

ARRL 10 GHz and Up Contest 2018 Results

By Jeff Wadsworth, KI5WL (jill8302@yahoo.com)

Participation Up for 2018

Activity for the 2018 contest was up significantly from 2017. Sixteen more operators turned in logs this year and are appreciated by the stations that worked the contest.

Participation has been on an upward trend for several years now, as shown in the graph below. Compared to the recent low in 2013, entries in the 2018 contest were up by 43%. Hopefully this trend will continue!

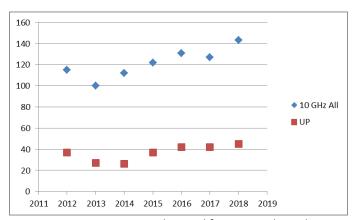
The same general trend was ture for the 'UP part of the contest (which includes the bands above 10 GHz). This year we had 45 entries that included contacts at 24 GHz and higher. In 2017 there were 42 and in 2013 there were only 27, a local low point. We need to keep increasing participation in order to keep these amateur allocations.

Bill, W7QQ, is giving a talk on "Getting on 24 GHz" at the New Mexico TechFest in Feburary, 2019. That's a great way to promote and expand the use of the higher microwave bands!

Overall Activity

Every year is a little different and so was 2018. There was no solar eslipse but there was a large concentration of operations around Lake Superior. The QSO leaders had between 153 and 322 QSOs a peice. Those must have been exciting operations indeed!

On the 10 GHz band, 8 stations worked 47 or more different other stations. That's a lot of action for a lot of microwavers!



Microwave Contest Logs Submitted from 2013 through 2018



Dave, K2DH summed up the experience of many operators well, "BEST 10GHz+ CONTEST EVER." (Photo from Dave Hallidy, K2DH)

Top 10 Lists

All but one of the top three winners in 10 GHz & Up were from the Great Lakes and/or northern Great Plains areas, with AA6IW saving second in the category for California.

You didn't have to be on a Top-Ten list to have impressive results, though. Lots of operators were on the air or assembling new things including meter-sized antennas, airplane scatter, roving with digital modes, transverters coming out on higher bands, and novel ways to home brew mixers for the milimeter wave bands.

Top Ten Score	s - 10 GHz Only
Call	Score
KB8U	70,704
W9FZ	60,079
KA9VVQ	59,534
KCØP	57,401
кØCQ	52,967
NØUK	48,492
К9ЈК	46,740
кØнас	44,199
N6RMJ	38,634
K1RZ	38,117

Top Ten Scores - 10 GHz & Up

Call	Score
K3SIW	70,614
AA6IW	65,795
WB8TGY	65,735
K6ML	65,572
WA2VOI	59,051
W6QIW	58,125
K9PW	57,246
W0ZQ	55,969
WB0LJC	54,009
W7QQ	43,408

Top Ten QSO Leaders - 10 GHz

Call	QSOs
KB8U	308
W9FZ	254
KA9VVQ	253
KCØP	238
кøсо	223
К9ЈК	209
NØUK	197
кøнас	184
N6RMJ	182
N5BF	153

Top Ten QSO Leaders - 10 GHz & Up

Call	QSOs
K3SIW	322
WB8TGY	304
AA6IW	292
WA2VOI	260
K9PW	259
K6ML	256
W6QIW	252
WB0LJC	233
WØZQ	219
W7QQ	181

Canadian and DX Results

Area 15 - Canada, 10 GHz

Call	Score
VE3EG	18,800
VA3TO	18,431
VE3KH	13,850
VE3JGL	4,718

Area 15 - Canada, 10 GHz & Up

Call	Score
VE4MA	40,711
VA3ELE	21,097
VE3SMA	19,856
VE3KRP	14,281

Area 20 - DX, 10 GHz

Call	Score
XE2HWB	127

Only one log was sent in from a DX station this year. We appreciate XE2HWB submitting a log with 127 points.

Best DX by Band

There was operation in all US call areas, Mexico and Canada. While most of the action was on 10 GHz, QSOs were also made on 24, 47, 75 and 300 GHz as well. On the bands above 10 GHz, 491 QSOs were made on 24 GHz and another 52 QSOs on 47 GHz.

Best Terrestrial DX by Band

Call	Band	Dist (km)
AA1I/K1OR/K1RZ/N1DPM/W2RMA	10 GHz	735
K6ML	24 GHz	347
VE3FN	47 GHz	111
VE3KRP/VE4MA	75 GHz	1
AF1T/W1MKY	300 GHz	8

Best DX – 10 GHz

Call	Dist (km)
AA1I	735
K1OR	735
K1RZ	735
N1DPM	735
W2RMA	735
AF1T	663
W1MKY	663
WA3PTV	634
N9ZL	629
AA6IW	616
N6NU	615
N6VI	615

Best DX - 24 GHz

Call	Dist (km)
K6ML	347
N6NU	293
N6TEB	276
AA6IW	268
N9JIM	268
KB6BA	257
W6QIW	257
WØZQ	241
K9PW	240
W7QQ	240
N6JET	221
	'

Best DX - 47 GHz

Call	Dist (km)
VE3FN	111
VE2UG	110
K2DH	105
N1JEZ	100
W1EX	100
WA1MBA	100
AF1T	90
W1MKY	90
W1GHZ	90
WB8TGY	49
K3SIW	48

Best DX - 75 GHz

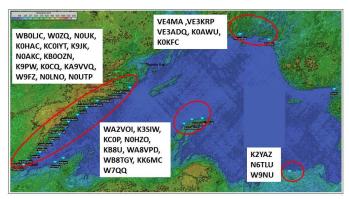
Call	Dist (km)
VE3KRP	1
VE4MA	1

Best DX - 300+ GHz

Call	Dist (km)
AF1T	8
W1MKY	8

A lot of long range DX this year was generated by the multiple groups working on both sides of Lake Superior. This year, advanced planning for operating around Lake Superior played a big role for QSOs around the Great Lakes areas. Multiple groups operated across the lake with success. Pre-planned roving expeditions played a major role in generating large numbers of QSOs.

Weather changes had major effects on propagation, including 24 GHz and higher bands. The large rover caravan on the North West side of the Lake Superior attempted to move in approximately 10 mile jumps to generate maximum QSOs. The efforts were largely successful for both sides of the lake.



Graphic from Barry, VE4MA's presentation on Lake Superior operations to the Microwave Update 2018 conference. (Graphic provided by Barry Malowanchuk, VE4MA.)

Activity Around the Call Areas

California, call area 6, led the number of logs entered this year, followed closely by call areas 1, Ø and 5. Call area 5 included planned operations by the North Texas Microwave Society (NTMS) and the Road Runners Microwave Group, as well as operators in Arkansas, Texas and Louisiana.

