSOs in 69 sections. So now our score had moved up to half the winning score instead of just the 1/4 we had in June. More important, the section count was almost the same; 68 vs. 69. This was very encouraging. Lots to think about over winter. We agreed that we would do this again with the Berkshire Hilltoppers next June.

One thing that bothered us in September was the hassle of always sending /1 at the end of the callsign as FCC rules required at the time. It made the exchange long and clumsy especially on CW. We agreed that several of us would independently request additional station callsigns for the fixed location on the summit of Mt. Greylock. (Additional station callsigns were a normal thing at the time, but the FCC has discontinued issuing them now for decades.) When the callsigns arrived, we chose the one that was "the best" for voice and/or CW. That turned out to be WA1MUG, held by WB2DRW. So the combined group was to become the Maniacs Upon Greylock for the next several years.

In June of 1970 the WA1MUG era began. Our combined group of Hilltoppers and RPI students/alumni expandd and invited others to join us. We grew from 12 operators in September to 20 in June. Our score grew as well. The WA1MUG team scored 67,554 points with 759 QSOs in 81 sections compared to the winner, W1DC/1 with 75,030 points with 853 QSOs in 82 sections. We were now at 92.5% of the winning score. We were definitely within striking distance! And to top it off, we beat W2JKI just west of us, our original goal a year earlier!

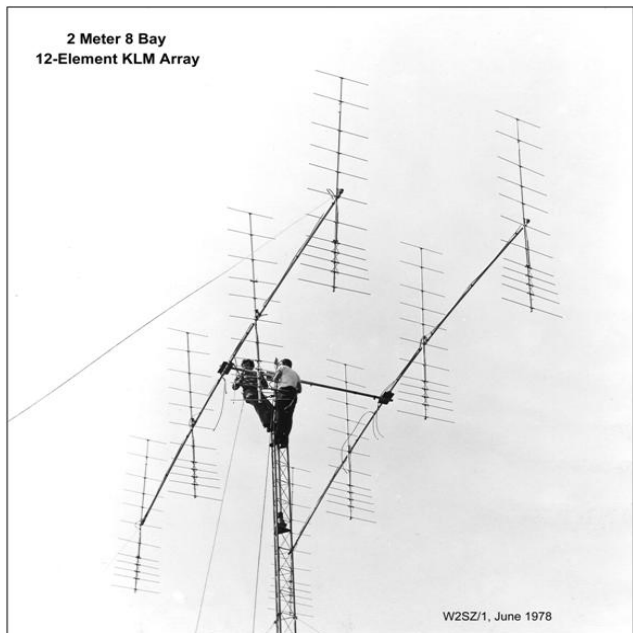
In September of 1970 we finally did it. We managed to win an ARRL VHF QSO Party contest as a multioperator group. In just a little less than 2 years, we went from an idea, (just a hope, really), to actually getting it done. In September 1970, WA1MUG scored 107,160 points with 1047 QSOs in 94 Sections, far more than the nearest competitor WA8PLZ with 65,700 points. And we had more than doubled W1DC's score of 51,376. At this point, we witnessed just how good a location Mount Greylock really is.

For the 11 contests from September 1970 through September 1975, WA1MUG won all of them except September 1971, when W1DC/1 managed to beat us by about 15%. WA1MUG set new all-time record high scores for both the June and September contests in 1974. The June score was 172,142 and the September score was 132,396. Many other competitors also pushed their own scores into the 6-digit range during that time. Competition was widespread and seemed to really push the technology

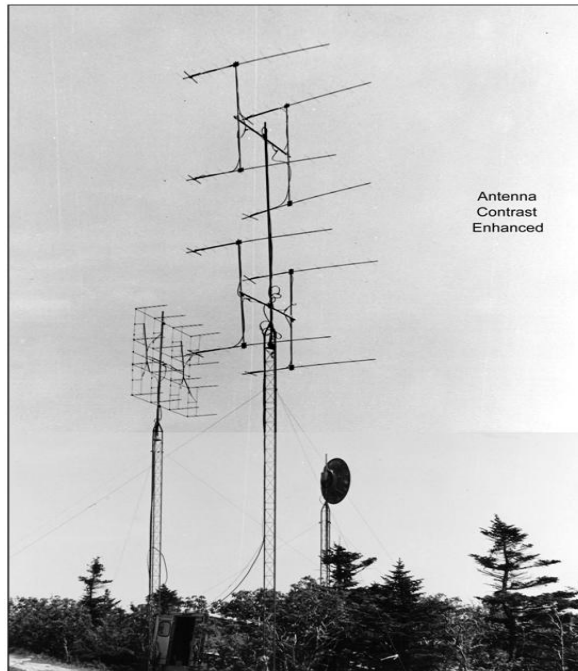
Unfortunately, after the September 1975 contest, the group broke completely apart. Many of the major contributors lost interest. Some had to move to different parts of the country. Others just thought the winning "was too easy" over the previous five years. In any case,

