ARRL 10 GHz and Up Contest 2017 Results

By Jeff Wadsworth, KI5WL

An eclipse didn't get in the way!

During the first contest weekend contest operations had to compete for time and resources with the total eclipse of the sun. This drew many to the North and Midwest, but there was still time to operate. One hundred and twenty-seven amateurs turned in logs with contacts at X Band and above over the two weekends. This was slightly down from the 131 logs turned in for 2016.

There was a lot of comradery, chats with folks stopping by to see what was going on, and practical RF engineering field experience. Sometimes field experience is seeing how Maxwell's equations work in the real world; sometimes it involves more of Murphy's Law. It's always an opportunity to expand you knowledge and enjoy good times with friends.

Tammy, KI7GVT operating a serious rover set up with the southern group of the Midwestern Microwavers during the August weekend. (Photo by Kevin Jacobsen, AD7OI).

For several couples it was an opportunity to operate the contest together. Tammy, KI7GVT and Kevin, AD7OI saw the eclipse, joined the Midwestern Microwavers for the August weekend, operated in six-land in September and experienced plains, wild fires, mountain tops and the desert. Good times and high adventure!

From anecdotal reports it appears that SSB mode contacts dominated the contest. However Digital, FM, and CW were also present. Digital seems to be growing. During and shortly after the contest some folks experimented with aircraft scatter. As you might expect, it seemed to work better right after the contest was over. Moonbounce was used successfully by VE4MA and W5LUA. In general we are in a time of new innovation on how to get information from one place to another using "short photons."

Overall Activity and Category Winners

First- and second-place winners in both categories operated from California. Third-place winners were split between areas 9 and Ø. However none of the 2016 top three winners in either the 10 GHz or 10 GHz & Up categories were repeats in 2017. Six new calls graced these positions showing how dynamic this contest is. True, you did need to be where there were lots of other operators but aggressive rovers added a lot to the dynamics, as well.

Top Ten Scores - 10 GHz only

CALL	SCORE
AD6FP	89,611
WA6CDR	56,815
KØKFC	43,301
KØCQ	42,216
KØMHC	37,936
WA2VOI	37,691
AD7OI	37,577
KI7GVT	36,635
KA9VVQ	33,267
KCØIYT	33,264

Top Ten Scores - 10 GHz & Up

CALL	SCORE
AA6IW	58,900
K6GZA	50,570
WBØLJC	48,997
N9JIM	41,766
W6BY	38,287
W6QIW	38,265
K9PW	36,774
WØZQ	36,012
N6NU	33,042
N1JEZ	25,584

Best DX by Band

The amount of activity above 10.5 GHz was impressive! Forty-one stations, 31% of amateurs who turned in logs reported contacts at 24 GHz or higher. The best 47 GHz DX was almost as long as the longest 24 GHz DX. We are getting better at exploiting the higher microwave bands. From comments and posts it seems both German transverters and home brewed or modified parts and subsystems were used. VE4MA's article at the 2017 Microwave Update conference discussed the growing availability of usable microwave subsystems form automotive radars. This is a promising for the future microwave operations.

Best Terrestrial DX by Band

Call	Band	Distance (km)
W6SR	10 GHz	673
W6BY	24 GHz	295.4
N1JEZ	47 GHz	276.6
WA1MBA	75 GHz	21.1
VE3SMA/VE3EG	300 GHz	4

A complete listing of Best DX by Band is available at the end of this article.

Activity around the Call Areas

Areas 6, 1, Ø, 5 and VE had the most submitted logs. California had the same number of submitting operators as 2016. VE and area Ø were down slightly while call area 1 was down by 6 stations. Area 5 was the improvement leader where the number of stations almost doubled, going from 9 last year to 16 this year. Way to go North Texas Microwave Society and Roadrunners Microwave Group!

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	8
9	9
VE	11
DX	1

Mexico

XE2HWB often works the contest and did in 2017. Perhaps with digital modes we can expand the number of stations that can reach XE land.

10 GHz

CALL	SCORE
XE2HWB	127

Canada

VE-land had a strong 11 entries this year. Barry, VE4MA sent in the following report:

"This year was quite unusual as most of the operators in the MN, IA, SD and VE4 Areas were not available for the first contest weekend, as they went to watch the Eclipse! Consequently there was no local activity, except for one QSO with North Dakota station NTØV. This weekend fortunately was great for EME activity on 10 GHz. I had solicited activity from USA stations and was quite pleased with the result of working 5 stations.