As the Mt. Airy V.H.F. Radio Club, the San Bernardino Microwave Association, NTMS, Road Runners, Arizona Microwave Group and many others have shown time and again, planning ahead makes a big difference in participation and success.

Logs Received by Call Area

Call Area	Entries
Ø	18
1	20
2	6
3	6
4	3
5	16
6	25
7	4
8	12
9	9
VE	11
DX	1

Call Area Ø Report

10 GHz Only

W9FZ	60,079
KA9VVQ	59,534
кøсq	52,967
NØUK	48,492
10 GHz & Up	
K9PW	57,246
WØZQ	55,969
WBØLJC	54,009
W7QQ	43,408

Bruce, W9FZ, provided the following (edited) travelogue, pictures, and graphics of his and Janice, KA9VVQ's, roving in the contest.

The August weekend of the 2018 ARRL 10 GHz and Above contest was spent on Minnesota's north shore of Lake Superior, as part of a regional expedition to the lake. For the September portion of the contest, Janice and I... joined in with many others in focusing on the Red River Valley which lies along the border between Minnesota and North Dakota.

The Red River Valley is flat. It is the site of the glacial <u>Lake Agassiz</u>. Farmers have long grown sugar beets and potatoes in the Red River Valley. We much prefer soybeans and sugar beets because they only grow about 18" high and we can see across them with our 10 GHz dish systems.



Saturday dawn started with a bit of sunshine before a cloud deck rolled in for the rest of the day. In the photo above, this is the view towards the operators 304 km away at Monticello, MN (northwest of the Twin Cities). In the photo below, this is the view towards NTØV at Devils Lake, ND--about 195 km away.



Our second stop on Saturday was near Argusville, ND. Overpasses give a little altitude over the terrain, but we noticed more wind and significant highway noise. We had many targets over the weekend:

- Barry VE4MA in Winnipeg, MB EN19lu
- Dennis NTØV in Devils Lake, ND ENØ8oc
- Multi-op at a hill in Monticello, MN EN35cg (WØZQ, NØKP, KCØP, KØMHC, KØKFC, and KCØIYT)
- KØHAC, NØUK, WBØLJC, and KØCQ roving from Elbow Lake, MN to north of Fargo and back
- KØAWU and WA2VOI roving from Grand Forks northward
- VE4SA and VE4DDZ portable in southwest Manitoba ENØ9tf
- Jim KØMHC roving on Sunday on the Buffalo Ridge in SW Minnesota

We activated six spots on Saturday and stayed busy all day. Conditions were pretty good. We rarely had to switch to CW--most signals were easy SSB strength.

Sunday morning dawned sunny and the forecasted high winds had already begun. We went just west of Grand Forks ND to operate on the dike berm that was built after the big flood in 1997. In the photo above, we are aimed straight north to Barry VE4MA. In the photo below, we are blasting right through those trees to Dennis NTØV only 127 km away in Devils Lake, ND. We activated 9 spots and tended to travel about 20 miles between operating locations.



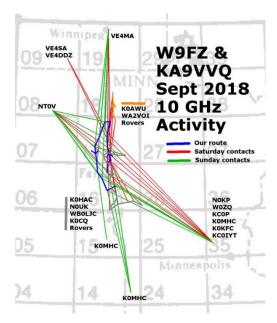
Sunday, the winds were howling all day - steady at 30 mph, with gusts into the 40's. Also, it was hot! The temps were 90 to 94 from noon onward. The wind made the temperature bearable and kept the bugs under control. The high winds meant we had to hunch with our backs to the wind, with the microphone tucked in on the downwind side, to minimize wind noise going out over the microphone.

I captured a graphic from aprs.fi showing our route. We came into Fargo from the lower right on Friday night. Saturday morning we started at EN16lt and worked northward along the right side of the graphic. Sunday we worked southward on the left side of the graphic.



We think conditions were pretty good! Our long distance QSO for the weekend was 367 km from EN17lq to EN35cg. We appreciate all the contacts with the other roversgenerally they were pretty easy because they were fairly short distances.

I whipped up a graphic showing the paths we worked. These were just the ones that Janice and I made. When you consider the other two rover groups working the fixed stations, there was a BUNCH of RF flowing around the region.



We made 138 contacts each. We had two full days of activity. We had a bunch of activity thanks to OTHER operators willing to play "radio". Thank you to all of you!

This was a good year of activity. Next year, new adventures await!



73, Bruce W9FZ and Janice Richardson KA9VVQ (including photo and graphic credits)

Call Area 1

10 GHz Only

40.011.0.11	
KB1VC	18,195
W1AIM	20,705
AA1I	21,401
N1DPM	21,958

10 GHz & Up

AF1T	41,221
W1MKY	38,916
K1OR	23,543
N1JEZ	21,418

In recent years, at their annual picnic each summer, the North East Weak Signal Group holds a microwave test outing before the contest. Measurements include minimum discernable signal and effective radiated power on 10, 24, 47 and 78 GHz.

Call Area 1 had the second highest number of logs turned in this year, with lots of contacts on the higher microwave bands and very competitive scores.

Call Area 2

10 GHz Only

10 0112 01119		
KA2LIM	27,549	
N3RG	12,729	
K2CBA	7,815	
N2MKT	406	
10 GHz & Up		
K2DH	33,328	



Here is Dave, K2DH working a QSO. (Picture posted by K2DH on ARRL Soapbox photo gallery.)

Dave, K2DH, had a pretty good contest too. He came in first place in Call Area 2 for the 10 GHz & Up portion of the contest. He made his case so joyfully on his ARRL soapbox post that I've included portions of it here:

Simple statement: BEST 10GHz+ CONTEST EVER! I started the first weekend at FN02nu on Saturday, which is the Safe Harbor Marina south of Buffalo, NY. This location has a great view of Lake Erie and provided plenty of QSOs with the VE's who park along the Canadian shore of the lake, as well as US hams who park at various locations along the US shoreline. Conditions were good but not great, so I only managed one 24GHz QSO, but there were plenty of fairly long-haul 10GHz contacts. Best DX of the day was 336km. The next day, Sunday, I went to one of my favorite locations - FN02xu which is the top of the hill on Transit Road in Pavilion, NY (southwest of Rochester). The farmer who owns the property has welcomed hams there for this contest for years - we park right in his front yard! This spot has some great long haul DX capabilities and it was no different this year. From there I had QSOs with AF1T, W1MKY and K1RZ on Block Island (FN41ee) at 563km; N1JEZ, W1FKF, W1AIM, W1EX and KA1NKV who were all on Mt. Washington (FN44ig) at 568km (best DX of the contest for me), as well as KA1OJ on Mt. Wachusett (FN42bl) at 505km. On Saturday, I was joined by KA2LIM who worked the W8/VE crowd with me, and on Sunday Ken was still with me and we were joined by K8ZR and KB8VAO, who also worked the gang on Block Island. I ended the first weekend with my best ever first weekend score of over 15k.

