

# ARRL June VHF Contest 2015 Results

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#### Propagation Took a Summer Vacation

The 6 meter sporadic E ( $E_s$ ) season this year has been disappointing at best and the contest weekend was no exception. K4WI's soapbox comment really nailed it; "I have read about virtual particles that pop out of nowhere and then disappear. This was the story of 6 meters for the week end ...". While some areas of the country got a few hours' worth of, at best, mediocre E<sub>s</sub>, the rest of the country was literally left out in the rain. Thunderstorms hundreds of miles long trudged through all weekend, killing any hope of enhanced conditions on any other bands. It rained almost constantly in the Midwest. This made for really slow going for most of us and made the past two years of poor June propagation seem wonderful by comparison. Of course 6 meters opened up with widespread European and domestic  $E_s$  the day AFTER the contest!



This doesn't look like the "lower" four bands, but George, K5TR, can be seen hard at work getting his VHF/UHF array ready for the contest. From bottom to top (not including George) are seven elements on 50 MHz, 17 elements on 144 MHz, 16 elements on 222 MHz, and a pair of 28-element beams on 432 MHz. [George, K5TR, photo]

Even the Texans were feeling the pain on 6 meters this time out despite having some of the best Es conditions of the contest again. Conditions on the other bands were average at best, and poor most of the time. Top Ten scores were mostly comparable to 2013 lows and considerably down from last year. The bright spot for most folks seemed to be the new rules changes being tested for the first time that allows QSO scheduling to be set up in real time and keep it interesting during the many slow hours.

### Logs-Up or Down?

1061 logs were submitted and while the continued upward trend is encouraging (1043 in 2014 and 1010 in 2013) we still have a long way to go to better the total of 1222 in 2012. Overall QSO and grid totals were way down from 2012, too. The good news is that SO3B (Single-Op, 3 Bands) has increased in popularity by 10% and the rebound in the number of Rovers (R) has held steady at 38 but is still down from 49 in 2011. Hopefully, this indicates the multiband classic Rover is still alive and will be increasing scores with many band mults for years to come. However the number of Limited Rovers (LR) on the bottom 4 bands (50, 144, 222, and 432 MHz) took a worrisome drop with only 31 compared to 42 last year, 43 in 2013 and 42 in 2012. The numbers of Unlimited (RU) rovers remains statistically static at less than a dozen.

Reflecting the generally poor conditions, once again few existing division or overall scoring records were broken. Of course record scores for the newer SO3B, SOFM (Single-Op, FM-Only) categories and the new Canadian RAC 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 the any new records set in 2015.

# What about the DX?

DX logs are up this year with the help of three DXpeditions and a few South American logs. The 3830 soapbox comments (www.3830scores.com) also reported a handful of European contacts to the East Coast on Sunday. Canadian participation stayed steady at 47 but is still way down from the 70 logs submitted in 2012. The XE contingent continues with five logs and Jorge, XE2X leading the way for his countrymen XE3N, XE2CQ, XE2OK and XE2O. The Limited Multiop (LM) at C6ATA broke the existing C6 record with a whopping 931 OSOs on 6 meters and 15 on 2 meters, mostly on EME. Pedro, NP4A also put a new multiplier in a lot of logs with a huge 689-QSO 6 meter effort for a Top Ten finish shattering the old SOHP (Single-Op, High Power) WP4G 1986 record from Puerto Rico. Kyle,

VP9/WA4PGM also made a lot of people happy with 432 QSOs on 6 meters with 100 W and a 5-element Yagi at 20 feet. Three stations submitted logs from Cuba; Raul, CO8ZZ; Ed, CO8LY; and Juan, CO2WZ; all on 6 meters. Logs from Alaska doubled to four; Kevin, KL7KY; Ed, KL7UW; Dale, KL7XJ; and Ron, KL7YK. AH6RH/R and K6GSS/KH6 (SO3B) both submitted logs from Hawaii. VP2MTT, PV8AZ, FS/K9EL, and YL2GD rounded out the rest.

# So what about the Conditions?

As noted before, 6 meters was not especially kind to most of the county. The West Coast did report a few short openings on both days that didn't last long. And while the East Coast got some propagation to the Caribbean and EU it only opened well domestically for them for about two hours late Sunday. There was a late flurry on Sunday in Missouri to the FN grids that caused Jon, KCØDEB to comment, "That is what I call a run for the finish line ..." but it never migrated much further north. Some Texans and few stations in AZ and NM got the best shake out of a bad deal with multiple small openings in different areas as well as double hop to the FN grids on Sunday, but not everyone was in the spotlight. We heard some of them here in the Midwest for brief periods both days, but it was very weak and short lived. All of the 6 meter  $E_s$  this author got was what has been termed "popcorn prop"; short bursts that would pop in and pop right out again, however ionoscatter was about normal on Sunday morning and a lot easier to line up on with web spots and chats."

Unlike last year when there were 16 stations over 500 QSOs on 6 meters, only 9 broke that barrier and most of them multiops or DX. No stations made it over 1000 Qs, although C6ATA came the closest with 931. Pedro, NP4A was next in line for DX with 689. Two multiops in the east were able to leverage a combination of tropo, meteorscatter, ionoscatter, and the sparse 6 meter openings with W2SZ (M) making 748 contacts in 102 grids and W3CCX (M) clearing 595 contacts and 93 grids, but their grid totals indicate the limited areas of the openings. Chuck, W5PR and George, K5TR and Ken, WM5R at K5TR (M) were able to take the best advantage of the STX prop to rack up 571 QSOs in 235 grids and 605 QSOs in 222 grids, respectively, but neither had the pileup depth they normally enjoy. Mark, K5AM parlayed his location in NM to rack up 624 QSOs and 191 grids, and W7FSL (M) in AZ had 570 QSOs in 188 grids. Jay, W9RM in CO had a respectable 521 QSO/180 grid score from CO despite having very limited short-duration openings. K5QE (LM) reported 6 meters was very poor at their STX QTH this year, but 427 QSOs/173 grids is still much better than most of us got.

Troposcatter enhancements of the other bands were slim to none this year. The number of stations working more than 100 QSOs on 2 meters dropped back down to 28 this year from 35 but is consistent with 27 in 2013 and 29 in 2012. Even with essentially flat propagation, SOHP (B) Stan, KA1ZE with his new 4x12 2 meter array was able to go to right to the top of the pack with an outstanding 368 QSO/78 grid 2 meter-only effort. 13 of the top 2 meter scores were multiops with W2SZ on top from 357 QSOs/56 grids. The top 2 meter grid total goes to K5QE (LM) with 129, followed by Joel, W5ZN (SOHP) with 93. Both are heavily invested in EME to acquire those high grid totals and found the new rules useful in attracting attention to their potent signals. K5QE's grid total tops the old all-time high of 121 set by W8VP (M) from Ohio in June of 1985.

Four stations in the June VHF contest had 100 or more QSOs on 222, all of them multiops, with W2SZ (M) topping the list at 129. Six stations had 432 QSO totals over 100, five multiops once again with W2SZ on top at 186. Jeff K1TEO (SOHP) is also on this list at 121. No real enhancement was reported by anyone on 432 and up.



Now THAT is a sturdy mount for a rover antenna! Dave, NN1N decided to create a serious mount for his trip to super-rare FN67 in Maine, along with FN78 and FN79 in Quebec. That roof tower tips over but holds up a 5-element 50 MHz beam plus beams for 144 and 432 MHz. (Photo by NN1N)

# **First Time Test for the Updated Rules**

Back in the bad old days of the 80s and 90s I remember setting up VHF QSOs during a contest from EM64 (AL) using a VHF distribution list attached to the SE packet cluster network. It was acceptable to do that then but, contest rule changes based on HF standards shut down any form of QSO setup for VHF by applying the same principles to all contests, HF and VHF+. When I was at the Dayton Hamvention this year I asked every VHF+ contester I knew what they thought of the new rules and everyone had a different take on how they could make them work for them. Almost everyone expressed approval of the hard work done by the VHF/UHF Ad Hoc Committee in convincing the Programs and Services Committee that VHF is indeed different. It's much more difficult to determine where the band may be enhanced (often for very short times) or who may be actually listening. Propagation on VHF is not at all the same as HF and just because your neighbor 30 miles away hears DX that doesn't mean you will ... in fact you probably won't!

EMEers can now announce their CQ frequency and get more folks to listen for them. Rovers can now announce over the Web when they arrive in a new grid, where they are listening, and where they are actually pointing. Folks can line right up with each other to attempt longer distance QSOs: Random antenna aiming would not allow them to even hear distant stations unless they coincidentally just happened to be pointing back at exactly the same time. You can track rovers with a cell phone call or text and ask them to point your way (similar to what the portable microwave folks have been doing for years). The possibilities are endless and only limited by our imaginations.

First impressions from my QTH show that the ON4KST Chats and Ping Jockey pages were particularly useful, as WØUC's web-based Google were **Documents** spreadsheets of upper-Midwest stations on the air for any given contest. The data include rover plans that include detailed itineraries and cell numbers to contact them. APRS rover tracking proved to be more confusing than helpful to me, but the real-time APRS VHF propagation map at aprs.mountainlake.k12.mn.us was a useful tool. Traditional DX clusters didn't seem to be as useful except maybe on 6 meters, but were often more frustrating and maybe a little disheartening by showing E<sub>s</sub> propagation that I didn't have! Looking at all the stuff already available was actually a lot of work! Again, these are just my first impressions ... your mileage may vary!

#### Single-Operators

The backbone of VHF contesting is the Single-Operators who build stations that range from a single band with a modest antenna to a multi-band station with stacked arrays. Modest stations even with only one or two bands allow everyone to enjoy the contest with a lot more stations to work. Here in the Midwest the VHF/UHF bands are relatively quiet unless there is a contest or a net. Day to day activity on the bands seems to be dwindling with the exception of KA1ZE/3 and his 205 Morning Report gathering coordinated on Facebook. Many stations are active every day (and more on the weekends) on the ON4KST low band, VHF, UHF and microwave chats in the Region 2 144 and 432 chat rooms. There they make real-time skeds and report on what they have worked that day and Stan compiles it all into a daily report on the group's *Facebook* page. Lots of folks were already comfortable using this tool. Great job promoting activity, Stan!

Top Ten – Single-Op, Low Power							
Call	Score	QSOs	Mults	Bands			
K2DRH	225,984	597	264	ABCD9EFG			
WB1GQR (W1SJ, op)	155,844	736	162	ABCD9EFG			
AF1T	140,454	682	153	ABCD9EFGHIJ			
N4QWZ	90,882	345	198	ABCD9E			
K1KG	87,870	396	145	ABCD9EFGHI			
KX4R	56,115	295	145	ABCD9E			
WB2JAY	50,600	304	110	ABCD9EFG			
NØLL	45,760	334	130	ABCD			
VP9/WA4PGM	44,928	432	104	А			
WJØF	43,820	304	140	ABD			

Band designators are A=50 MHz; B=144; C=222; D=432; 9=902 MHz; E=1.2GHz; F=2.3; G=3.4; H=5.7; I=10; J=24; K=47; L=75; M=119; N=142; O=241 GHz; P=Light

Modest stations with 100-200 W "bricks" (amplifiers) have always comprised the bulk of contest activity since well before the Low Power category was established so it's no surprise that once again the Single-Op, Low Power (SOLP) category proved to be most popular. The SOLP category has been big hit since it was introduced back in 2000.