"The second weekend was hampered by fall type weather with rain and winds on the first day. Originally we had planned to try some shots across Lake Winnipeg, but resorted to a set of local QSOs (1 km) on 10, 24, 47 and 78 GHz on the second day afternoon when the weather cleared. All these contacts were made in SSB although in the process of starting the 78 GHz QSO, my rig sustained a failure...and signals dropped from S9+++ to S1 (5x5). I later determined that the 78 GHz mixer failed....so its a miracle that we were able to complete the QSO …The operators on the local QSOs were Kirk VE4MO and Dan VE4DDZ."

10 GHz

CALL	SCORE
VE3FN	6,940
VE3KH	2,948
VE2GT	2,459
VA3CDD	2,451

10 GHz & Up

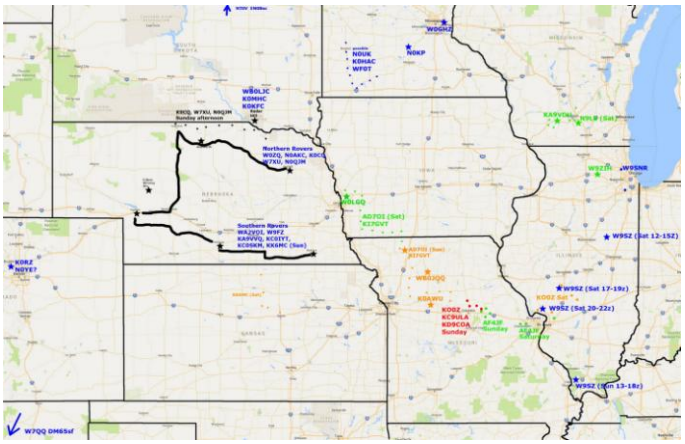
CALL	SCORE
VA3ELE	17,445
VE3SMA	16,469
VE4MA	11,944*
VE3EG	6,283
VE3FHM	4,706

(* = Includes one or more EME contacts)

VE4MO (left) and VE4DDZ (right) working 47 GHz and 78 GHz. (Photo provided by Barry Malowanchuk, VE4MA)

Call Area Ø

Bruce, W9FZ collected the plans for operators over a wide area before the contest and published the data to help everyone make QSOs during the contest. Bruce's map included two major rover packs and operators as far south as W7QQ in New Mexico and as far northeast as Wisconsin. (I tried to work W7QQ as well and it was exciting to be on the edge of so many microwave operators, even if southern Arizona did turn out to be a bit too far.)



Midwest roving plans published by Bruce, W9FZ on August 15, 2017. (Graphic by Bruce Richardson, W9FZ.)

Call Area Ø Leaders

10 GHz

CALL	SCORE
KØCQ	42,216
KØMHC	37,936
WA2VOI	37,691
AD7OI	37,577

10 GHz & Up

CALL	SCORE
WBØLJC	48,997
WØZQ	36,012

Jim, KØMHC described his adventure this way: "It was an exhilarating experience to participate in the 10 GHz-&-Up, E-o-M event from our South Dakota vantage point. The rolling plains of Nebraska and southern South Dakota were in full view from our fixed position near Radar Hill, SD. Both Jim, KØKFC and Gary, WBØLBJ had recently upgraded to bigger, microwave dishes which were quite suitable for this operation.

"Our thanks go out to Janice, KA9VVQ and Bruce, W9FZ for creating and organizing Eclipse-o-Mania…Two rover packs and many single fixed/portable stations helped keep us busy…Splitting up into three rover packs Sunday afternoon helped level out the activity peaks and valleys…The locals (mostly ranchers and farmers) that stopped by received a brief education on ham radio and a detailed hand-out explaining the E-o-M event. It helped that one of their own; Jim, K0ØKFC (a local SD native) spoke South Dakotan with a convincing accent.

"Propagation was considerably enhanced during Saturday morning with several rain scatter opportunities on Sunday. We also tried airplane scatter to round out the weekend.