Fast forward four weeks. I planned once again, to rove New England with Rus K2UA. ... We started there and Murphy hit me almost immediately - my 10Ghz radio wouldn't transmit - I could hear fine, but no one could hear me beyond our own parking lot. Rus, Ken and I put our heads together (thanks, guys!) and figured out that it was the T/R relay not switching ... To save the weekend for myself, I ended up stealing the same board from the 24GHz transverter and borrowing a spare relay from Ken ... Next we went to FN32kp, the Mount Greylock Eastern Overlook. Fabulous location (of course)! And we worked the heck out of everyone until we finally pulled out of there as it was getting dark.

We spent the night in Bennington, VT and on Sunday headed for FN32ou (Hogback Mountain). This is another great spot, with one exception - the spot is right on the side of Vermont Route 9, and the truck and motorcycle traffic is deafening! Headphones were a must, even though most signals were on the peg in strength. We stayed there till almost noon, then headed for FN33kd (Mt. Equinox). We spent the rest of the afternoon there and worked a number of stations. Ken left us then, as his path home was different (and longer) than ours...

It was a great contest- I ended up with my best score ever by far- over 33k. Rus and Ken did very well, also. Ken's score is likely close to mine, and Rus did very well for a one weekend effort - something like 70 QSOs.

A final side note - the problem with the relay drive was self-inflicted. The cause turned out to be a broken solder joint on the board, which we were able to fix in our hotel room Saturday night and put back into service in the 24GHz rig on Sunday. It had been working for well over 10 years, and in all probability was barely hanging on for all that time.

On the road repairs are all too common during a roving. A simple tool kit and spares are good to have along, not to mention going with a second operator and vehicle in case it's your transport that develops the problem.

Call Area 3

K1RZ	38,117
W2RMA	26,548
WA3GFZ	22,493
WA3PTV	13,577

Dave, K1RZ, expends a lot of effort each year to collect operator plans in a data base available to all of us before the contest starts. It's an excellent tool. In an article in the October 2018 issue of *Cheese Bits*, the Mt. Airy V.H.F. Radio Club newsletter, he described his first roving experience on 10 GHz which took place in the 2018 contest.

Dave came in first in the 10 GHz portion of the contest in Area 3 and made the top list overall. Not too bad for his first time as a rover! Following are excerpts I chose from his article:

My First Rove. OK it was really my first Portable Operation on 10 GHz. NOW I appreciate so much more what so many of you do to do what you do go portable in the ARRL 10 GHz and up Contest. For the August weekend I went northeast to join up with Dale AF1T and Mickie W1MKY on one of their favorite spots on Block Island RI at FN41ee.

I worked Ray N3RG FM29ki on Wednesday morning and dubbed Ray "THE SNJ Beacon". Thanks Ray. On Saturday the Rainscatter (RS) propagation provided a nice touch. After a while I just expected every contact to be via RS since rain storm fronts were sweeping across New England and the Mid-Atlantic. Our best DX from Block Island was 630 km with John N9ZL at Hogback Overlook in Virginia. We worked John on SSB at S8, on Rainscatter.

After working John, I looked at my "smart" phone WX radar apps, and I could see a front slightly west of us and

also slightly west of my 10 GHz friends in Maryland at FM19. I called each on the phone and in half an hour we worked Maurice, K3EJJ, FM19, Brian, N3OC, FM19le and Ed, W3EKT, FM19lg on RS, all at about 500 km's.

On Sunday, among others, we worked the Mt. Washington "Crew of Six" at FN44ig, for 344 km's six times. It was good to get Paul, WA3GFZ, on both FM29hx (Saturday) and then FN21hb on Sunday. During the mid-evening we called Steve, KB8VAO and Tony, K8ZR at FN02xu. We pointed at them and started hearing bits and pieces of the signal. We completed with them both after some time using what appeared as airplane scatter, as judged by observing the signal come up out of the noise quite strong for several seconds.

The September weekend was a special treat too. I joined my Pittsburgh friend Bill W2RMA for a real rove weekend. We met up in Tannersville PA Friday late afternoon, surveyed the overlooks in a dense cloud, so we could start really early on Camelback FN21hb on the Southeast through Northeast overlook.

As an overview we moved three times to be able to overlook to the Southwest, and then to the Northwest through Northeast overlook, and then finishing with a return to the Southeast to Northeast overlook. Our friend Lenny W2BVH visited us from NNJ to try to understand what makes this 10 GHz work and what makes us do this. While Lenny was with us we had many contacts and each had their own stories.

Very early Saturday morning, after checking bearing of the strong W3CCX FM29jw beacon, we worked Paul W1GHZ and another 15 or so Q's out to 450+ Km.

Call Area 4

N9ZL	3,663
KØVXM	2,508
WA7ZZI	940
AA2LY	403

Four logs were turned in for the 10 GHz category (only). Don, WA7ZZI, made his first roving expedition and reported:

I worked Chuck, KOVXM (EL98PJ, 122 km) from this location and would have worked George, K4RSV/R at EL98IG but for an impenetrable wall of rain that stood between us. Earlier in the day I worked both KØVXM (102 km) and K4RSV/R (43 km) from Sugerloaf Mountain (EL98DP). My longest distance contact occurred during the first weekend of the contest when I worked Steve, N2CEI/R (EM80EM) from EL98HP via rainscatter, a

distance of 302 km. This was my first roving experience and was a huge amount of fun!



Don, WA7ZZI, and future ham Logan in front of Lake Harris on Don's first rove. (Photo supplied by Don Jones, WA7ZZI.)

Call Area 5

10 GHz Only

WA5YWC	11,292
WQ5S	5,751
W5AFY	2,319
K5LLL	1,570
10 GHz & Up	
W5LUA	16,937
AA5C	4,940
AA5AM	2,884

Al Ward, W5LUA sent in the following notes for the North Texas Microwave Society and the Roadrunners Microwave Group activity in Call Area 5:

The North Texas Microwave Society put on a great showing in the contest. As a home station, I was privileged to have a number of rover stations in the Texas, Oklahoma, Arkansas and Kansas area. Stations worked on 10 GHz included WA5VJB, WA5YWC, K8ZR, WQ5S, WA5TKU, AA5C, AA5AM, K5LLL, W5AFY, N5BRG, K5SOP, W5RLG, AG4V, K5TRA, NM5M, AF5DM, KA5BOU, and NØUY. Most notable rover in Texas was Bob WA5YWC who I was able to work 27 times on 10 GHz followed by K8ZR (who travelled down from Ohio to rove in Texas) who I worked 19 times, followed by WQ5S 15 times and WA5TKU 7 times. In total, I had 83 QSOs (a record high for me) with 18 unique call signs on 10 GHz. I worked a total of 13 four digit grids on 10 GHz.