Aimed at the US West Coast, this 50-element, rope-mounted Yagi didn't have a lot of success this year but you can't fault KL7NN for trying! The antenna can be flipped from vertical to horizontal to take advantage of whatever polarization is best. (Photo by KL7NN)

There are more ways than one to field a good SOLP station, and several folks over the years have taken it portable to a hill or mountaintop and done very well. For most VHF+ hams it's the best way for them to be competitive and maybe earn a place in the Top Ten. The overall Single-Op, Low Power W3ZZ First Log Award - Memorial has been sponsored by Tim, K3LR and Dave, W9PA again for the fourth year and goes to Mike

Crownover, Sr., AD5A, of Boerne, TX — welcome to the ranks of VHF+ contesting!

Despite the challenging conditions and a lower overall QSO total than the both the second and third-place stations, Bob, K2DRH in EN41 (IL) took first place again in the Single-Operator, Low Power category with a score of 226K using 8 bands through 3456 MHz. Thanks to a OTH in the middle of the country and a high-gain antenna system constantly in need of maintenance his overall multiplier total was over 100 more than his top two competitors. WB1GQR manned by Mitch, W1SJ atop Mt. Equinox in MA took second again with 156K — one of the few who made a better score than last year by using 8 bands through 3456 MHz. Dale, AF1T with 11 bands took 3rd place with 140K. In a relatively close race with Warner, K1KG in 5th with 88K, Todd, N4QWZ moved up a place to fourth with 91K, mostly on the strength of being able to work 198 grids.

#### Top Ten, Single-Op High Power

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Call	Score	QSOs	Mults	Bands
K1TEO	414,400	973	280	ABCD9EFGHI
K1RZ	254,016	643	216	ABCD9EFGHI
W9RM	148,685	613	227	ABCD
K5AM	148,645	663	217	ABCD
W5PR	134,185	571	235	А
WØUC	128,234	476	194	ABCD9EFGHI
W5ZN	114,918	448	214	ABCD
KU8Y	101,493	414	179	ABCD9E
NP4A	93,704	689	136	А
К9СТ	76,736	358	176	ABCD9E

The Single-Op, High Power category is where the big guns of the VHF+ contesting world come out to play. It takes a large commitment of time and resources to build and maintain a multiband high power station and compete effectively in this category. For the western half of the country the relative scarcity of VHF+ stations to work on 2 meters and above makes it more difficult to be in contention for the top spots when 6 meters is not cooperative.

Jeff, K1TEO's 10-band station in FN31 (CT) has kept him on the top of the leader boards for over 20 years. He took top honors again with 415K, despite few  $E_s$ opportunities, flat tropo conditions, equipment problems, and persistent electrical noise to the west that has been plaguing him recently. Jeff says he will not be able to participate in 2016 due to his son's college graduation so it practically guarantees much better conditions next year (at least for the NE). Dave, K1RZ got 10 bands going in MDC and moved up from 3rd to 2nd place this year in flat conditions with little help from 6 meters. Both W9RM in CO and K5AM in NM had 4 bands and some of the better 6 meter totals for this contest, but in another rare reversal of fortune, Jay squeaked out Mark by 40 points to take 3rd place after log checking. Logging accuracy made all the difference in this race with W9RM receiving a lower reduction in claimed score than K5AM. And despite making only about half as many 6 meter QSOs as he did last year Chuck, W5PR still made it into the Top Five with his 6 meters-only station.

Top Ten, Single-Op Portable							
Call	Score	QSOs	Mults	Bands			
KB5WIA	13,932	250	43	ABCD			
KG6IYN	7,137	117	61	А			
N4OGW	7,056	96	63	ABCD			
W1QK	4,816	172	28	А			
KJ5RM	4,307	72	59	ABD			
N8XA	3,337	66	47	ABCD			
NV4B/5	3,330	61	45	ABCD			
WB2AMU	2,508	63	33	ABCD			
K1ZK	2,356	66	31	ABD			
W6KKO	1,775	57	25	ABCD			

The Single-Operator Portable category stations running 10 W are anywhere from 10-20 dB harder to hear on the bottom four band than the other single-operators. They often face harsh environments and weather when they assemble a station on a hill or mountain top. Dave, KB5WIA in the East Bay section (CA) moved up again this time from 3rd to 1st place with 13K. Dave operated at 4000 feet from the summit of Mount Diablo in the SF Bay Area where line of sight for VHF+ signals can be hundreds of miles.

Another Californian from the San Diego section, KG6IYN, took 6 meters to his favorite hilltop and made enough QSOs on  $E_s$  to capture second place with 7K, barely edging out last year's 2nd place winner, Tor, N4OGW in Mississippi by 81 points. Ironically, Tor could not stay in his chosen location on Little Mountain after dark and had to pack up just as he finally got some 6 meter  $E_s$  to the west. Dan, W1QK went to a hilltop in CT with only 6 meters, yet managed to work enough stations to put him in 4th place with 4.8K. Jory, KJ5RM in TX took 5th place with 4.3K.

This is the third year for the two new Single-Operator categories. Single-Op, 3 Band (3B) is growing steadily with 132 entries this year, a roughly 10% increase. Single-Op, FM Only (FM) remained static with 17 log submissions. As expected, 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 propagation favored TX and AZ for the top spots in the SO3B category. Mike, AB5EB used his South Texas (STX) 6 meter sweet spot again to keep himself in first place with 61K, but only got half as much action as he did when he set the high-water mark for this

category last year. Mike keeps constantly improving his station to stay on top. N7IR from AZ worked his way up from number 6 to number 2 this year by using CW for the last 3 hours on 6 meter  $E_s$ . Generally, in an  $E_s$ opening if you're running on CW, you're going too slow, but Gary made it work for him. Sam, W8SPM has been to Spruce Knob in WV 46 times but this one was the charm as he took 3rd place despite a near miss with lightning that almost knocked him off his feet. Bob, KØNR parlayed his 6 meter totals into a fourth place spot and Jim, KO9A racked up some pretty good numbers from the black hole of IL to join the Top Five.

Тор Те	n, Single-	Op 3 Bar	nds	
Call	Score	QSOs	Mults	Bands
AB5EB	63,896	381	163	ABD
N7IR	31,920	271	112	ABD
W8SPM	30,550	276	94	ABD
KØNR	23,900	228	100	ABD
КО9А	23,392	240	86	ABD
N7EME	16,878	167	97	ABD
KC7QY	12,510	136	90	ABD
N1ZN	11,529	173	63	ABD
AA5AM	11,180	126	86	ABD
WDØBGZ	11,147	157	71	AB
Тор	Ten, Sing	le-Op FIV	1	
KK4OSG	3,725	114	25	ABCD
W2EV	3,612	93	28	ABCD
KI6JJW	1,425	47	19	ABCD
K2SI	1,065	57	15	ABD
KA6AMB	640	38	10	BCD
W3SKX	630	27	14	BCD
N9VM (N1VM, op)	451	27	11	BCD
KE6PLA	261	19	9	BCD
WB5HVH	252	21	12	AB
NA6AA	246	32	6	ABD

Here in the Midwest VHF+ FM activity is very sparse. Entries in the SOFM category tend to cluster in the population centers near the coasts and the top three entries have QSOs on all of the bottom four bands. Scores are definitely going up with the top score logged by the GA station of Ryan, KK4QSG who shattered the old category record with 3.7K. Ev, W2EV in NY doubled his last year's high score but still slid into 2nd place only about 100 points behind. Ev has always been an innovator and proponent of rover tracking and his many QSOs with the Rochester (NY) VHF Group (RVHFG) members and rovers are helping revitalize VHF+ contesting in that area. Steve, KI6JJW from the San Francisco Bay area also improved his score significantly, but dropped one for a 3rd place finish. Duane, K2SI from WNY and Mark, KA6AMB complete the Top Five.

#### **Multioperators**

Unlimited Multiops (M) score QSOs from 6 meters to daylight. These stations are on the air all the time and

they set the limits of what's possible for VHF+ contesting. The Limited Multiops (L) range from a few operators manning a home station to huge efforts with many ops and multiple antenna systems. They both provide a place where folks without a big station can have the fun of operating while enjoying time with other hams who also enjoy VHF+ contesting. They also provide a place for future operators to learn such as the WA2CP Camp Pouch Boy Scouts will attest – read the short story below! We need more of them on both coasts as well as here in the black hole of the Midwest where all the old guard, huge effort multiop stations have shut down.



Erecting the microwave station at W3CCX (W3CCX website photo)



A historical aerial view of W3CCX from 1999. All this work, and yet they keep on doing it! (Photo by KB3XG)

Top Five, Limited Multiop								
Call	Score	QSOs	Mults	Bands				
K5QE	273,000	707	350	ABCD				
K8GP	267,852	994	221	ABCD				
K2LIM	231,420	889	210	ABCD				
AA4ZZ	216,999	775	243	ABCD				
W3SO	202,335	768	205	ABCD				

The Top Five Limited Multiop scores were grouped pretty tightly together. The K5QE powerhouse from the STX flatlands won the category again this year, but with only about half the QSOs of last year. Since 6 meters was not as kind to them as it was to the other TX stations they took to the Moon again on 2 meters and racked up an impressive overall grid total of 350 to come up with a winning score of 273K on the bottom 4 bands. They had a lower QSO total than any of the other Top Five contenders. Close on their heels was the intrepid Grid Pirate crew at K8GP in VA who scored 268K, also with little in the way of 6 meter E<sub>s</sub> but with strong numbers on 2 meters and 432. K2LIM in WNY moved back up to 3rd place this year with 231K. AA4ZZ in EM96 (NC) broke into the Top Five this year at 4th place and 217K. W3SO (WPA) couldn't pull their big 2 meter numbers this year and without much 6 meter E<sub>s</sub> they dropped to 5th place with 202K.

Top Five, Unlimited Multiop								
Call	Score	QSOs	Mults	Bands				
W2SZ	883 <i>,</i> 575	1,714	315	ABCD9EFGHIJP				
W3CCX	526 <i>,</i> 864	1,230	272	ABCD9EFGHIJP				
K5TR	268,500	787	300	ABCD9EI				
W6TE	160,556	573	164	ABCD9EFGHI				
W2LV	140,304	740	158	ABCDE				

W2SZ, The Mt Greylock Expeditionary Force, posted their 25th June VHF win in the Unlimited Multioperator (M) category with 884K. Without much enhancement they were still able to outdistance their nearest competitor, W3CCX, by almost 500 QSOs. These two stations were the only ones to post OSO totals over the 1000 mark this year. The Mt Airy VHF Radio Club (aka Pack Rats) steered W3CCX to a strong 2nd place finish with 527K. They have been fielding a great station from Camelback Mountain in PA since 1999 and are always a force to be reckoned with. K5TR broke into the world of Multiop VHF+ contesting in a big way to take 3rd. George's recently revamped VHF station is now on seven bands. They parlayed good 6 meter numbers and a great multiband grid total of 300 to turn in a respectable 269K from STX where other multiband VHF stations are few and far between. W6TE mounted a rare multiop effort from the West Coast atop Frasier Peak and captured fourth with 161K. W2LV from NNJ took 5th with 140K.