"With 74 and 43 QSOs on Saturday and Sunday respectively, there was quite a bit of activity. We completed two-way contacts in five states including: SD, NE, IA, MN, and MO. Distances were quite varied. The rover packs ranged from chip-shots at 68 km up to 325 km. The fixed/portable stations were more distant ranging up to 613 km (Bill, KØAWU). These 117 QSOs were with 23 unique call signs for 26K points for the first weekend.

"James, KK6MC…who with 200 mW and a 20 dBi horn was able to hang in there with the big guns… W9ZIH and I were able exchange signals at 796 km. but, without a successful QSO… digital mode opportunities! Barry, VE4MA tried aircraft scatter at 763 km using ISCAT but, we couldn't quite resolve the Doppler shifts."

Call Area 1

Call Area 1 logs were down this year from 26 in 2016, to 20 this year. Nonetheless there were a lot of stations on the air, second only to California. There were four repeats in the first, second and third place winners, in both categories, from 2016 to 2017. N1JEZ edged out AF1T for first in 10 GHz & UP, and W1AUV just beat last year's champ K1GX in the 10 GHz category.

Call Area 1 Leaders

10 GHz

CALL	SCORE
W1AUV	17,330
K1GX	14,536
K1CA	14,340
W1AIM	13,030

10 GHz & Up

CALL	SCORE
N1JEZ	25,584
AF1T	25,420
W1MKY	24,617
W1GHZ	23,710

Call Area 2

Dave, K2DH had a great time winning first place in the Area 2, 10 GHz & Up category. He described the contest in his ARRL Soapbox upload. (www.arrl.org/soapbox) Excerpts follow:

"This was my best effort ever and certainly the most fun ever! The first weekend, I traveled to FN02nu on Saturday …on the shore of Lake Erie south of Buffalo, NY. This spot always provides lots of QSOs with the W8s in Ohio and Michigan, as well as the VEs from the Toronto area… On Sunday, I went to my old favorite FN02xu … Once again, plenty of good QSO's- I even sneaked another QSO with K1RZ on pure troposcatter at 400km. Later in the day, I had an easy QSO with W1AUV on Mt. Equinox, VT at 402km for the best DX of the day.

"Fast forward to the second weekend. I decided to go to New England, and to hit more mountains than in the past. I had Rus K2UA along, who has become re-invigorated on the microwave bands, and he managed to put together a 10GHz rig that ran 2W to a 20" dish. He was excited to join me and try to make contacts after about a 25 year hiatus… This netted QSOs on 10, 24, and 47GHz SSB for me…We also had easy QSOs with FN41ee and FN41oi (Block I. and Martha's Vineyard) on a knife-edge path. Later in the day we made the trip to FN32kp (the Eastern Overlook on Mt. Greylock) where we were joined by Pete K2AEP and made a bunch more QSOs on 10GHz.

"We spent the night in Bennington, VT and then early Sunday, headed for FN32ou - Hogback Mountain, VT where once again we made many great QSO's, all on10GHz… I ended up with 97 QSO's and a total of a bit over 21k points. K2UA did extremely well…working 52 stations on 10GHz!"

Call Area 2 Leaders

10 GHz

CALL	SCORE
N1DPM	20,614
AA1I	20,598
N3RG	10,213
KA2LIM/R	6,846

10 GHz & Up

CALL	SCORE
K2DH	21,328
VE2UG	2,418

Dave, K2DH on Mt Graylock during the second weekend of the contest. (Photo provided by Dave Hallidy, K2DH via the ARRL Soapbox.)

Call Area 3

Dave, K1RZ, normally collects contest plans and publishes them in an excellent database which he updates multiple times. The year he moved to new and improved format and again made many QSO's possible. Before the August weekend there were three pages of stations planning to be on the air. Bands ranged from 10 GHz only to 10, 24, 47 and 76 GHz. This is the kind of planning that makes an enjoyable and productive contest!

Call Area 3 Leaders

10 GHz

CALL	SCORE
N1DPM	20,614
AA1I	20,598
N3RG	10,213
KA2LIM/R	6,846

Call Area 4

Call Area 4 only had three entries and they all won their category! That's something to keep in mind when you are deciding whether or not to send in your log. A new microwave certificate would look pretty good on the wall.