Dan W5AFY in EM04 became active recently on 10 GHz and provided numerous contacts for all of us. I appreciated Steve AG4V operating portable from EM24 in Mena, Arkansas providing several of us with contacts in the DFW area. Another treat was working Pete NØOY who was roving in northern Oklahoma and southern Kansas providing me with my best DX of the contest from EM17dr at 523 km!

On 24GHz and 47GHz I was able to work AA5C, AA5AM and K8ZR with a best DX of 24km on both bands. My best score ever at 16937 points.

Bob WA5YWC activated a total of 8 four-digit grid squares during the contest. Bob had 68 QSOs with 9 unique call signs. Bob worked W5LUA 27 times, AA5C, 16 times, WQ5S 11 times, W5AFY 7 times, K5SOP and AA5AM twice, and K5LLL, K8ZR & N5BRG once. His best DX was 369 km from DM94 to W5LUA in EM13 for a best dx of 369km. His score was his best ever at 11,292 points.

On a sad point, Bob WA5YWC passed away at age 73 on October 21, 2018, of natural causes. Bob had been my friend for over 30 years and we have been partners in promoting 10 GHz operation in the north Texas area through the North Texas Microwave Society. Amongst many other things, Bob helped me develop the bandpass filters that I used to copy RW3BP via the moon on 77 GHz. He helped many others in the NTMS as well. We will miss you Bob. R.I.P. 73 de Al W5LUA



WA5YWC three-foot prime focus dish mounted on bed of truck. (Photo provided by Al Ward, W5LUA)

Call Area 6

10 GHz Only

N6RMJ	38,634
N6VI	36,809
K6WCI	31,232
N5BF	31,059
10 GHz & Up	
AA6IW	65,795
K6ML	65,572
W6QIW	58,125
N9JIM	39,704

California has several active microwave clubs which support the 10 GHz & Up contest. The San Bernardino Microwave Society (SBMS) and the San Diego Microwave Group are two. In July 2018 they had a tune up party to test and align rigs for the contest. BBQ was served afterwards at a local park.

Mel, WA6JBD, and the SBMS put together a list of plans for who was going where and when. This was updated almost daily as contest weekends approached. He also included other interested stations such as those in Arizona and a list of beacons that would be of use.

This preparation really got a lot of people on the air. Pat, who came in first in 10 GHz, reported 47 unique contacts, 182 QSOs, 33933 distance points and a longest contact of 610 km.

Call Area 7

W7GLF	928
W7PUA	652
KI5WL	378
KJ7OG	263

Stations operating in Call Area 7 were a mix of Arizona and Washington/Oregon radio amateurs. We would have had some real DX if the two groups had been able to work each other! Maybe next year.

Ed, W7GLF, posted a nice summary of the northern group's adventures on the ARRL soapbox. On the first weekend KD7UO, AG6QV, K6JEY, KI7OJL, W7FU and Ed (W7GLF) operated from O.O. Denny Park on Lake Washington. They were able to work Bill, N6MN, near Mt Rainier and the Canadian border.



10 GHz beach party with KD7U O, AG6QV, K6JEY, KI7OJL, W7FU, and W7GLF. (Photo by Pablo Sala, KI7OJL)

Pablo, KI7OJL, made his first X-band contact in that outing using a W1GHZ transverter. Congratulations and well done, Pablo!

Ed (W7GLF) reported "The highlight of the second weekend was a contact from CN86xx to Bob W7PUA in CN84fm (Mary's Peak Oregon) bouncing off of Mount Rainier."

On the southern end of the 7th district, Steve, KJ7OG, Joe, AC7JD, and Jeff, KI5WL, operated in the southern half of Arizona around the Santa Catalina Mountains. KJ7OG used an X-band rig he built from scratch some years ago. It worked well.

Kevin, AD7OI and Tammy, KI7GVT, roamed far and wide from central and northern Arizona through California. Both ended up with lots of QSOs and very respectable five-digit scores on the Call Area 6 list, as well.

Call Area 8

10 GHz Only

,	
KB8U	70,704
KCØP	57,401
NØHZO	32,657
10 GHz & Up	
K3SIW	70,614
WB8TGY	65,735
WA2VOI	59,051
K8ZR	27,009

As in other areas around the Great Lakes region, Call Area 8 had a lot of activity. Eight logs were turned in.

Interestingly more logs were entered in the 10 GHz & Up category — with contacts at 24 GHz and above — than in the 10 GHz Only category, 9 vs 3. Canada and Call Area 1 also had 8 logs submitted with contacts above the 10 GHz band.

Call Area 9

10 GHz Only

,	
K9JK	46,740
KA9VDU	17,585
WA9TT	5,482
N9LB	2,815
10 GHz & Up	
KØKFC	31,272
W9SZ	25,109
W9SNR	24,334

Contesters in Wisconsin, Illinois and Indiana also benefited from the Great Lakes expeditions. K9JK, the leader in the 10 GHz Only category, made contact with 37 other hams, and KØKF made contact with 40 in the 10 GHz and Up category.

What's Next?

Cabrillo Log Files

For the 10 GHz & Up Contest in 2019, the ARRL's goal is to have all, or as many participants as possible submit Cabrillo log files (6-digit grid exchange as usual). This will be similar to the 222 MHz and Up Distance Contest which requires that all logs be submitted in Cabrillo format. Distances will be calculated automatically.

However, if roving doesn't lend itself to you lugging another computer along, there is a tool to translate paper logs to Cabrillo at www.b4h.net/cabforms. Most of us lug the computer anyway!

Getting the bulk of the contest entries via the Cabrillo standard will assist in generating ever more accurate and timely results.

Conferences

The VHF Super Conference is being held again this year, April 26-28, 2019, at Holiday Inn Washington-Dulles Intl Airport, 45425 Holiday Drive, Sterling VA. It is sponsored by the SE VHF Conference, the NE Weak Signal Group and Mt Airy VHF Society, and hosted by the Grid Pireates and Directive Systems and Engineering. See https://vhfsuperconference.com/ for more info.

The 2019 Central States VHF Conference will be held July 25-27 at the Country Inn & Suites by Radisson, 5353 N 27th St, Lincoln, NE. See http://www.csvhfs.org/ for more information.



Jeff, KI5WL in the foothills of the Santa Catalina mountians, 2018. (Photo taken by Jill Wadsworth.)

Microwave Update 2019 will be held in Lewisville, Texas, in October. This is conveniently located by the DFW airport, between Dallas and Ft Worth, and is always well worth attending. See their web site for more information at http://microwaveupdate.org/

Are there better ways to evalute and report our event?

This year we have added an "HF" equivalent Regional-Leaders Table. This presentation tends to group participants in a fashion similar to time zones.