# **Rovers**

Rovers are the glue that hold things together and keep it interesting. Classic Rovers (R) often carry as many bands as the multiops to multiple locations and hand out grid multipliers like Halloween candy. The steady numbers of Classic Rovers are a hopeful sign that the turmoil from the rover rule changes some years ago may be over and more will continue to join their ranks to take the place of those who have left. The new rules changes make it even easier to find them now.



Jim, W9SNR/R roves in the Chicago area and has a great station from 6 meter through 10GHz. (Photo by W9SNR)

Top Ten, Limited Rover							
Call	Score	QSOs	Mults	Grids	Bands		
ACØRA/R	96,180	519	140	10	ABCD		
WW7D/R	38,133	509	57	10	ABCD		
K2QO/R	32,340	266	98	8	ABCD		
K2JB/R	20,010	321	58	6	ABD		
K2EZ/R	19,734	229	66	10	ABCD		
KM3T/R	17,794	238	62	5	ABCD		
KD5EUO/R	14,300	189	65	8	ABD		
N6GP/R	12,749	184	61	6	ABCD		
W3DHJ/R	8,840	136	65	4	AB		
K9JK/R	8,160	203	30	4	ABCD		

For Rover Top Ten tables, "Grids" is the total number of grids activated.

In the Limited Rover (RL) category, Wyatt, ACØRA/R is still going strong with a little help from Brian, KDØLRG and they took the top spot again this year. In fact, ACØRA/R had the best score of all three rover categories combined! While they didn't set any records this year it wasn't for lack of trying. Their aggressive 10grid schedule through the Central Division netted them 96K and put a lot of new mults in a lot of logs. In 2nd place, Darryl, WW7D/R ran 10 grids in the Northwestern division with 38K and posted a great description with pictures of his rove at ww7d.wordpress.com/2015/06/24/ww7dr-roves-the-2015-arrl-june-vhf-contest. Bill-Mark, K2QO/R and his partner Paul, W2TAU took third with 32K from an 8grid, 600-mile rove through the Atlantic Division in WNY and were encouraged by having quite a few new RVHFG rovers to work.

Newcomers to VHF+ roving, Jimmy, K2JB/R and his copilot Howard, W4PH mounted a 6-grid assault on the Roanoke Division that netted them fourth place and 20K. Andrea, K2EZ/R on her second time out (she roved for the first time in January from the Central Division) did a 10-grid rove to garner almost 20K and another place in the Top Five. Andrea has a great description of her January rove and her rover on her QRZ.com web page.

Top Ten, Classic Rover							
Call	Score	QSOs	Mults	Grids	Bands		
VE3OIL/R	95,583	304	151	4	ABCD9EFHIP		
WA3PTV/R	46,036	312	68	5	ABCD9EFGHI		
W9SNR/R	43,415	268	95	9	ABCD9EFGHI		
VE3WJ/R	40,940	157	115	6	ABCD9EFHIP		
NN3Q/R	40,656	240	77	8	ABCD9EFGHI		
KK6MC/R	39,480	249	120	4	ABCDEFJ		
WA3RGQ/R	35,295	257	65	3	ABCD9EFGHI		
K2TER/R	34,848	280	99	7	ABCD9E		
WØZQ/R	34,612	257	68	7	ABCD9EFGHI		
KF8QL/R	34,170	238	85	9	ABCD9EFGHIJK		



Perennial Top Five rover Russ, VE3OIL/R had his day in the sun and won the Classic Rover category this time out with 96K. (Photo by VE3OIL)

First-place Classic Rover, Russ, VE3OIL/R used 10 bands (no Qs on 3456) in a 9-grid rove on the other side of the border to leap to the top with double the score of his nearest competitor. Russ also shared nine laser QSOs with companion rover VE3WJ/R. Joe, WA3PTV/R did a 4-grid romp through the Atlantic Division with 10 bands to capture 2nd place with 46K. Jim, W9SNR/R stayed close to home to do 5 grids on 10 bands in the Chicago area so he could attend to his ailing spouse and did a great job taking 3rd place with 43K. Murray, VE3WJ/R also used 10 bands (no Qs on 3456) in 9 grids to amass 41K. Packrat member Russ, NN3Q fielded another 10-band rove with his companion Al, K3WGR to do a 6-grid trek through the Atlantic Division and take 5th with just over 40K.

There were 11 entries this year in the Unlimited Rover category (RU). While these stations can carry as many bands as they wish and can work as many other rovers as many times as they wish, few entrants now in this category seem to fully embrace the intent of this category that allows multiple operators, pack roving and grid circling to rack up massive scores while still being fair to the classic Rovers. For the past two years scores in this category have not challenged those of the Top Ten classic Rovers.

Top Ten, Unlimited Rover							
Call	Score	QSOs	Mults	Grids	Bands		
K6EU/R	14,136	194	57		ABCD		
W3HMS/R	13,188	146	42		ABCDEFGI		
W7QQ/R	11,712	121	64		ABCDEFJ		
KE6QR/R	10,619	223	37		ABCD9		
KJ1K/R	10,542	116	42		ABCD9EFGHI		
KØBBC/R	9,240	130	60		ABCD		
K7ATN/R	1,872	63	24		ABCD9E		
VE7AFZ/R	1,197	45	19		ABCDE		
AB4CR/R	740	42	10		ABCDEFI		
WØATV/R	636	26	12		ABCDEI		



WW7D/R took to the hills to activate CN98 from this location at 3,000 feet elevation. (Photo by WW7D)

Tom, K6EU/R in the Pacific Division switched places with W3HMS/R in the Atlantic division to take 1st this year on a 4-grid 14K jaunt, again using the bottom 4 bands. John, W3HMS/R managed a 13K 9-band rove also in 4 grids. Bill, W7QQ/R in the Rocky Mountain Division fielded 7 bands in 9 grids for a 3rd place, 12K finish. In a close finish on opposite coasts, KE6QR/R (5 bands 4 grids) and KJ1K/R (10 bands, 5 grids) round out the Top Five.



You see the best stuff while roving, like this sunset from Gator, N5RZ somewhere out in West Texas. (Photo by N5RZ)

# **Sponsored Plaque Winners**

•	<b>.</b>		Ģ
<b>Category</b> Overall Single Operator Low Power	Recipient K2DRH	Sponsor Society of Midwest Contesters	F
Overall Single Operator, 3-Band	AB5EB	Northern Lights Radio Society	N N
Overall Multioperator	W2SZ	AA4ZZ Team & CDXA, Ken Boyd K4DXA Memorial	S B
Overall Limited Multioperator	K5QE	Gene Zimmerman, W3ZZ Memorial - ARRL Contest Branch	H N V
Overall Rover	VE3OIL/R	* 73 Tim KE3HT/SK, Microwave DX Addict *	K
Overall Limited Rover	ACØRA/R	Carolina DX Association, In Memory of W4VHF/R	C V
Atlantic Division Rover	WA3PTV/R	Potomac Valley Radio Club	L
Dakota Division Single Operator Low Power	WBØHHM	Northern Lights Radio Society	L
Hudson Division Single Operator Low Power	WB2JAY	NY2NY - In Memory of W2GFF & W2HBA	R
Northwestern Division Single Operator High Power	K7CW	Boring, OR Amateur Radio Club	C L
Northwestern Division Multioperator	WN7Y	Randy Stegemeyer, W7HR	P
Roanoke Division Rover	AD4IE/R	Potomac Valley Radio Club	C
Southwestern Division Single Operator Low Power	WJØF	Bud Semon, N7CW	R V R
Canada Single Operator Low Power	VA3ZV	Northern Lights Radio Society	lı
Northwestern Single Operator, 3-Band	AL1VE	Pacific Northwest VHF Society	S t
Single-Op, Low Power W3ZZ First Log Award - Memorial	AD5A	Tim Duffy, K3LR, and Dave Zeph, W9PA	

# **Affiliated Club Competition**

Club Name	Logs	Score
Unlimited	8-	
No entry		
,		
Medium		
Potomac Valley Radio Club	34	948,372
North East Weak Signal Group	19	845,139
Mt Airy VHF Radio Club	20	716,753
Society of Midwest Contesters	49	393,333
Central Texas DX and Contest Club	5	390,437
Northern Lights Radio Society	16	330,290
Pacific Northwest VHF Society	31	314,130
Contest Club Ontario	20	311,824
Arizona Outlaws Contest Club	24	268,273
Carolina DX Association Grand Mesa Contesters of Colorado	6 8	235,170 209,662
Southern California Contest Club	22	199,603
Yankee Clipper Contest Club	16	
Frankford Radio Club	8	187,156 162,300
Northern California Contest Club	22	102,300
Badger Contesters	8	140,797
Tennessee Contest Group	8 7	97,697
CTRI Contest Group	, 5	93,722
Rochester VHF Group	12	87,801
Florida Contest Group	18	63,992
Michigan VHF-UHF Society	6	54,882
Alabama Contest Group	9	51,279
DFW Contest Group	8	46,090
Georgia Contest Group	4	44,596
Florida Weak Signal Society	6	39,477
Bergen ARA	4	24,390
North Coast Contesters	3	22,581
Minnesota Wireless Assn	13	17,606
South East Contest Club	4	16,102
Bristol (TN) ARC	3	14,734
Hudson Valley Contesters and DXers	4	11,215
Mad River Radio Club	6	8,918
Western Washington DX Club	4	7,449
Kansas City Contest Club	3	6,800
Contest Group Du Quebec	3	3,303
West Park Radiops	4	2,944
Louisiana Contest Club	3	1,742
Alaska VHF-UP Group	3	1,260
local		
<i>Local</i> Radio Amateurs of Northern Vermont	2	156 105
Clovis Amateur Radio Pioneers	3	156,105 38,102
Granite State ARA	4	36,526
Lodi ARC	4 5	31,190
Portage County Amateur Radio Service	4	24,599
Meriden ARC	3	14,008
Contoocook Valley Radio Club	4	14,008
Rochester ARA	5	5,321
Ventura County Amateur Radio Society	5	4,709
Raritan Bay Radio Amateurs	9	2,556
Inland Empire ARC	3	18
	-	10

Scores for the Rochester VHF Group have been corrected in version 1.1 of these results.