most of those involved in the MUG effort moved on. But a few remained interested. The group essentially started over with the callsign of W2SZ/1 since John, WB2DRW (WA1MUG) was no longer involved. But that is another story for another time.

The photos below were taken in the 1976 to 1980 time frame but are also representative of the WA1MUG setup.



This monster was only put up a few times. It worked well, but was too hard to build on site. It also did not have side lobes low enough for good moon bounce performance.

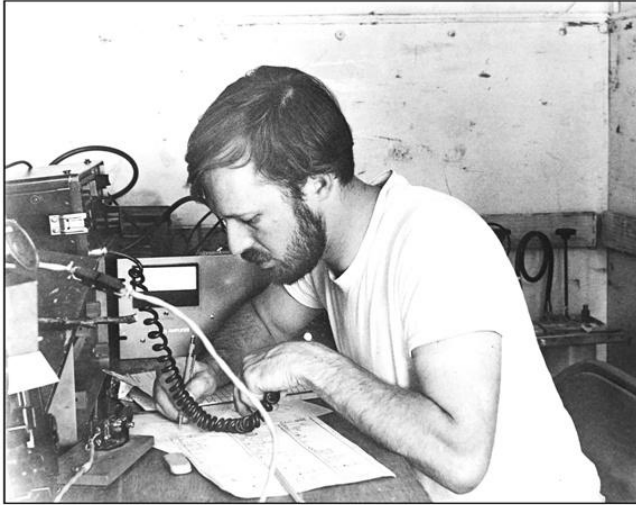


W2SZ/1 UHF Antennas (left to right) 16 x 6 EI on 432 MHz
8 x 11 Elements on 220 MHz 6-Foot Dish on 1296 MHz



Harvey Chalmers - N2FU Operating 432 MHz Station

The transmitter exciter in this 432 MHz station is actually a crystal-controlled 450 MHz 2-way mobile radio transmitter. Transmitter frequency was zero-beat to the receiving frequency by using a screwdriver to turn a trimmer capacitor across the crystal. The transmit frequency could be adjusted over a range of about 20 kHz that way. The power amplifier was a W2GN kilowatt amplifier kindly provided by Fred Merry.



Dean Keyser - WB2QCJ Operating at W2SZ/1 (Band Unknown) June 1978

It is not clear what band Dean is operating here, but he was primarily interested in 220 MHz during that time, so that might be a good guess. Note the manual dupe sheets in front of the operator. No computers were used in those days. The operating position here is inside a Hertz rental truck.



Original Calls: WB2PKO, Unknown, WB2BXP, WA1UGE, WA2AXV, WB2QCJ, WA8USA
Modern Calls: WA2AAU W1SZ N2FU

Division Winners

Classic Rover

Atlantic	K2TER/R (+ KV2X)	78,207
Central	W9SNR/R	29,920
Dakota	WØZQ/R	51,198
Delta	AG4V/R	44,036
Great Lakes	KF8QL/R	41,376
Hudson	K2JWK	90
Midwest	ACØRA/R	139,944
Northwestern	KE7MSU/R	8,374
Pacific	KE6QR	16,483
Roanoke	K8GP/R (K1RA, W8ZN, ops)	305,760
Rocky Mountain	N5ZGT	9
Southeastern	K4SME/R (+ N2CEI)	61,401
West Gulf	KT5TE	13,800
Canada	VE3OIL/R	112,578

Limited Rover

Atlantic	K2QO/R (+ W2TAU)	54,934
Central	K9ILT/R	7,056
Delta	WA5KBH/R	1,292
Great Lakes	K8DOG/R	5,562
Hudson	K2EZ/R	24,984
Midwest	WK7G	7,200
New England	W1RGA/R	7,722
Northwestern	WW7D/R	42,834
Roanoke	KS4S/R	14,280
Rocky Mountain	KK6MC/R (+ N5SJ)	20,274
Southeastern	NL7CO/R	110
Southwestern	N6GP/R	8,802
West Gulf	KD5EUO/R	58,968
Canada	VE3SMA/R (+ VE3RZ)	63,376