Do regional results - beyond call areas - better represent how we operate the event these days? If yes, what are the appropriate region definitions to consider? ARRL Divisions? Or WRTC 2022 regions (see item 3 at http://wrtc2022.it/en/?page_id=112)? Grid fields (DM, DN, EM, EN, etc)? Propagation is going to affect the practical regions differently every year (as there is or isn't tropo, or rain scatter, etc.) Please talk this up in your circles (your VHF+ Conferences, VHF/UHF/Microwave Reflectors, and Club Meetings, etc. Drop us an email and tell us what you believe is the most fair/appropriate way to report your future event results.

Post-script

The ARRL 2018 10 GHz and UP event was a great contest, and we have the opportunity to have an even better one in 2019. Join your friends and make some new ones working the really high bands and getting ready for the next contest. I hope to see you on 24 myself next year as well as 10. 73, Jeff, KI5WL

Po	aia	nal	Lead	lare
Re	yıo	Hai	Leac	161 2

West Coast Region Midwest Region					Се	ntral Regior	n	South	east Regi	on	North	Northeast Region					
Pacific, Northwestern, and Southwestern ARRL Divisions; Alberta; British Columbia, and NT RAC Sections			West 0	Midwest, Rocky Mo Bulf ARRL Divisions; Baskatchewan RAC	Manitoba	Divisions; Ontario Ea	nd Great Lakes Greater Toront ast, Ontario Noi South RAC Se	o Area, rth, and		Roanoke, an ern ARRL Div		Atlantic	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			
N6RMJ	38,634	10G	W9FZ	60,079	10G	KB8U	70,704	10G	N9ZL	3,663	10G	K1RZ	38,117	10G			
N6VI	36,809	10G	KA9VVC	59,534	10G	KCØP	57,401	10G	KØVXM	2,508	10G	KA2LIM	27,549	10G			
K6WCI	31,232	10G	кøсq	52,967	10G	К9ЈК	46,740	10G	WA7ZZI	940	10G	W2RMA	26,548	10G			
N5BF	31,059	10G	NØUK	48,492	10G	NØHZO	32,657	10G	AA2LY	403	10G	WA3GFZ	22,493	10G			
K3LZ	25,864	10G	кøнас	44,199	10G	VE3EG	18,800	10G				N1DPM	21,958	10G			
AA6IW	65,795	10GUP	K9PW	57,246	10GUP	K3SIW	70,614	10GUP				AF1T	41,221	10GUP			
K6ML	65,572	10GUP	wøzq	55,969	10GUP	WB8TGY	65,735	10GUP				W1MKY	38,916	10GUP			
W6QIW	58,125	10GUP	WBØLJC	54,009	10GUP	WA2VOI	59,051	10GUP				K2DH	33,328	10GUP			
N9JIM	39,704	10GUP	W7QQ	43,408	10GUP	KØKFC	31,272	10GUP				K1OR	23,543	10GUP			
N6NU	34,028	10GUP	VE4MA	40,711	10GUP	K8ZR	27,009	10GUP				N1JEZ	21,418	10GUP			

Category	Area	Call	Unique Calls	Tot Qs	Score	Distance Points	DX Max	10G Os	10G Uniques	10G Points	10G Rest DX	24G Qs	24G Uniques	24G Points	24G Best DX	47G	47G Uniques	47G	47G Rest DX	75G Os	75G Uniques	75G Points	75G Best DX	Light Q	Light Uniques	Light	Light Best
100.0		14/057			60.070				•				•								-		DC3t DX	٩ .	•		DX
	Area 0 Area 0	W9FZ KA9VVQ			60,079 59,534	57,279 56,834				57279 56834	394 394	0	0		0		<u> </u>	0	0		0	1 -	0	0	0		
10G Only	Area 0	KOCQ		223		50,167				50167	426	0		_			<u> </u>	i	0					0			1
	Area 0	NOUK			48,492	45,592				45592	533	0	0	_	0		0	0	0	0	0	0	0	0	0		
10G Only	Area 0	КОНАС	29	184	44,199			184	29	41299	394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10G Only	Area 0	N0KP	20	109	32,421	30,421	565	109	20	30421	565	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Area 0	N0AKC			28,310	26,210				26210	364	0				i .			0			· -	0				1
	Area 0	KB00ZN			24,881	22,581				22581	394	0	0		0		<u> </u>		0		0		0	0			
10G Only	Area 0	K0AWU	34	_	24,156	20,756	_	91		20756	390	0					0	0	0		0	<u> </u>	0			ļ	_
10G Only 10G Only	Area 0	NOUTP NOLNO	22 20		22,946 21.651	20,746 19,651		95 92	+	20746 19651	333 333	0	0		0		· ·	— <u> </u>	0	_		— <u> </u>	0	0		<u> </u>	1
	Area 0 Area 0	KOMHC	18		19,482	17,682	565			17682	565						-	- 1	0		-	<u> </u>	0			1 -	-
	Area 0	NTOV	10	_	10,494	9,494	467		10	9494	467	0							0				0	0			•
10G Only		W0LGQ	2			554		2	2	554	327	0	0	0			0	0	0	0	0	0	0	0	0		
10G Only	Area 0	AF4JF	1	5	211	111	44	5	1	111	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10G Only	Area 1	N1DPM	33	84	21,958	18,658	735	84	33	18658	735	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0
10G Only	Area 1	AA1I	33		21,401	18,101		81		18101	732	0	0		0	_	0	0	0		0	<u> </u>	0	0	0		1
	Area 1	W1AIM	34		20,705	17,305		66		17305	567	0		_	0				0		0	1 -	0	0	0		
	Area 1	KB1VC	35	_	18,195	14,695				14695	593	0					-		0		0		0				
10G Only 10G Only	Area 1	K1IIG K2UA	61 34		16,809 16,273	10,709 12,873	338 446	61 69		10709 12873	338 446	0							0		0		0	0			
	Area 1	K1GX	34		14,513	11,113				11113	546	0	0				<u> </u>		0		0	1	0				
h	Area 1	K1ZE	26	45		4,687	158		26	4687	158	0					 		0				0	0			
10G Only	Area 1	WA2BTR	19	31	6,832	4,932	250	31	19	4932	250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10G Only	Area 1	K1TR	22	24	5,428	3,228	202	24	22	3228	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10G Only	Area 1	WZ1V	18	20	4,857	3,057	305	20	18	3057	305	0	0	0		:	0	0	0	0	0	0	0	0			
	Area 1	W1RGA	12		3,945	2,745	246	14	12	2745	246	0				!			0			<u> </u>	·				
	Area 1	K1JEB	13			2,332			13	2332	241								0			1	0			-	-
	Area 1	N1GJ	7	7	1,270	576 428		7 2	7	576	160	0	0		0	1	i .	i	0		0	' 	0	0		<u> </u>	1
10G Only 10G Only	Area 1 Area 2	W9JJ KA2LIM	52	116	628 27,549	22,349			52	428 22349	214 567	0	0	_	0		 	<u> </u>	0	_		1 -	0	0	0		
h	Area 2	N3RG	24		12,729	10,329			- 1	10329	520	_					ļ	! <u> </u>	0			<u> </u>	0			1 -	-
	Area 2	K2CBA	25			5,315			25	5315	360	0		-			· .	-	0								•
	Area 2	N2MKT	2	2		206		2	2	206	103	0	0	0		•	0	0	0	0	0	0	0	0	0		-
10G Only	Area 3	K1RZ	48	104	38,117	33,317	732	104	48	33317	732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10G Only	Area 3	W2RMA	33			23,248		66		23248	734	0	0		0		0	0	0		0	0	0	0	0		
	Area 3	WA3GFZ	35		22,493	18,993	489	68	+	18993	489	0				_	ļ	⊢ 	0			ļ	0	— <u>Ŭ</u>		<u> </u>	1
	Area 3	WA3PTV	16		13,577	11,977	634	38		11977	634	0		_	0	1	-		0				0				•
10G Only	Area 3	AB4CR	11 8			2,257	315		11 8	2257 2358	315 511	0			0		<u> </u>		0				0	0			
10G Only 10G Only	Area 3	N3OC W3SZ	9			2,358 1,498		13	9	1498	220	0	0				<u> </u>		0				0				
10G Only		W35Z W3EKT	5					6	5	1584	507	_	0				<u> </u>		0		0	<u> </u>		0			
10G Only		W3HMS	4		_,	864			4	864			0	0			0	0	0		0	0	0	0	0	0	0
10G Only		N9ZL	6						6	3063							0	0	0		0	0	0	0			0
10G Only	Area 4	K0VXM	3	11	2,508	2,208	426	11	3	2208	426	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10G Only	Area 4	WA7ZZI	3				302			640	302								0							•	
10G Only		AA2LY	2							203									0								
10G Only		WA5YWC	9		11,292	,				10392	369						·		0			1	Ŭ				
10G Only		WQ5S W5AFY	7 4	_		5,051 1,919			7	5051 1919	195 273							-	0 0								
10G Only 10G Only		K5LLL	4 5						4 5	1070						_	1									•	
10G Only		WA5TKU	3				117		- 1	566							•	i i				1				1	
10G Only		K5SOP	3				120			526				-			•										
10G Only		N5BRG	4				120			320							•		0								
10G Only		AG4V	2	2			272			520									0			0					
10G Only	Area 6	N6RMJ	47	182	38,634	33,934	610	182	47	33934	610	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