# Contesting at Camp Pouch by Andrew KC2GOW and Gary KB2BSL

The Camp Pouch Amateur Radio Association, brainchild of Andy Genau, KC2GOW and Gary Lindtner, KB2BSL, has become one of the primary activities at the William H. Pouch Boy Scout Camp in Staten Island, NY. Camp Pouch is a 100+ acre facility owned and operated by the Boy Scouts of America. The Amateur Radio program has been built from the ground up by hams for the scouts and promotes the hobby as well as helps to educate the scouts in electronics, RF propagation, Radio merit badge counseling, Amateur Radio licensing, kit building, and on-air activities. We have scouts from all age groups involved in the station and it has drawn a tremendous interest in the past three years of formal operation. The support from the rangers as well as other camp staff has been essential to the success and growth of Amateur Radio in the New York City scouting community.



Pictured left-to-right are Steve, NV2L (Eagle Scout)' Andy, KC2GOW (station manager); and Chris, K2USH (Eagle Scout) with WA2CP's two towers in the background. (Photo by KC2GOW)

The station is regularly on the air on every band between 160 meters and 70 cm, operating on all modes and is well-equipped for simultaneous multiple operator use. Aside from the day to day on-air experience, the radio contesting scene has been a hit with the regular visitors of the station, leading to WA2CP being found in every major contest. Last year a VHF weak signal station was

added to the shack and the mystery of VHF propagation drew plenty of attention from our operators. We are primarily active on the bottom four bands for the VHF+ contests on SSB/CW and have even taken first place for the Hudson Division for the Unlimited Multiop category in January 2015.

The VHF weak signal aspect has been so successful that we hope to be able to add more power and additional bands in the coming years. The June conditions were not as great as we had hoped, but still managed to obtain a respectable score considering our location in the region and the limited output power. The guys were running the VHF+ station all weekend and had a blast working everybody! Plans are to be active once again this coming September as the school and work schedules allow.

# Epilog

To briefly sum up the 2015 June contest in a few words; it was slow. Real slow. We are way overdue for some real barnburners like we all enjoyed ten or so years ago, but only time will tell. Now that the sunspot cycle is plunging rapidly and the weather is changing, we can only hope that things will start looking up for 6 meter  $E_s$  and VHF/UHF/SHF tropo.

The new rules are here to stay, whatever you think about them and there have been many more positive than negative comments in the Soapbox comments and on the reflectors. It's good to know that lots of stations still get on to make QSOs in the June contest despite the run of bad luck we have been experiencing for the past few years. Let's keep going, so be back next year on the 11<sup>th</sup>-13<sup>th</sup> for the 2016 June VHF Contest to find out what happens next.

#### **Division Winners**

Division	Category	Call	Score		RL	KM3T/R	17,794
Atlantic	SO3B	N1IBM	4,794		RU	KJ1K/R	10,542
, telumeto	SOLP	WA3EOQ	31,165	Northwestern	SO3B	AL1VE	8,550
	SOHP	K1RZ	254,016	NorthWestern	SOLP	K7YDL	22,995
	SOFM	W2EV	3,612		SOHP	K7CW	39,298
	LM	K2LIM	231,420		SOFM	WA6NDR	8
	UM	W3CCX	526,864		LM	K7TM	17,927
	SOP	N7UN/3	1,014		UM	WN7Y	17,527
	R	WA3PTV/R	46,036		SOP	AF7GL	189
	RL	K2QO/R	32,340		R	K7BWH/R	23,534
	RU	W3HMS/R	13,188		RL	WW7D/R	38,133
Canada	SO3B	VE1SKY	7,452		RU	K7ATN/R	1,872
canada	SOLP	VA3ZV	21,372	Pacific	SO3B	N6YG	1,891
	SOHP	VE3ZV	53,040	i denie	SOLP	K2GMY	40,255
	LM	VE3EG	180		SOHP	K6KLY	45,854
	UM	VE3WCC	56,610		SOFM	KI6JJW	1,425
	SOP	VE6IXD	80		UM	K6ARP	36,156
	R	VE3OIL/R	95,583		SOP	KB5WIA	13,932
	RU	VE7AFZ/R	1,197		R	N6ORB/R	13,446
Central	SO3B	KO9A	23,392		RL	AF6RR/R	3,007
	SOLP	K2DRH	225,984		RU	K6EU/R	14,136
	SOHP	WØUC	128,234	Roanoke	SO3B	W8SPM	30,550
	LM	W9JN	12,616	nounone	SOLP	K4FJW	14,168
	UM	N2BJ	21,980		SOHP	W3IP	76,140
	SOP	W9SZ	969		LM	K8GP	267,852
	R	W9SNR/R	43,415		SOP	KC8KSK	220
	RL	ACØRA/R	96,180		R	AD4IE/R	1,025
Dakota	SO3B	WØOHU	108		RL	K2JB/R	20,010
Banota	SOLP	WBØHHM	5,588	Rocky Mountain	SO3B	KØNR	23,900
	SOHP	WØGHZ	71,377	noong mountain	SOLP	AI5I	40,964
	LM	NØEO	12,960		SOHP	W9RM	148,685
	R	WØZQ/R	34,612		LM	K5LRW	1,950
	RU	KØBBC/R	9,240		UM	NØSZ	70,525
Delta	SO3B	WA4FHY	99		R	KK6MC/R	39,480
	SOLP	N4QWZ	90,882		RL	W3DHJ/R	8,840
	SOHP	W5ZN	114,918		RU	W7QQ/R	11,712
	LM	K5OLV	4,136	Southeastern	SO3B	N4AU	391
	UM	K5KDX	13,770		SOLP	KX4R	56,115
	SOP	N4OGW	7,056		SOHP	NP4A	93,704
	R	AG4V/R	28,032		SOFM	KK4OSG	3,725
	RL	WA4JA/R	816		LM	W4NH	50,096
Great Lakes	SO3B	WN8R	10,205		UM	W4UAL	6,902
	SOLP	N8BI	23,328		SOP	K3TW	1
	SOHP	KU8Y	101,493		R	N4TZH/R	78
	SOFM	W8DIY	161	Southwestern	SO3B	N7IR	31,920
	LM	N8ZM	91,300		SOLP	WJØF	43,820
	UM	квјн/в	1,632		SOHP	W6FM	31,302
	SOP	N8XA	3,337		SOFM	KE6PLA	261
	R	KF8QL/R	34,170		LM	WA7JTM	65,689
	RL	K8DOG/R	3,510		UM	W6TE	160,556
Hudson	SO3B	N2JJ	5,883		SOP	KG6IYN	7,137
	SOLP	WB2JAY	50,600		R	N6VI/R	11,886
	SOHP	N2SLO	16,767		RL	N6GP/R	12,749
	LM	N2NT	150,917	West Gulf	SO3B	AB5EB	63,896
	UM	W2LV	140,304		SOLP	AD5A	41,629
	SOP	WB2AMU	2,508		SOHP	W5PR	134,185
	R	WB2SIH/R	11,470		SOFM	WB5HVH	252
	RL	K2EZ/R	19,734		LM	K5QE	273,000
Midwest	SO3B	WDØBGZ	11,147		UM	K5TR	268,500
	SOLP	NØLL	45,760		SOP	KJ5RM	4,307
	SOHP	кмфт	20,273		R	N5RZ/R	19,152
	R	W2FU/Ø	506		RL	KD5EUO/R	14,300
	RL	WAØCNS/R	1,254				
New England	SO3B	N1ZN	11,529				
	SOLP	WB1GQR (W1SJ, op)	155,844				
	SOHP	K1TEO	414,400				
	SOFM	KB1YSK	215				
	LM	K1PRO	3,144				
	UM	W2SZ	883,575				
	SOP	W1QK	4,816				

	1				
QSO Band Leaders					
By Category		W3SZ	7	K1TEO	48
, , ,		K1KG	5	K1RZ	45
Single Operator Low	N Bower	AF1T		WØGHZ	21
Single Operator, Low	FOWEI				
			·		
50 MHz		10 GH7		Roone	15
VP9/WA4PGM	432		7	2.2.04-	
AF1T	392				
WB1GQR (W1SJ op)	354				
AI5I				-	
NØLL		K3IUV	1	WØGHZ	
NØLL	295	KA2OON	1	K1GX	8
		KB2EYN	1	K1IIG	
			1		
					-
K2DRH	140	24 GH7		3 4 GH7	
WB2CUT	140		1		17
AF1T	121				
KX4R					
		KB2EYN	1		
222 MHz				WØGHZ	6
	61	Light		W3PAW	6
			7		
K2DRH				5.7 GHz	
AF1T					11
N4QWZ	36	Single Operator, H	ah Dowor		
WA2VNV	33	Single Operator, H	ign Fower		
WB2JAY	KIKG 5 KIKZ 45   gle Operator, Low Power AFIT 1 W2GH2 21   MHz 0 K3UV 1 W2GH2 21   MHz 0 M2 W3GZ 7 2.3 GHz 1   MM 392 W3SZ 7 2.3 GHz 2.3 GHZ 23   I GOR (W1SJ, op) 354 AFIT 4 KIEZ 25   I GOR (W1SJ, op) 303 K3LV 1 W0GHZ 9   201 440 X1200N 1 K1EG 7   MHz KA2CON 1 K1IEG 7   OR X420N 1 K1IEG 7   201 40 24 GHz 34 6   201 40 24 GHz 34 6 7   201 40 24 GHz 34 6 34 6   201 40 24 GHZ 6 7				
		50 MHz			
432 MHz		NP4A	689	W3PAW	3
	07	K5AM	624		
				10 GHz	
				K1RZ	16
AF1T					
N4QWZ		KIIED	494		
WA2VNV	43				
902 MHz		KA1ZE/3	368	KIGX	5
K2DRH	18	K1TEO	273		
K1KG		N3HBX	187		
		K1RZ	181	Single Operator, Po	ortable
AF1T		1102IT	100	50 MH <del>7</del>	
WB1GQR (W1SJ, op)	11	222 MU <del>7</del>			170
			05		
1.2 GHz					
K2DRH	28				
WB2JAY					
		KU8Y	41	KJ5RM	60
AF1T		N3HBX	40		
				144 MHz	
VVAZVINV	10	432 MHz			91
			101		
2.3 GHz					
K1KG					
W3SZ	9				
AF1T	7			W6KKO	23
		WØUC	54		
	5				
				222 MHz	
K2DRH	5 4	902 MHz		<b>222 MHz</b> KB5WIA	24
K2DRH			32	KB5WIA	
K2DRH 3.4 GHz	4	K1RZ	32 30	KB5WIA N6ZE	10
K2DRH 3.4 GHz W3SZ	4 9	K1RZ K1TEO	30	KB5WIA N6ZE N4OGW	10 6
K2DRH 3.4 GHz W3SZ K1KG	4 9 7	K1RZ K1TEO WØGHZ	30 21	KB5WIA N6ZE N4OGW W6KKO	10 6 6
K2DRH 3.4 GHz W3SZ K1KG AF1T	4 9 7 6	K1RZ K1TEO WØGHZ WØUC	30 21 19	KB5WIA N6ZE N4OGW W6KKO NV4B/5	10 6 5
K2DRH 3.4 GHz W3SZ K1KG	4 9 7	K1RZ K1TEO WØGHZ WØUC KØAWU	30 21 19 13	KB5WIA N6ZE N4OGW W6KKO	10 6 6
K2DRH <b>3.4 GHz</b> W3SZ K1KG AF1T K2DRH	4 9 7 6 5	K1RZ K1TEO WØGHZ WØUC KØAWU K1GX	30 21 19 13 13	KB5WIA N6ZE N4OGW W6KKO NV4B/5	10 6 5
K2DRH 3.4 GHz W3SZ K1KG AF1T	4 9 7 6	K1RZ K1TEO WØGHZ WØUC KØAWU K1GX KC6ZWT	30 21 19 13 13 13	KB5WIA N6ZE N4OGW W6KKO NV4B/5	10 6 5
K2DRH <b>3.4 GHz</b> W3SZ K1KG AF1T K2DRH	4 9 7 6 5	K1RZ K1TEO WØGHZ WØUC KØAWU K1GX	30 21 19 13 13	KB5WIA N6ZE N4OGW W6KKO NV4B/5	10 6 5