Unlimited Rover

Atlantic	W3HMS	5,580
Central	W9YOY/R	10,896
Midwest	WØZF/R (+ KØBBC, AEØEE)	20,962
New England	KJ1K/R (+ WB2VVQ)	8,568
Northwestern	WE7X/R	16,590
Pacific	K6EU/R	17,040
	K6VHF/R (+ W6BVB,	
Southwestern	WY6DX)	14,112
West Gulf	KD5IKG	7,938

Single Operator, High Power

Atlantic	K1RZ	219,387
Central	WØUC	364,500
Dakota	WDØT	171,216
Delta	W5ZN	277,173
Great Lakes	WA8RJF	62,271
Hudson	N2GHR	56,440
Midwest	KMØT	135,240
New England	K1TR	217,012
Northwestern	K7CW	75,604
Pacific	WA6OSX	10,850
Roanoke	K4RW	74,816
Rocky Mountain	W9RM	244,713
Southeastern	N4WW	218,550

Southwestern	N7CW	43,155
West Gulf	W5PR	233,584
Canada	VE9AA	126,608
DX	EA8DBM	40,916

Single Operator, Low Power

Atlantic	N3RN	56,030
Central	K2DRH	463,939
Dakota	WBØHHM	46,843
Delta	N4QWZ	65,676
Great Lakes	WZ8T	21,483
Hudson	WB2JAY	70,840
Midwest	NØLL	125,883
New England	AF1T	266,160
Northwestern	KEØCO	10,192
Pacific	K2GMV	22,080
Roanoke	KJ4ZYB	12,810
Rocky Mountain	A15I	40,166
Southeastern	N4OX	98,840
Southwestern	WA7JTM	83,248
West Gulf	K15YG	59,400
Canada	VE1WOW	93,285
DX	XE2X	8,777

Single Operator Portable

Atlantic	K6PFA	640
Hudson	WB2AMU	4,472
Midwest	NØJK	3,795
New England	N1PRW	693
Northwestern	W4DVE	2,200
Pacific	W6KKO	3,003
Roanoke	N4ZAK	378
Rocky Mountain	KØNR	455
Southeastern	NV4B	13,288
Southwestern	AI6EA	4,559
West Gulf	N1HOB	6
Canada	VE3LVW/P	270

Single Operator, 3 Band

Atlantic	K3UHU	17,100
Central	KB9IIZ	9,360
Dakota	KBØHNN	8,701
Delta	N4OGW	66,495
Great Lakes	AE8M	26,226
Hudson	W2JTM	7,245
Midwest	WDØBGZ	49,539
New England	K1VUT	10,710
Northwestern	K7BG	34,809
Pacific	K7XC	6,435
Roanoke	KK4MA	34,272
Rocky Mountain	K4UB	6,517
Southeastern	K1TO	132,132
Southwestern	KE7GRO	28,842
West Gulf	AD5A	66,150
Canada	VA2NQ	19,320

Single Operator, FM Only

Atlantic	K3BLF	1
Dakota	ADØMJ	16
Northwestern	KE7KQA	1
Pacific	KI6JJW	1,215
Roanoke	K2JB	186
Rocky Mountain	KG5FHU	6
Southeastern	KK4OSG	6,976
Southwestern	NA6AA	129

Limited Multioperator

Atlantic	W3SO	255,524
Central	NV9L	130,788
Dakota	NØEO	80,214
Delta	WN2E	41,080
Great Lakes	N8ZM	184,386
Hudson	N2NT	277,907
New England	W1QK	80,480
Northwestern	K7TM	29,440
Roanoke	AA4ZZ	344,226
Rocky Mountain	WØFRC	4,004
Southeastern	W4NH	134,784
Southwestern	KW7MM	138,627
West Gulf	K5QE	629,241
Canada	VA3RKM	48

Unlimited Multioperator

Atlantic	W3CCX	560,170
Central	W9XA	301,576
Delta	N4JQQ	20,079
Midwest	WQØP	195,999
New England	W2SZ	830,720
Northwestern	K7VHF	53,820
Pacific	K6HS	34,498
Roanoke	K4HZ	14,872
Rocky Mountain	NØSZ	150,570
Southeastern	W4UAL	52,705
Southwestern	N6KN	31,248
West Gulf	K5TR	311,922
Canada	VE3WCC	141,372
DX	T43S	2,146