136 Groy, Area 6, Mark 1967 1967	10C Only	A #00 C	NCM	E1 140 2C 900	21 700 (15 140	F1 21700	C1F	0	0 0	0	0	0 0	0	0	0	0	0 /	0 0	0 0
Secondary American Secondary Secondary American Secondary Seconda		Area 6	N6VI	51 140 36,809	31,709 615 140	51 31709	615		0 0			0 0	U	U		U	0 1	0	0 0
150 mg 174 mg 1	10G Only	Area 6	K6WCI	49 128 31,232		49 26332	460	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
Secondary American Secondary Secon	10G Only	Area 6	N5BF	49 153 31,059	26,159 599 153	49 26159	599	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
Secondary American Secondary Secon	10G Only	Area 6	K3LZ	27 94 25.864	23.164 494 94	27 23164	494	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
Secondary Ames Mary Ma			+ +					_								0	0 1	0 0	!
1900 1900		†																·	├
Score Marce Score Scor	10G Only	Area 6	K6TJ		21,317 608 94	32 21317	608	0	0 0			0 0	0	0	0	0	0 (0	0 0
Second Aley Monte Mont	10G Only	Area 6	KI7GVT	37 98 24,407	20,707 598 98	37 20707	598	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
Second Aley Monte Mont	10G Only	Area 6	AF6NA	37 82 19.318	15.618 611 82	37 15618	611	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
150 Comp. American 150 Comp. American	-	•						0	 				0		0	0	0 (0 0	0 0
150 CMP APRIL 150		 																	
	10G Only	Area 6	KF6C	38 81 17,646	13,846 427 81	38 13846	427	0	i i i	0	0	0 0	0	0 _i	0	0	0 (0	0 0
Indoorny Area Month Mo	10G Only	Area 6	KK6EME	35 76 16,434	12,934 427 76	35 12934	427	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
Indoorny Area Month Mo	10G Only	Area 6	WB6TFC	55 59 16,101	10,601 470 59	55 10601	470	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
190 GO Area 6 MASCO 25 51 IZAIZ 29,912 498 52 9912 498 638 798 61 60 60 60 60 60 60 60		 	1				-	0	0 0	0	0	0 0	0	0	0	0	0 1	0 0	0 0
196 Only Area 6 0x4600M 34 64 59.88 55.88 37.89 55.88 37.8			+	+ + + - +			_		 	+			0			0		`	— <u> </u>
100 Grown Area 6 Stort 22 38 7.387 5.187 345 38 22 22 137 345 0 0 0 0 0 0 0 0 0		Area 6	1 1			•		-		-						0			
1956 Ordy Area 6 640 Per 20 29 5,488 3,488 322 29 20 3,888 322 60 6 6 6 6 6 6 6 6	10G Only	Area 6	KM6RXN	34 54 9,938	6,538 379 54	34 6538	379	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
1956 Ordy Area 6 640 Per 20 29 5,488 3,488 322 29 20 3,888 322 60 6 6 6 6 6 6 6 6	10G Only	Area 6	K1CT	22 39 7.337	5.137 345 39	22 5137	345	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
ISCORDY Area SEVER 13 22 4574 3,374 378 22 12 3374 378 0 0 0 0 0 0 0 0 0								_			-					0	0 '		
195 Only Area 686FY 13 13 12 273 12 13 13 13 13 13 13 1		1																-	
1966 Ordy Area 6 1997 KO 13 12 17,18 6 19 19 19 19 19 19 19		· .						_											
High Grow Area 6 High Grow Area 7 Work A 4 202 528 298 4 4 528 298 0 0 0 0 0 0 0 0 0	10G Only	Area 6	K6JEY	13 13 2,912	1,612 223 13	13 1612	223	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
1965 Orny Area 6 1966 OV 9 8 1.677 777 126 9 9 777 126 0 0 0 0 0 0 0 0 0	10G Only	Area 6	KB9FKO	11 12 1,719	619 176 12	11 619	176	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
1980 by Area 7 W7616 4 4 928 528 298 4 4 528 298 0 0 0 0 0 0 0 0 0			+ +		777 126 9	9 777	126	n	0 0	n	Ω	0 0	n	0	0	0	0 (0 0	0 0
195 Only Area 7 MFM 2 2 652 452 27 2 2 452 27 0 0 0 0 0 0 0 0 0		:	1 1	 			i	_	i i i									-	1
1960 by Area 7 MSWW 2 10 378 178 48 10 2 178 48 0 0 0 0 0 0 0 0 0		•						_										· · · · ·	
196 Only Area 70706 1 7 263 163 59 7 1 163 59 0 0 0 0 0 0 0 0 0								_	 										
196 Only Area RCFSW 1 1 200 100 32 1 1 100 32 0 0 0 0 0 0 0 0 0	10G Only	Area 7	KI5WL	2 10 378	178 48 10	2 178	48	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
196 Only Area RCFSW 1 1 200 100 32 1 1 100 32 0 0 0 0 0 0 0 0 0	10G Only	Area 7	KJ7OG	1 7 263	163 59 7	1 163	59	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
196 Ord Area Ar2 Ar2 Ar2 Ar3 Ar3		+						0				0 0	0		0	0	0 (0 0	0 0
196 Only Area 188		l	-													0		<u> </u>	
196 Only Area 8 196 PM Area 8 196 PM 27 248 22,657 23,957 313 148 27 29,957 313 29,957 313 29,957			1				 	_	i i i										
196 Only Area 8 NONZO 27 148 32,657 29957 313 148 27 29957 313 318 27 29957 313 318 29957 313 318 27 29957 313 318 27 29957 313 318 27 29957 315 318 31	10G Only	Area 8	KB8U	35 308 70,704	67,204 333 308	35 67204	333	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
10G Only Area 98 10K 37 209 467-40 43,040 579 209 37 43,040 579 50 0 0 0 0 0 0 0 0	10G Only	Area 8	KC0P	33 238 57,401	54,101 565 238	33 54101	565	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