432 MHz		144 MHz		2.3 GHz	
KB5WIA	50	KK4OSG	59	W2SZ	47
K1ZK	10	W2EV	33	W3CCX	26
N4OGW	10	K2SI	26	VE3WCC	15
N6ZE	10	KB1YSK	26	W6TE	14
NV4B/5	8	KI6JJW	16	W1XM	6
		RIOJJW	10		0
W6KKO	8				
WB2AMU	8	222 MHz		3.4 GHz	
		KI6JJW	15	W2SZ	43
902 MHz		W2EV	13	W3CCX	23
N6ZE	2	W3SKX	12	W6TE	15
W9SZ	2	KA6AMB	10	VE3WCC	6
WOOL	2	KE6PLA	8	K6ARP	3
4.0.00		REOFLA	0	NOAKE	5
1.2 GHz	_				
N7UN/3	5	432 MHz		5.7 GHz	
W9SZ	2	KK4OSG	29	W2SZ	33
		W2EV	23	W3CCX	21
2.3 GHz		KA6AMB	16	VE3WCC	16
W9SZ	2	K2SI	14	W6TE	13
WOOL	2	KI6JJW	13	K6ARP	
		KIOJJVV	13		1
3.4 GHz	_			W6QAR	1
W9SZ	2				
		Multioperator		10 GHz	
5.7GHz		(-L Limited Multi	operator)	W2SZ	36
W9SZ	1	( =		W3CCX	21
WOOL	I	<b>50 14</b> 11		W6TE	18
		50 MHz			
10 GHz		C6ATA -L	931	VE3WCC	6
AA9IL	1	W2SZ	748	NØSZ	4
W9SZ	1	K5TR	605		
		W3CCX	595	24 GHz	
				W2SZ	25
Single Operat	tor, Three Band	W7FSL	570	VE3WCC	1
olligie opera					
		144 MHz		W3CCX	1
50 MHz		K8GP -L	364		
	352			Light	
AB5EB	352 235	W2SZ	357		6
AB5EB N7IR	235	W2SZ K2LIM -L	357 307	W3CCX	6 4
AB5EB N7IR KØNR	235 187	W2SZ K2LIM -L W3SO -L	357 307 274	W3CCX VE3WCC	4
AB5EB N7IR KØNR KO9A	235 187 153	W2SZ K2LIM -L	357 307	W3CCX	
AB5EB N7IR KØNR	235 187	W2SZ K2LIM -L W3SO -L	357 307 274	W3CCX VE3WCC	4
AB5EB N7IR KØNR KO9A	235 187 153	W2SZ K2LIM -L W3SO -L	357 307 274	W3CCX VE3WCC	4
AB5EB N7IR KØNR KO9A	235 187 153	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b>	357 307 274 272	W3CCX VE3WCC	4
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b>	235 187 153 152	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ	357 307 274 272 126	W3CCX VE3WCC W2SZ Rover	4
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM	235 187 153 152 119	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE	357 307 274 272 126 119	W3CCX VE3WCC W2SZ <b>Rover</b> (-L Limited Rover)	4 1
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A	235 187 153 152 119 55	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX	357 307 274 272 126 119 105	W3CCX VE3WCC W2SZ Rover	4 1
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R	235 187 153 152 119 55 36	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L	357 307 274 272 126 119 105 103	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover)	4 1
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM	235 187 153 152 119 55 36 35	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX	357 307 274 272 126 119 105	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) 50 MHz	4 1
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R	235 187 153 152 119 55 36	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L	357 307 274 272 126 119 105 103	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L	4 1
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ	235 187 153 152 119 55 36 35	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L	357 307 274 272 126 119 105 103	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L	4 1 ) 213
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM	235 187 153 152 119 55 36 35	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b>	357 307 274 272 126 119 105 103 85	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) <b>50 MHz</b> WW7D/R -L K2JB/R -L	4 1 ) 213 195
AB5EB N7IR KØNR KO9A N7EME 144 MHz W8SPM KO9A WN8R N1IBM N3MWQ 432 MHz	235 187 153 152 119 55 36 35 33	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ	357 307 274 272 126 119 105 103 85 186	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) <b>50 MHz</b> WW7D/R -L K2JB/R -L ACØRA/R -L	4 1 ) 213 195 182
AB5EB N7IR KØNR KO9A N7EME 144 MHz W8SPM KO9A WN8R N1IBM N3MWQ 432 MHz W8SPM	235 187 153 152 119 55 36 35 33 33	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX	357 307 274 272 126 119 105 103 85 186 146	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) <b>50 MHz</b> WW7D/R -L K2JB/R -L ACØRA/R -L N6GP/R -L	4 1 ) 213 195 182 143
AB5EB N7IR KØNR KO9A N7EME 144 MHz W8SPM KO9A WN8R N1IBM N3MWQ 432 MHz W8SPM KO9A	235 187 153 152 119 55 36 35 33 33 49 32	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L	357 307 274 272 126 119 105 103 85 186 146 146 141	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) <b>50 MHz</b> WW7D/R -L K2JB/R -L ACØRA/R -L	4 1 ) 213 195 182
AB5EB N7IR KØNR KO9A N7EME 144 MHz W8SPM KO9A WN8R N1IBM N3MWQ 432 MHz W8SPM KO9A WN8R	235 187 153 152 119 55 36 35 33 33 49 32 22	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L	357 307 274 272 126 119 105 103 85 186 146 146 141 133	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L ACØRA/R -L N6GP/R -L K7BWH/R	4 1 ) 213 195 182 143
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM	235 187 153 152 119 55 36 35 33 33 49 32 22 16	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L	357 307 274 272 126 119 105 103 85 186 146 146 141	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L ACØRA/R -L N6GP/R -L K7BWH/R 144 MHz	4 1 ) 213 195 182 143
AB5EB N7IR KØNR KO9A N7EME 144 MHz W8SPM KO9A WN8R N1IBM N3MWQ 432 MHz W8SPM KO9A WN8R	235 187 153 152 119 55 36 35 33 33 49 32 22	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L	357 307 274 272 126 119 105 103 85 186 146 146 141 133	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L ACØRA/R -L N6GP/R -L K7BWH/R	4 1 ) 213 195 182 143
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM	235 187 153 152 119 55 36 35 33 33 49 32 22 16	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L W2SZ W3CCX W3SO -L K8GP -L K2LIM -L	357 307 274 272 126 119 105 103 85 186 146 146 141 133	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L ACØRA/R -L N6GP/R -L K7BWH/R 144 MHz ACØRA/R -L	4 1 213 195 182 143 142 169
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM	235 187 153 152 119 55 36 35 33 33 49 32 22 16	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b>	357 307 274 272 126 119 105 103 85 186 146 141 133 110	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L ACØRA/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L	4 1 213 195 182 143 142 169 136
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM N3ALN	235 187 153 152 119 55 36 35 33 33 49 32 22 16 15	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) <b>50 MHz</b> WW7D/R -L K2JB/R -L ACØRA/R -L N6GP/R -L K7BWH/R <b>144 MHz</b> ACØRA/R -L WW7D/R -L KF2MR/R	4 1 213 195 182 143 142 169 136 113
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM	235 187 153 152 119 55 36 35 33 33 49 32 22 16 15	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L ACØRA/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L KF2MR/R K2JB/R -L	4 1 213 195 182 143 142 169 136 113 102
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM N3ALN Single Operat	235 187 153 152 119 55 36 35 33 33 49 32 22 16 15	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX W6TE	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32 13	W3CCX VE3WCC W2SZ (-L Limited Rover) (-U Unlimited Rover) <b>50 MHz</b> WW7D/R -L K2JB/R -L ACØRA/R -L N6GP/R -L K7BWH/R <b>144 MHz</b> ACØRA/R -L WW7D/R -L KF2MR/R	4 1 213 195 182 143 142 169 136 113
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM N3ALN Single Operation 50 MHz	235 187 153 152 119 55 36 35 33 49 32 22 16 15 tor, FM Only	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX W6TE W1XM	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32 13 6	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L KF2MR/R K2JB/R -L K2QO/R -L	4 1 213 195 182 143 142 169 136 113 102
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM N3ALN Single Operat	235 187 153 152 119 55 36 35 33 33 49 32 22 16 15	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX W6TE	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32 13	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L ACØRA/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L KF2MR/R K2JB/R -L	4 1 213 195 182 143 142 169 136 113 102
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM N3ALN Single Operation 50 MHz	235 187 153 152 119 55 36 35 33 49 32 22 16 15 tor, FM Only 24	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX W6TE W1XM	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32 13 6	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L KF2MR/R K2JB/R -L K2QO/R -L	4 1 213 195 182 143 142 169 136 113 102
AB5EB N7IR KØNR KO9A N7EME 144 MHz W8SPM KO9A WN8R N1IBM N3MWQ 432 MHz W8SPM KO9A WN8R N1IBM N3ALN Single Operation 50 MHz W2EV KK4OSG	235 187 153 152 119 55 36 35 33 49 32 22 16 15 tor, FM Only 24 20	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX W6TE W1XM WB6W	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32 13 6	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L K2JB/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L KF2MR/R K2JB/R -L K2QO/R -L Z22 MHz ACØRA/R -L	4 1 213 195 182 143 142 169 136 113 102 92 76
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM N3ALN <b>Single Opera</b> <b>50 MHz</b> W2EV KK4OSG WB5HVH	235 187 153 152 119 55 36 35 33 49 32 22 16 15 tor, FM Only 24 20 20	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX W6TE W1XM WB6W <b>1.2 GHz</b>	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32 13 6 5	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L K2JB/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L KF2MR/R K2JB/R -L K2QO/R -L Z22 MHz ACØRA/R -L WW7D/R -L	4 1 213 195 182 143 142 169 136 113 102 92 76 71
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM N3ALN <b>Single Opera</b> <b>50 MHz</b> W2EV KK4OSG WB5HVH K2SI	235 187 153 152 119 55 36 35 33 49 32 22 16 15 tor, FM Only 24 20 20 17	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX W6TE W1XM WB6W <b>1.2 GHz</b> W2SZ	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32 13 6 5	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L K2JB/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L KF2MR/R K2JB/R -L K2QO/R -L Z22 MHz ACØRA/R -L WW7D/R -L VE3OIL/R	4 1 213 195 182 143 142 169 136 113 102 92 76 71 45
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM N3ALN <b>Single Opera</b> <b>50 MHz</b> W2EV KK4OSG WB5HVH	235 187 153 152 119 55 36 35 33 49 32 22 16 15 tor, FM Only 24 20 20	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX W6TE W1XM WB6W <b>1.2 GHz</b> W2SZ W3CCX	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32 13 6 5 68 49	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L K2JB/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L KF2MR/R K2JB/R -L K2QO/R -L Z22 MHz ACØRA/R -L WW7D/R -L VE3OIL/R WA3PTV/R	4 1 213 195 182 143 142 169 136 113 102 92 76 71 45 45
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM N3ALN <b>Single Opera</b> <b>50 MHz</b> W2EV KK4OSG WB5HVH K2SI	235 187 153 152 119 55 36 35 33 49 32 22 16 15 tor, FM Only 24 20 20 17	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX W6TE W1XM WB6W <b>1.2 GHz</b> W2SZ W3CCX W1XM	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32 13 6 5 68 49 18	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L K2JB/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L KF2MR/R K2JB/R -L K2QO/R -L Z22 MHz ACØRA/R -L WW7D/R -L VE3OIL/R	4 1 213 195 182 143 142 169 136 113 102 92 76 71 45
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM N3ALN <b>Single Opera</b> <b>50 MHz</b> W2EV KK4OSG WB5HVH K2SI	235 187 153 152 119 55 36 35 33 49 32 22 16 15 tor, FM Only 24 20 20 17	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX W6TE W1XM WB6W <b>1.2 GHz</b> W2SZ W3CCX	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32 13 6 5 68 49 18 17	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L K2JB/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L KF2MR/R K2JB/R -L K2QO/R -L Z22 MHz ACØRA/R -L WW7D/R -L VE3OIL/R WA3PTV/R	4 1 213 195 182 143 142 169 136 113 102 92 76 71 45 45
AB5EB N7IR KØNR KO9A N7EME <b>144 MHz</b> W8SPM KO9A WN8R N1IBM N3MWQ <b>432 MHz</b> W8SPM KO9A WN8R N1IBM N3ALN <b>Single Opera</b> <b>50 MHz</b> W2EV KK4OSG WB5HVH K2SI	235 187 153 152 119 55 36 35 33 49 32 22 16 15 tor, FM Only 24 20 20 17	W2SZ K2LIM -L W3SO -L N2NT -L <b>222 MHz</b> W2SZ W6TE W3CCX K2LIM -L K8GP -L <b>432 MHz</b> W2SZ W3CCX W3SO -L K8GP -L K2LIM -L <b>902 MHz</b> W2SZ W3CCX W6TE W1XM WB6W <b>1.2 GHz</b> W2SZ W3CCX W1XM	357 307 274 272 126 119 105 103 85 186 146 141 133 110 44 32 13 6 5 68 49 18	W3CCX VE3WCC W2SZ Rover (-L Limited Rover) (-U Unlimited Rover) 50 MHz WW7D/R -L K2JB/R -L K2JB/R -L K7BWH/R 144 MHz ACØRA/R -L WW7D/R -L KF2MR/R K2JB/R -L K2QO/R -L Z22 MHz ACØRA/R -L WW7D/R -L VE3OIL/R WA3PTV/R	4 1 213 195 182 143 142 169 136 113 102 92 76 71 45 45