Call Area 4 Leaders

10 GHz

CALL	SCORE
K4RSV/R	2,379
N9ZL	1,959
AB4CR	1,284

Call Area 5

Five-land had a lot of activity this year. Al, W5LUA reported the following for the North Texas Microwave Society and the Roadrunners Microwave Group:

"The North Texas Microwave Society had excellent participation this year with 11 stations active on 10 GHz in North Texas. Only a few stations that had been on in the past were unable to be on this year. The RMG group in South Texas provided an additional 7 stations to be worked making the Texas total of 18 stations on the air. W5LUA, AA5C, N5WCO, AA5AM and WA5VJB provided operation from home stations in North Texas. The South Texas stations included K5AND, K5LLL, K5TRA, N5MU, K5VH, NO5K and W3XO/5. The list of rovers in North Texas included K5ZSJ, W5RLG, WA5YWC, WQ5S, K5SOP, N5BRG and K8ZR (x/WA8RJF) who came down from Ohio … K5LLL and his XYL also roved in South Texas.

"Conditions were pretty normal in August providing contacts up to 405 km between myself and W3XO/5 EM00 in Kerrville, Texas. The first day of the second weekend provided some nice tropo. K8ZR started out in EM24qq/EM24tq in Mena, Arkansas and was working the Austin, Texas area. Tony's best DX was W3XO/5 in EM00kd for a best distance of 673km (418 miles) … WA5YWC started out in the Arbuckle Mountains in Oklahoma in EM14kj and was also working the tropo down to the Austin area.

"Other notable contacts were on the first weekend between K5VH in EM00xe and myself in EM13qc (351km) and AA5C in EM13se at a best distance of 365 km. Tom was running just a DB6NT transverter at 250 milliwatts through 70 ft of 3/8 inch Heliax to a 13 dBi horn on his tower! Also noteworthy is that Jerry K5SOP made his first 10 GHz contact to me from a rover spot at a distance of 121 km.

On 24 GHz I worked AA5C at 19 km and K8ZR/R at 8 km. On 47 GHz, I used my new periscope antenna at 55 ft to work K8ZR/R at 1 km."

Call Area 5 Leaders

10 GHz

CALL	SCORE
WA5YWC	10,509
W3XO/5	4,920
K5AND	4,600
K5LLL	4,461

10 GHz & Up

CALL	SCORE
W5LUA	13,386*
AA5C	5,619

(* = Includes one or more EME contacts)

Call Area 6

This area had the most logs turned in, 25. A few more people than that worked the contest, as is probably true in most call areas.

Call Area 6 Leaders

10 GHz

CALL	SCORE
AD6FP	89,611
WA6CDR	56,815
KI7GVT	36,635
N6RMJ	30,482

10 GHz & Up

CALL	SCORE
AA6IW	58,900
K6GZA	50,570
N9JIM	41,766
W6BY	38,287
W6QIW	38,265

The following notes paraphrase a "thank you" email Marty, N6VI sent out after the contest: WA6JBD kept the "who's where" list up to date even as he was preparing for the long and rough trip to Mt. Potosi. WA6CDR configured the outstanding Cactus System to provide for the essential liaisons and also summoned his own version of Lazarus by cobbling a work-around after his IF TX died. A tip of the hat goes to KK6MXP (a rank beginner just a few years ago) whose astute tail-ending made for some very quick QSOs with no tuning or peaking. AA6IW shared his power on Frazier.

During one weekend Gordon West, WB6NOA set up a demonstration table at HAMCON in the Los Anglos and made demonstration QSOs during the contest.

AD6FP won the 10 GHz category and AA6IW won the 10 GHz & Up category. Both worked from area 6 as did N6RMJ who won 10 GHz last year.

Call Area 7

This area is not quite as dense with microwavers during the contest as is California, but some are there. Turnout was low this year and we (your author lives in call area 7) only had 4 logs submitted this year.

Call Area 7 Leaders

10 GHz

CALL	SCORE
KI5WL	1,866
KB7NIE	959
AG7BW	910
K6JEY/7	111

What was impressive was the roving plan the Knoepfle brothers put together and executed during the September weekend. Henry, KB7NIE and Mark, AG7BW made a seven-stop roving plan for the second Saturday of the contest and completed it with just over an hour deviation from plan.

They started in Tucson and roved through the Empire and Wheatstone Mountains in southern Arizona, ending up at the west edge of the famous Chiricahua Mountains, making QSOs at each of their seven stops. It was one of the best executed roves I have witnessed.