10G Only Area 98 10K 37 209 467-40 43,040 579 209 37 43,040 579 50 0 0 0 0 0 0 0 0	10G Only	Area 8	NOHZO	27 148 32 657	29 957 313 148	27 29957	313	0	0 0	0	Ω	0 0	Ο	0	Ω	0	0 (0 0	0 0
Indo Grity Area 9 MASPIT 6 26 5,482 4,882 279 26 6 4882 279 0 0 0 0 0 0 0 0 0								_											!
196 Only Area 9 WA9TT		1														U _i			1 1
196 Only Area 9 A98 7 23 2,815 2,115 277 23 7 2115 277 0 0 0 0 0 0 0 0 0	10G Only	Area 9	KA9VDU			16 15985	579	0	0 0			0 0	0	0	0	0	0 (0 0	0 0
195 Only Area 9 A9IL 6 8 1,965 1,365 192 8 6 1365 192 0 0 0 0 0 0 0 0 0	10G Only	Area 9	WA9TT	6 26 5,482	4,882 279 26	6 4882	279	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
196 Only Area 9 A-9 L 6 8 1,965 1,965 1,925 8 6 1365 192 8 6 1365 192 0 0 0 0 0 0 0 0 0	10G Only	Area 9	N9LB	7 23 2.815	2.115 277 23	7 2115	277	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
10G Only Canada VESEG 29 106 18,800 15,900 440 106 29 15900 440 0 0 0 0 0 0 0 0		·	<u> </u>					0	0 0	n	n	0 0	0	n	0	0	0 (0 0	0 0
10G Only Canada VA3TO 24 102 18,431 16,031 447 102 24 16031 447 00 00 00 00 00 00 0				 					 									-	1
10G Only Canada VE3KH 19 78 13,850 11,950 446 78 19 11950 446 0 0 0 0 0 0 0 0 0		:																	
10G Only Canada VE3JGL 11 16 4,718 3,618 429 16 11 3618 429 0 0 0 0 0 0 0 0 0	10G Only	Canada	VA3TO	24 102 18,431	16,031 447 102	24 16031	447	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
10G Only Canada VEGT	10G Only	Canada	VE3KH	19 78 13,850	11,950 446 78	19 11950	446	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
10G Only Canada VEGT	10G Only	Canada	VF3IGI	11 16 4.718	3.618 429 16	11 3618	429	0	0 0	0	0	0 0	0	0	0	0	0 (0 0	0 0
10G ONIV Canada VEZOT 5 7 1,642 1,142 249 7 5 1142 249 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		†	1					_										-	
10G Only Canada VESOIL 5 8 582 82 82 19 8 8 582 82 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	•	 	+		' 		_		 				-					· ·	H
10G & Up		:	1			i i	i 		i i i			i i							i — i — —
10G & Up Area 0 WOZQ 33 219 55,969 55,669 566 208 26 51764 566 11 77 905 241 0 0 0 0 0 0 0 0 0	10G Only	Canada	VE3OIL	5 8 582	82 19 8	5 82	19	0	0 0	0	0	0 0	0	0	0	0	0 (00	0 0
10G & Up Area 0 WOZQ 33 219 55,969 55,669 566 208 26 51764 566 11 77 905 241 0 0 0 0 0 0 0 0 0	10G & Up	Area 0	K9PW	51 259 57,246	52,146 579 238	40 50442	579	19	9 1702	240	2	2 2	1	0	0	0	0 (0 0	0 0
10G & Up Area 0 WBOLC 33 23 54,009 50,709 427 229 29 50419 427 4 4 290 137 0 0 0 0 0 0 0 0 0												0 0	Λ			0	0 (
10G & Up Area 1 AF1T GO 142 41,221 35,221 G63 133 53 34682 G63 5 4 311 96 3 2 220 90 0 0 0 0 0 0 0 0																			
10G & Up	<u> </u>															-			
10G & Up	10G & Up	Area 0	W7QQ					8	7 1262							0	0 (0 0	
10G & Up	10G & Up	Area 1	AF1T	60 142 41,221	35,221 663 133	53 34682	663	5	4 311	96	3	2 220	90	0	0	0	0 :	1 1	8 8
10G & Up	10G & Un	Area 1	W1MKY			50 32677	663	5	4 311	96	3	2 220	90		0	0	0	1 1	8 8
10G & Up		•																-	
10G & Up													_						
10G & Up																			
10G & Up	10G & Up	Area 1	W1GHZ			35 14808	592	2	2 146	73	3	2 236	90	0	0	0	0 (00	00
10G & Up	10G & Up	Area 1	W1EX	41 66 16,028	11,928 565 60	36 11275	565	5	4 553	139	1	1 100	100	0	0	0	0 (0 0	0 0
10G & Up Area 1 WA1MBA 16 16 4,101 2,501 399 14 14 2301 399 1 1 100 100 1 1 100 100 0 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>_</td><td></td><td></td><td></td><td></td><td></td><td></td></th<>													_						
10G & Up Area 2 K2DH 56 135 33,328 27,728 568 129 50 27578 568 3 3 43 41 3 3 107 105 0 0 0 0 0 0 0 0 0			1 1																!
10G & Up Area 5 W5LUA 24 89 16,937 14,537 523 83 18 14398 523 3 3 67 24 3 3 72 24 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u> </u>	:	1 1									i		- 1				1	i
10G & Up Area 5 AA5C 10 32 4,940 3,940 335 30 8 3906 335 2 2 34 18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0																			
10G & Up Area 5 AA5C 10 32 4,940 3,940 335 30 8 3906 335 2 2 34 18 0 <td< td=""><td>10G & Up</td><td>Area 5</td><td>W5LUA</td><td></td><td>14,537 523 83</td><td>18 14398</td><td>523</td><td> 3</td><td>3 67</td><td>24</td><td>3</td><td>3 72</td><td>24</td><td>0</td><td>0</td><td>0</td><td>0 (</td><td>0 0</td><td>0 0</td></td<>	10G & Up	Area 5	W5LUA		14,537 523 83	18 14398	523	3	3 67	24	3	3 72	24	0	0	0	0 (0 0	0 0
10G & Up Area 5 AA5AM 11 14 2,884 1,784 335 11 8 1720 335 2 2 40 24 1 1 24 24 0 0 0 0 0 0 0 0 0	10G & Un	Area 5	AA5C		3,940 335 30	8 3906	335	2	2 34	18	0	0 0	0	0	0	0	0 (0 0	0 0
עני אַ אַ פּער פּער פּער פּער פּער פּער פּער פּער																		1	
	TOG & Ob	Area 6	AAbIW	61 292 65,795	59,695 b16 230	53 48991	616	62	8 10/04	268	U	U U	U	U	U	U	U _i (u <u>i</u> 0	U 0