432 MHz		Multiplier Band Lea	ders	5.7 GHz	
ACØRA/R -L	92	By Category		W3SZ	6
WW7D/R -L	89			K1KG	4
KF2MR/R	56		. <b>D</b>	AF1T	1
VE3OIL/R	54	Single Operator, Lov	v Power	K3IUV	1
	-			KSIOV	I
KF8QL/R	52	50 MHz			
		AI5I	130	10 GHz	
902 MHz		WJØF	127	W3SZ	6
WØZQ/R	22			K1KG	5
VE30IL/R	21	AD5A	120	AF1T	2
WA3PTV/R	18	NQ7R	114	K3IUV	1
		W3XO/5	114		
K7BWH/R	17			KA2OON	1
NN3Q/R	17	144 MHz		KB2EYN	1
W9SNR/R	17	K2DRH	50	NN4AA	1
			52		
1.2 GHz		N4QWZ	41	24 GHz	
WA3PTV/R	27	KX4R	36	AF1T	1
		WA3EOQ	30		
VE3OIL/R	25	N4TUT	28	KA2OON	1
WØZQ/R	24			KB2EYN	1
W9SNR/R	20	222 MHz			
WA3RGQ/R	20			Light	
		K2DRH	29	KSIUV	1
2.3 GHz		N4QWZ	29	1010 0	I
		KX4R	22		
WA3PTV/R	19	WB1GQR (W1SJ, op)	20		
VE3OIL/R	18			Single Operator	r, High Power
NN3Q/R	14	W9GA	18	• •	
WA3RGQ/R	14	WA3EOQ	18	50 MU-	
	11			50 MHz	
VE3WJ/R	11	432 MHz		W5PR	235
		K2DRH	35	K5AM	191
3.4 GHz		N4QWZ	28	W9RM	180
WA3PTV/R	17			NP4A	136
WA3RGQ/R	14	KX4R	20	NR7T	126
NN3Q/R	11	W9GA	20		
		VE3DS	19	WB2FKO	126
W3HMS/R -U	11				
N6VI/R	7	902 MHz		144 MHz	
		K2DRH	10	W5ZN	93
5.7 GHz			13	KA1ZE/3	78
NN3Q/R	13	WB1GQR (W1SJ, op)	10	K1TEO	47
VE3OIL/R	9	K1KG	8		
		W9GA	8	NTØV	46
VE3WJ/R	9	WA2VNV	8	K1RZ	42
WA3PTV/R	9		•	K8TQK	42
N6VI/R	7	1.2 GHz			
WØZQ/R	7		4.0	222 MHz	
		K2DRH	16		25
10 GHz		WB1GQR (W1SJ, op)	13	K1TEO	35
	10	KX4R	9	K1RZ	29
WA3PTV/R	16	K1KG	8	KU8Y	25
WA3RGQ/R	13	WA2VNV	8	K8TQK	24
W3HMS/R -U	12			W3IP	24
NN3Q/R	11	WB2JAY	8	W5ZN	24
WØZQ/R	11			VVJZIN	24
WØZQ/R	11	2.3 GHz			
		K1KG	6	432 MHz	
24 GHz		W3SZ	6	K1TEO	37
KK6MC/R	2	AF1T		K1RZ	31
K1DS/R	1		5	K8TQK	30
KF8QL/R	1	WB1GQR (W1SJ, op)	5		
		K2DRH	4	KU8Y	28
W7QQ/R -U	1			VE3ZV	27
		3.4 GHz			
47 GHz			7	902 MHz	
KF8QL/R	1	W3SZ	7	K1TEO	18
	÷	K1KG	6		
Light		AF1T	4	K1RZ	16
Light	•	K2DRH	4	K9EA	12
VE3OIL/R	9	WB1GQR (W1SJ, op)	3	KU8Y	11
VE3WJ/R	9	WB2JAY	3	K1GX	10
K1DS/R	2	VV DZJA I	J	WØUC	10