Call Area 8

Call Area 8 Leaders

10 GHz

CALL	SCORE
KB8U	17,123
WA3TTS	4,199

10 GHz & Up

CALL	SCORE
WB8TGY	21,304
K8ZR	16,445
WA8VPD	15,748
K2YAZ	13,678

Mark, WB8TGY described his contest experience in a ARRL Soapbox upload: "I operated the first weekend of the contest at four different locations on Lake Erie, working stations all around the lake and several inland stations in Michigan. One highlight the first weekend was working Bob, WA8VPD on 10, 24, and 47 GHz…a distance of around 54 km. The second weekend I operated from northwest lower Michigan, at three sites on Lake Michigan and two others …We had a nice turnout of operators on both sides of the lake. On Saturday the conditions on 10 GHz seemed up, but we had a lot of wind on Sunday morning and conditions were ok for 10 GHz but not for the higher bands across the lake. I didn't make any QSOs across the lake on 24…

My best DX on 24 and 47 the second weekend was around 48 km. We had eight stations on the Michigan side of the lake with 24 GHz this year, and five of us also had 47 GHz. It was great to see so many friends both weekends, both in person and over the air...

Mark, WB8TGY, took this photo on the Sunday night of the second contestweekend, looking west across Lake Michigan from his operating position in Manistee, Michigan (EN64tf). (Mark Korroch, WB8TGY photo)

Call Area 9

Bruce, W9FZ's Midwest plan covered more than just one call area. AF4JF, NØPQU, and KOØZ all operated with Bruce's "Eclipse-O-Mania" plans and Ron, KOØZ won third place in Area 9, 10 GHz, as well as enjoying the eclipse. The corn was high enough to be an impediment at some points and it rained. Turning a lemon into lemonade they used FM rain-scatter mode.

Totality at 1:17 PM, August 21, 2017, from EM48rq. (Photo from Herbert Ullman, AF4JF's, blog at bi-state-amateur-radio-society.blogspot.com.)

KOØZ working KØAWS via FM rain scatter during the August weekend. (Photo from Herbert's, AF4JF, blog on http://bi-state-amateur-radio-society.blogspot.com.)

Call Area 9 Leaders

10 GHz

CALL	SCORE
KØKFC	43,301
KA9VDU	11,367
N9LB	4,113
KOØZ	1,719

10 GHz & Up

CALL	SCORE
K9PW	36,774
W9SZ	25,543
K9JK	22,168
W9SNR	17,160

How Do You Get Your Call in This Article?

You may have noticed that some areas got more attention than others in this writeup of the results. Before I began to write the results article, I wondered why that happened. Did the author just like California better than Arizona? Is the Northeast a better place to operate every year?

Here's the secret – there has to be information to write about for it to be included! Want your area to get more space? Send me, or whoever writes up the results, your notes and pictures on how you did, what you liked, etc. That's how you get your call and maybe even your picture in the results!

The February 2018 issue of *QST* contains the print version of all tables in these results.

The contest takes place on the third full weekends of August and September. In 2018, those dates are 18-19 August and 15-16 of September. We'll be aiming for you!

Best DX by Band

10 GHz

CALL	Best DX (km)
VE4MA	2,492*
W5LUA	2,114*
W6SR	673
K6GZA	660
WA6CDR	660
K6ML	659
N6NU	659
K8ZR	658
W3XO/5	657
N9JIM	652
N6RMJ	651
W6BY	651
AD6A	620
K6TJ	619

(* = Includes one or more EME contacts)

24 GHz

CALL	Best DX (km)
W6BY	295.4
K6ML	256
N9JIM	255.8
K6GZA	236
N6NU	209
AA6IW	201
N6TEB	201
KI6HQR	201
VA3ELE	198
VE3SMA	197
KA1NKD	194
W1FKF	194
K2DH	194
N1JEZ	193.3

47 GHz

CALL	Best DX (km)
N1JEZ	276.6
WA1MBA	126.2
KA1OJ	126
W1FKF	126
KA1NKD	126
K9PW	105
K2DH	93
W1GHZ	90
AF1T	89.6
W1MKY	89.6
WB8TGY	54
WA8VPD	54
W1JHR	23
W1EX	21.1

75 GHz

CALL	Best DX (km)
WA1MBA	21.1
KA1OJ	21
VE4MA	1

300 GHz

CALL	Best DX (km)
VE3EG	4
VE3SMA	4