10G & Up Area 6	K6ML	52 256 65,572	60,372 492 215	44 53149	492	41	8	7223	347	0	0	0	0	0 (0	0	0	0	C	0 0
10G & Up Area 6	W6QIW	58 252 58,125	52,325 599 201	51 43095	599	51	7	9230	257	0	0	0	0	0 (0	0	0	0	C) 0
10G & Up Area 6	N9JIM	41 154 39,704	35,604 575 129	34 31336	575	25	7	4268	268	0	0	0	0	0 0	0	0	0	0	C	0 0
10G & Up Area 6	N6NU	30 91 34,028	31,028 615 90	29 30735	615	1	1	293	293	0	0	0	0	0 0	0	0	0	0	C	0 0
10G & Up Area 6	N6TEB	44 141 31,807	27,407 610 122	38 25229	610	19	6	2178	276	0	0	0	0	0 0	0	0	0	0	C	0 0
10G & Up Area 6	N6JET	33 151 30,603	27,303 344 139	27 25950	344	12	6	1353	221	0	0	0	0	0 0	0	0	0	0	C	0 0
10G & Up Area 6	KB6BA	39 138 30,406	26,506 605 118	34 23128	605	20	5	3378	257	0	0	0	0	0 0	0	0	0	0	C) 0
10G & Up Area 6	KD6W	24 97 21,289	18,889 400 89	22 17984	400	8	2	905	182	0	0	0	0	0 0	0	0	0	0	C	0 0
10G & Up Area 8	K3SIW	49 322 70,614	65,714 333 294	32 63610	333	23	14	2018	179	5	3	86	48	0 0	0	0	0	0	C	0 0
10G & Up Area 8	WB8TGY	45 304 65,735	61,235 333 283	32 59642	333	16	11	1490	179	5	2	103	49	0 0	0	0	0	0	C	0 0
10G & Up Area 8	WA2VOI	36 260 59,051	55,451 390 250	27 54873	390	10	9	578	179	0	0	0	0	0 0	0	0	0	0	C	0 0
10G & Up Area 8	K8ZR	30 99 27,009	24,009 561 89	23 23804	561	6	4	148	25	4	3	57	25	0 0	0	0	0	0	C) 0
10G & Up Area 8	KB8VAO	31 96 19,605	16,505 579 84	24 15941	579	9	5	531	114	3	2	33	25	0 0	0	0	0	0	C) 0
10G & Up Area 8	WA8VPD	31 83 17,891	14,791 331 63	16 13547	331	16	12	1216	179	4	3	28	18	0 0	0	0	0	0	C	0 0
10G & Up Area 8	NN9X	14 64 12,788	11,388 327 61	11 11344	327	3	3	44	18	0	0	0	0	0 0	0	0	0	0	C	0 0
10G & Up Area 8	K2YAZ	16 56 11,520	9,920 380 52	12 9889	380	2	2	20	10	2	2	11	10	0 0	0	0	0	0	C	0 0
10G & Up Area 8	KD9GGZ	12 55 10,374	9,174 327 53	10 9138	327	2	2	36	18	0	0	0	0	0 0	0	0	0	0	C	0 0
10G & Up Area 9	KOKFC	40 108 31,272	27,272 512 98	31 26274	512	10	9	998	179	0	0	0	0	0 0	0	0	0	0	C	0 0
10G & Up Area 9	W9SZ	23 118 25,109	22,809 579 108	16 22197	579	9	6	611	171	1	1	1	1	0 (0	0	0	0	C	0 0
10G & Up Area 9	W9SNR	23 112 24,334	22,034 579 105	17 21546	579	7	6	488	171	0	0	0	0	0 0	0	0	0	0	(0 0
10G & Up Canada	VE4MA	45 134 40,711	36,211 565 122	33 34419	565	11	11	1791	179	0	0	0	0	1 1	. 1	1	0	0	C	0 0
10G & Up Canada	VA3ELE	30 131 21,097	18,097 447 121	25 17586	447	9	4	510	97	1	1	1	1	0 0	0	0	0	0	C	0 0
10G & Up Canada	VE3SMA	33 117 19,856	16,556 441 108	29 16103	441	9	4	453	115	0	0	0	0	0 0	0	0	0	0	C	0 0
10G & Up Canada	VE3KRP	33 48 14,281	10,781 365 37	33 9388	365	7	7	1091	179	0	0	0	0	1 1	. 1	1	0	0		0 0
10G & Up Canada	VE3FHM	23 83 11,656	9,356 347 76	20 9132	347	7	3	224	47	0	0	0	0	0 0	0	0	0	0	C	0 0
10G & Up Canada	VE3ADQ	28 30 8,567	5,767 365 27	25 5764	365	3	3	3	1	0	0	0	0	0 0	0	0	0	0		0 0
10G & Up Canada	VE3FN	14 21 5,765	4,365 396 17	12 4048	396	3	1	192	111	1	1	125	111	0 (0	0	0	0	C) 0
10G & Up Canada	vE2UG	12 26 3,042	1,842 203 19	8 1527	203	4	2	191	110	3	2	124	110	0 (0	0	0	0	C	0 0