1.2 GHz		432 MHz		144 MHz	
K1TEO	20	KB5WIA	10	KK4OSG	9
K1RZ	18	N4OGW	10	W2EV	8
K8TQK	12	K1ZK	6	KI6JJW	6
KU8Y	12	NV4B/5	6	K2SI	5
K1GX	11	NG1R	4	KA6AMB	4
K9EA	11	W6KKO	4	KE6PLA	4
WØUC	11	WB2AMU	4	N9VM (N1VM, op)	4
W5MRB	11			W8DIY	4
	••	902 MHz		110DTT	•
2.3 GHz		W9SZ	2	222 MHz	
K1RZ	12	N6ZE	1	W3SKX	7
K1TEO	7			W2EV	6
WØGHZ		1.2 GHz			
	7		_	KI6JJW	5
K1GX	6	N7UN/3	5	KA6AMB	3
K1IIG	6	W9SZ	2	KE6PLA	3
W5MRB	6		_	KK4OSG	3
VISIVILLE	0	2.2.011-			
		2.3 GHz		N9VM (N1VM, op)	3
3.4 GHz		W9SZ	2		
K1RZ	11			432 MHz	
K1TEO		3.4 GHz			7
-	9		_	KK4OSG	7
WØGHZ	6	W9SZ	2	W2EV	6
K1IIG	5			K2SI	5
K1GX	4	5.7GHz		KI6JJW	5
KIGA	4				
		W9SZ	1	N9VM (N1VM, op)	4
5.7 GHz				W3SKX	4
K1RZ	8	10 GHz			
			4		
K1TEO	7	AA9IL	1	Multioperator	
WØGHZ	6	W9SZ	1	(-L Limited Multioperation	ator)
K1GX	5			, i	,
W3PAW	2			50 1411	
VV3FAVV	2	Cinale Onerete	. Three Bend	50 MHz	
		Single Operato	r, Three Banu	K5TR	222
10 GHz				W7FSL	188
	8	50 MHz			
K1RZ	8	50 MHz	450	K5QE -L	173
K1RZ WØGHZ	8	AB5EB	156	K5QE -L WA7JTM -L	173 140
K1RZ			156 97	K5QE -L WA7JTM -L	173 140
K1RZ WØGHZ K1TEO	8 7	AB5EB N7IR	97	K5QE -L	173
K1RZ WØGHZ K1TEO K1GX	8 7 5	AB5EB N7IR N7EME	97 88	K5QE -L WA7JTM -L KBØZO	173 140
K1RZ WØGHZ K1TEO K1GX KØAWU	8 7 5 3	AB5EB N7IR N7EME KC7QY	97 88 84	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b>	173 140 135
K1RZ WØGHZ K1TEO K1GX	8 7 5	AB5EB N7IR N7EME	97 88	K5QE -L WA7JTM -L KBØZO	173 140
K1RZ WØGHZ K1TEO K1GX KØAWU	8 7 5 3	AB5EB N7IR N7EME KC7QY	97 88 84	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L	173 140 135 129
K1RZ WØGHZ K1TEO K1GX KØAWU	8 7 5 3	AB5EB N7IR N7EME KC7QY KØNR	97 88 84	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L	173 140 135 129 85
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF	8 7 5 3 3	AB5EB N7IR N7EME KC7QY KØNR <b>144 MHz</b>	97 88 84 81	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L W2SZ	173 140 135 129 85 56
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF	8 7 5 3	AB5EB N7IR N7EME KC7QY KØNR <b>144 MHz</b> W8SPM	97 88 84 81 39	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L W2SZ K2LIM -L	173 140 135 129 85 56 55
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF	8 7 5 3 3	AB5EB N7IR N7EME KC7QY KØNR <b>144 MHz</b> W8SPM K8GU	97 88 84 81	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L W2SZ K2LIM -L	173 140 135 129 85 56
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera	8 7 5 3 3	AB5EB N7IR N7EME KC7QY KØNR <b>144 MHz</b> W8SPM K8GU	97 88 84 81 39 16	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L	173 140 135 129 85 56 55 55
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera	8 7 5 3 3 3	AB5EB N7IR N7EME KC7QY KØNR <b>144 MHz</b> W8SPM K8GU N1IBM	97 88 84 81 39 16 16	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L W2SZ K2LIM -L	173 140 135 129 85 56 55
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN	8 7 5 3 3 ator, Portable 61	AB5EB N7IR N7EME KC7QY KØNR <b>144 MHz</b> W8SPM K8GU N1IBM W2REA	97 88 84 81 39 16 16 16	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L	173 140 135 129 85 56 55 55
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM	8 7 5 3 3 ator, Portable 61 51	AB5EB N7IR N7EME KC7QY KØNR <b>144 MHz</b> W8SPM K8GU N1IBM	97 88 84 81 39 16 16	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L 222 MHz	173 140 135 129 85 56 55 55 55 55
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN	8 7 5 3 3 ator, Portable 61 51 36	AB5EB N7IR N7EME KC7QY KØNR <b>144 MHz</b> W8SPM K8GU N1IBM W2REA WN8R	97 88 84 81 39 16 16 16	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L <b>222 MHz</b> K2LIM -L	173 140 135 129 85 56 55 55
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW	8 7 5 3 3 ator, Portable 61 51 36	AB5EB N7IR N7EME KC7QY KØNR <b>144 MHz</b> W8SPM K8GU N1IBM W2REA WN8R	97 88 84 81 39 16 16 16	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L <b>222 MHz</b> K2LIM -L	173 140 135 129 85 56 55 55 55 55 38
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA	8 7 5 3 3 ator, Portable 61 51 36 33	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz	97 88 84 81 39 16 16 16 16 16	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L <b>222 MHz</b> K2LIM -L W3SO -L	173 140 135 129 85 56 55 55 55 55 38 34
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW	8 7 5 3 3 ator, Portable 61 51 36	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM	97 88 84 81 39 16 16 16 16 16 23	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L Z22 MHz K2LIM -L W3SO -L W3SO -L W3CCX	173 140 135 129 85 56 55 55 55 55 38 34 32
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK	8 7 5 3 3 ator, Portable 61 51 36 33	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R	97 88 84 81 39 16 16 16 16 16 23 13	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L Z22 MHz K2LIM -L W3SO -L W3CCX K8GP -L	173 140 135 129 85 56 55 55 55 55 38 34
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK	8 7 5 3 3 ator, Portable 61 51 36 33	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM	97 88 84 81 39 16 16 16 16 16 23	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L Z22 MHz K2LIM -L W3SO -L W3CCX K8GP -L	173 140 135 129 85 56 55 55 55 55 38 34 32 31
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz	8 7 5 3 3 ator, Portable 61 51 36 33 28	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM	97 88 84 81 39 16 16 16 16 16 23 13 11	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L Z22 MHz K2LIM -L W3SO -L W3SO -L W3CCX	173 140 135 129 85 56 55 55 55 55 38 34 32
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG	8 7 5 3 3 ator, Portable 61 51 36 33 28 18	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU	97 88 84 81 39 16 16 16 16 16 23 13 11 10	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ	173 140 135 129 85 56 55 55 55 55 38 34 32 31
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK	8 7 5 3 3 ator, Portable 61 51 36 33 28 18 15	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM	97 88 84 81 39 16 16 16 16 16 23 13 11	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L 222 MHz K2LIM -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz	173 140 135 129 85 56 55 55 55 55 38 34 32 31 29
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG	8 7 5 3 3 ator, Portable 61 51 36 33 28 18	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU	97 88 84 81 39 16 16 16 16 16 23 13 11 10	K5QE -L WA7JTM -L KBØZO <b>144 MHz</b> K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ	173 140 135 129 85 56 55 55 55 55 38 34 32 31
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK	8 7 5 3 3 ator, Portable 61 51 36 33 28 18 15	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU	97 88 84 81 39 16 16 16 16 16 23 13 11 10	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L 222 MHz K2LIM -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L	173 140 135 129 85 56 55 55 55 55 55 38 34 32 31 29 46
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL	97 88 84 81 39 16 16 16 16 23 13 11 10 9	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L	173 140 135 129 85 56 55 55 55 55 38 34 32 31 29 46 36
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA	8 7 5 3 3 3 ator, Portable 61 51 36 33 28 18 15 15	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU	97 88 84 81 39 16 16 16 16 23 13 11 10 9	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ	173 140 135 129 85 56 55 55 55 55 38 34 32 31 29 46 36 35
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW WB2AMU	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL Single Operato	97 88 84 81 39 16 16 16 16 23 13 11 10 9	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ K2LIM -L	173 140 135 129 85 56 55 55 55 55 55 38 34 32 31 29 46 36 35 34
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL	97 88 84 81 39 16 16 16 16 23 13 11 10 9	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ	173 140 135 129 85 56 55 55 55 55 38 34 32 31 29 46 36 35
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW WB2AMU 222 MHz	8 7 5 3 3 ator, Portable 61 51 36 33 28 18 15 15 15 11 11	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL Single Operato 50 MHz	97 88 84 81 39 16 16 16 16 16 16 23 13 11 10 9	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ K2LIM -L W2SZ K2LIM -L W3CCX	173 140 135 129 85 56 55 55 55 55 55 38 34 32 31 29 46 36 35 34 32
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW WB2AMU 222 MHz KB5WIA	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15 11 11	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL Single Operato 50 MHz WB5HVH	97 88 84 81 39 16 16 16 16 16 16 23 13 11 10 9 9	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ K2LIM -L	173 140 135 129 85 56 55 55 55 55 55 38 34 32 31 29 46 36 35 34
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW WB2AMU 222 MHz KB5WIA N4OGW	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15 11 11 11	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL Single Operato 50 MHz WB5HVH W2EV	97 88 84 81 39 16 16 16 16 16 16 16 16 16 16 7 3 13 11 10 9 9 5 <b>r, FM Only</b>	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ K2LIM -L W2SZ K2LIM -L W3CCX W4IY -L	173 140 135 129 85 56 55 55 55 55 55 38 34 32 31 29 46 36 35 34 32
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW WB2AMU 222 MHz KB5WIA N4OGW NV4B/5	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15 11 11 11	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL Single Operato 50 MHz WB5HVH	97 88 84 81 39 16 16 16 16 16 16 16 17 9 pr, FM Only 11 8 6	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ K2LIM -L W2SZ K2LIM -L W3CCX W4IY -L	173 140 135 129 85 56 55 55 55 55 38 34 32 31 29 46 36 35 34 32 32
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW WB2AMU 222 MHz KB5WIA N4OGW NV4B/5	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15 11 11 11	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL Single Operato 50 MHz WB5HVH W2EV KK4OSG	97 88 84 81 39 16 16 16 16 16 16 16 17 9 pr, FM Only 11 8 6	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ K2LIM -L W2SZ K2LIM -L W3CCX W4IY -L	173 140 135 129 85 56 55 55 55 55 55 38 34 32 31 29 46 36 35 34 32
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW WB2AMU 222 MHz KB5WIA N4OGW NV4B/5 N6ZE	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15 11 11 11	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL Single Operato 50 MHz WB5HVH W2EV KK4OSG K2SI	97 88 84 81 39 16 16 16 16 16 23 13 11 10 9 9 9 9 9 9 9 11 8 6 5	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ K2LIM -L W2SZ K2LIM -L W3CCX W4IY -L 902 MHz W2SZ	173 140 135 129 85 56 55 55 55 55 55 38 34 32 31 29 46 36 35 34 32 32 32
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW WB2AMU 222 MHz KB5WIA N4OGW WB2AMU	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15 11 11 11	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL Single Operato 50 MHz WB5HVH W2EV KK4OSG	97 88 84 81 39 16 16 16 16 16 16 16 17 9 pr, FM Only 11 8 6	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ K2LIM -L W2SZ K2LIM -L W3CCX W4IY -L 902 MHz W2SZ W3CCX	173 140 135 129 85 56 55 55 55 55 55 38 34 32 31 29 46 36 35 34 32 32 17 15
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW WB2AMU 222 MHz KB5WIA N4OGW NV4B/5 N6ZE	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15 11 11 11	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL Single Operato 50 MHz WB5HVH W2EV KK4OSG K2SI	97 88 84 81 39 16 16 16 16 16 23 13 11 10 9 9 9 9 9 9 9 11 8 6 5	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ K2LIM -L W2SZ K2LIM -L W3CCX W4IY -L 902 MHz W2SZ W3CCX W6TE	173 140 135 129 85 56 55 55 55 55 55 55 38 34 32 31 29 46 36 35 34 32 32 17 15 8
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW WB2AMU 222 MHz KB5WIA N4OGW WB2AMU	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15 11 11 11	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL Single Operato 50 MHz WB5HVH W2EV KK4OSG K2SI	97 88 84 81 39 16 16 16 16 16 23 13 11 10 9 9 9 9 9 9 9 11 8 6 5	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ K2LIM -L W2SZ K2LIM -L W3CCX W4IY -L 902 MHz W2SZ W3CCX	173 140 135 129 85 56 55 55 55 55 55 38 34 32 31 29 46 36 35 34 32 32 17 15
K1RZ WØGHZ K1TEO K1GX KØAWU W1FKF Single Opera 50 MHz KG6IYN KJ5RM N4OGW N8XA W1QK 144 MHz KA1SYG K1ZK KB5WIA N4OGW WB2AMU 222 MHz KB5WIA N4OGW WB2AMU	8 7 5 3 3 3 <b>ator, Portable</b> 61 51 36 33 28 18 15 15 15 11 11 11	AB5EB N7IR N7EME KC7QY KØNR 144 MHz W8SPM K8GU N1IBM W2REA WN8R 432 MHz W8SPM WN8R N1IBM WA4LDU W2XL Single Operato 50 MHz WB5HVH W2EV KK4OSG K2SI	97 88 84 81 39 16 16 16 16 16 23 13 11 10 9 9 9 9 9 9 9 11 8 6 5	K5QE -L WA7JTM -L KBØZO 144 MHz K5QE -L AA4ZZ -L W2SZ K2LIM -L K8GP -L W3SO -L W3SO -L W3SO -L W3CCX K8GP -L W2SZ 432 MHz W3SO -L K8GP -L W2SZ K2LIM -L W2SZ K2LIM -L W3CCX W4IY -L 902 MHz W2SZ W3CCX W6TE	173 140 135 129 85 56 55 55 55 55 55 55 38 34 32 31 29 46 36 35 34 32 32 17 15 8

1.2 GHz	24	222 MHz	10	47 GHz	4
W2SZ W3CCX	21	VE3OIL/R ACØRA/R -L	19	KF8QL/R	1
W6TE	16 10	K2QO/R -L	17 16	Light	
K5TR	8	K2QO/R -L K2TER/R	14	VE30IL/R	9
W1XM	8	W9SNR/R	14	VE3WJ/R	9
	0	VVSOINIAIX	14	K1DS/R	1
2.3 GHz		432 MHz			•
W2SZ	16	ACØRA/R -L	19		
W3CCX	12	VE3OIL/R	18		
W6TE	9	KF8QL/R	14		
W1XM	5	W9SNR/R	14		
VE3WCC	2	K2QO/R -L	13		
		KF2MR/R	13		
3.4 GHz					
W2SZ	13	902 MHz			
W3CCX	11	VE3OIL/R	11		
W6TE	10	VE3WJ/R	9		
K6ARP	3	KF2MR/R	6		
VE3WCC	1	W9SNR/R	6		
W6QAR	1	KF8QL/R	5		
		NN3Q/R	5		
5.7 GHz		WA3PTV/R	5		
W3CCX	11	WA3RGQ/R	5		
W2SZ	9				
W6TE	8	1.2 GHz			
K6ARP	1	VE3OIL/R	11		
VE3WCC	1	VE3WJ/R	9		
W6QAR	1	K2TER/R	8		
		KCØP/R	8		
10 GHz	4.4	NØHZO/R	8		
W3CCX	11	2.3 GHz			
W2SZ W6TE	9 8		10		
NØSZ	o 4	VE3OIL/R VE3WJ/R	10 9		
K5TR	2	NN3Q/R	9 4		
K6ARP	2	WA3PTV/R	4		
KBØZO	2	WA3RGQ/R	4		
ND020	2		7		
24 GHz		3.4 GHz			
W2SZ	6	NN3Q/R	4		
VE3WCC	1	WA3PTV/R	4		
W3CCX	1	WA3RGQ/R	4		
		KF8QL/R	3		
Light		W3HMS/R -U	3		
VE3WCC	1				
W2SZ	1	5.7 GHz			
W3CCX	1	VE3OIL/R	9		
		VE3WJ/R	9		
Rover		NN3Q/R	4		
(-L Limited Rover)		KF8QL/R	3		
(-U Unlimited Rover)		WA3RGQ/R	3		
50 MHz		<b>10 GHz</b> VE3OIL/R	0		
KK6MC/R	72	VE30IL/R VE3WJ/R	9		
KD7DCR/R	62	NN3Q/R	9 4		
ACØRA/R -L	56	WA3PTV/R	4		
N5RZ/R	55	WA3RGQ/R	4		
K7BWH/R	54		<b>т</b>		
1 <i>44</i> MU-		24 GHz			
<b>144 MHz</b> ACØRA/R -L	38	KK6MC/R	2		
VE3OIL/R	38 29	K1DS/R	1		
K2QO/R -L	29 26	KF8QL/R	1		
K2QO/R -L K2TER/R	20	W7QQ/R -U	1		
N2SPI/R	24				
	<b>∠</b> ⊤				

Regional Leaders															
	S	SOLP/HP/Q	= Single-Operat	or Low/High F	Power/Port	table;	LM/M = Limit	ed/Unlimited I	Aultioperat	or; R/RL/RU = Cla	ssic/Limited/U	nlimited Rov	er		
Northea	st Region		Sout	heast Regi	on		Cer	ntral Regior		Mid	west Regior	۱ I	West Co	ast Regio	n
New England, Hudsor Maritime and C	n and Atlantic Divi Quebec Sections	sions;		a, Roanoke ar eastern Divisi				and Great La s; Ontario Sec		and West G	west, Rocky M ulf Divisions; M atchewan Sec	lanitoba	Pacific, No Southwestern British Columbia		berta,
Call	Score	Cat	Call	Score	Cat		Call	Score	Cat	Call	Score	Cat	Call	Score	Cat
WB1GQR (W1SJ, op)	155,844	SOLP	N4QWZ	90,882	SOLP		K2DRH	225,984	SOLP	NØLL	45,760	SOLP	WJØF	43,820	SOLF
AF1T	140,454	SOLP	KX4R	56,115	SOLP		W9GA	42,037	SOLP	AD5A	41,629	SOLP	K2GMY	40,255	SOL
K1KG	87,870	SOLP	N4TWX	21,565	SOLP		N8BI	23,328	SOLP	AI5I	40,964	SOLP	NQ7R	31,868	SOL
VB2JAY	50,600	SOLP	N3LL	16,456	SOLP		WZ8T	22,680	SOLP	W3XO/5	31,020	SOLP	W6JK	24,650	SOL
WA2VNV	40,097	SOLP	K4FJW	14,168	SOLP		VA3ZV	21,372	SOLP	квøнн	21,040	SOLP	K7YDL	22,995	SOLI
K1TEO	414,400	SOHP	W5ZN	114,918	SOHP		WØUC	128,234	SOHP	W9RM	148,685	SOHP	K6KLY	45,854	SOH
K1RZ	254,016	SOHP	NP4A	93,704	SOHP		KU8Y	101,493	SOHP	K5AM	148,645	SOHP	K7CW	39,298	SOH
K1TR	75,330	SOHP	W3IP	76,140	SOHP		көст	76,736	SOHP	W5PR	134,185	SOHP	W6FM	31,302	SOH
N3HBX	75,208	SOHP	W5MRB	48,018	SOHP		K8TQK	56,848	SOHP	WØGHZ	71,377	SOHP	WA6OSX	27,508	SOH
W1AN	61,774	SOHP	K4PI	38,416	SOHP		VE3ZV	53,040	SOHP	WB2FKO	43,026	SOHP	KY7M	26,215	SOH
W1QK	4,816	SOP	N4OGW	7,056	SOP		N8XA	3,337	SOP	KJ5RM	4,307	SOP	KB5WIA	13,932	SOP
WB2AMU	2,508	SOP	NV4B/5	3,330	SOP		W9SZ	969	SOP				KG6IYN	7,137	SOP
K1ZK	2,356	SOP	KC8KSK	220	SOP		AA9IL	4	SOP	AB5EB	63,896	SO3B	W6KKO	1,775	SOP
KA1SYG	1,026	SOP	W3ME0	98	SOP		AE8M	2	SOP	KØNR	23,900	SO3B	N6ZE	1,148	SOF
N7UN/3	1,014	SOP	K3TW	1	SOP					KC7QY	12,510	SO3B	KD7WPJ	290	SOP
							KO9A	23,392	SO3B	AA5AM	11,180	SO3B			
N1ZN	11,529	SO3B	W8SPM	30,550	SO3B		WN8R	10,205	SO3B	WDØBGZ	11,147	SO3B	N7IR	31,920	SO3
VE1SKY	7,452	SO3B	WA4LDU	7,236	SO3B		K8AB	1,276	SO3B				N7EME	16,878	SO3
W1DYJ	7,228	SO3B	KM4ID	4,930	SO3B		WB9TFH	1,232	SO3B	WB5HVH	252	SOFM	AL1VE	8,550	SO3
N2JJ	5,883	SO3B	N4AU	391	SO3B		KB8UUZ	1,196	SO3B				N6LB	6,683	SO3
W2XL	5,014	SO3B	W4MDF	315	SO3B					K5QE	273,000	LM	N9NA	5,616	SO3
	2.642						W8DIY	161	SOFM	NØEO	12,960	LM			
W2EV	3,612	SOFM	KK4OSG	3,725	SOFM		KD8VSQ	20	SOFM	WØSHL	9,590	LM	KIGJJW	1,425	SOFN
K2SI	1,065	SOFM	N1LF	4	SOFM		N8ZM	01 200	1.5.4	WØW K5LRW	6,237	LM	KA6AMB W3SKX	640 630	SOFN
KB1YSK	215	SOFM	KOCD	267.052				91,300	LM	KSLKW	1,950	LM		630 451	SOFN
W2GMT W1FP	60 8	SOFM SOFM	K8GP AA4ZZ	267,852 216,999	LM LM		W9JN KC8AAV	12,616 11,218	LM LM	K5TR	268,500	м	N9VM (N1VM, op) KE6PLA	261	SOFN SOFN
VVIFF	0	30FIVI	W4IY	144,358	LM		K9LAS	3,150	LIM	NØSZ	70,525	M	REOFLA	201	SOLI
K2LIM	231,420	LM	K8EP	113,900	LM		N9TF	2,225	LIM	KC5MVZ	8,494	M	WA7JTM	65,689	LM
W3SO	202,335	LM	W4NH	50,096	LM		NJIF	2,223	LIVI	WØLFA	2,408	M	K7TM	17,927	LIVI
N2NT	150,917	LM	VV-41411	50,050	LIVI		VE3WCC	56,610	м	KN5S	550	M	W01S	3,190	LM
WA2CP	22,848	LM	K5KDX	13,770	м		N2BJ	21,980	M	KNJJ	550	141	NIGE	2,448	LM
K2BAR	18,300	LM	W4UAL	6,902	M		N9UHF	17,136	M	KK6MC/R	39,480	R	11102	2,110	2.00
	10,500	<i>i</i>	WN2E	6,240	M		VE3RB	6,028	M	WØZQ/R	34,612	R	W6TE	160,556	М
W2SZ	883,575	м	K4E	2,760	M		K8JH/8	1,632	M	N5RZ/R	19,152	R	W7FSL	135,044	M
W3CCX	526,864	M	AD4ES	2,278	M			1,052		KCØP/R	8,448	R	KBØZO	98,102	M
W2LV	140,304	M		_,			VE3OIL/R	95,583	R	NØHZO/R	8,184	R	K6ARP	36,156	M
W1XM	60,368	M	AG4V/R	28,032	R		W9SNR/R	43,415	R		0,10 1	··	WB6W	13,635	M
KV1J	55,000	м	K4QF/R	1,938	R		VE3WJ/R	40,940	R	KD5EUO/R	14,300	RL	-	-,	
	,		AD4IE/R	1,025	R		KF8QL/R	34,170	R	W3DHJ/R	8,840	RL	K7BWH/R	23,534	R
WA3PTV/R	46,036	R	N4TZH/R	78	R		VE3FHM/R	4,214	R	ABØYM/R	4,719	RL	WA7BBJ/R	15,428	R
NN3Q/R	40,656	R								KD5IKG/R	2,592	RL	N6ORB/R	13,446	R
WA3RGQ/R	35,295	R	K2JB/R	20,010	RL		ACØRA/R	96,180	RL	WAØCNS/R	1,254	RL	N6VI/R	11,886	R
K2TER/R	34,848	R	WA4JA/R	816	RL		K9JK/R	8,160	RL				KD7DCR/R	7,808	R
KF2MR/R	33,456	R					K9PW/R	6,480	RL	W7QQ/R	11,712	RU			
							WB8BZK/R	6,048	RL	KØBBC/R	9,240	RU	WW7D/R	38,133	RL
K2QO/R	32,340	RL					K8DOG/R	3,510	RL	WØATV/R	636	RU	N6GP/R	12,749	RL
K2EZ/R	19,734	RL											W4OEP/R	7,008	RL
KM3T/R	17,794	RL													
KØBAK/R	6,550	RL													
KC2PJH/R	3,090	RL													
W3HMS/R	13,188	RU													
KJ1K/R	10,542	RU													
AB4CR/R	740	RU													
KD2IRH/R	208	RU										1			
	200									L					