

2006 ARRL 10 GHz and Up Contest Results

Longer DX paths + more contacts = record scores.

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Microwave enthusiasts have long enjoyed the challenge of pushing the envelope, and the ARRL's 10 GHz and Up Contest is just the event to inspire many of us. The challenges of microwave contesting include how to get on the bands, finding ways to coordinate contacts with others and knowing how to maximize your score by taking advantage of known propagation paths while continuously exploring new ones. During this year's contest, 115 microwave enthusiasts from California to Maine, from Mexico to Canada, took on the challenge.

Getting on the Bands

During this year's contest, 114 out of 115 stations were equipped with 10 GHz. Most of these stations operate portable using transverters, typically in the 1 to 2 W range, along with 18 inch dish antennas. Designing equipment to operating portable in the elements is always a challenge — a challenge met by microwave enthusiasts with different solutions. One solution was found by Bob Gormley, WA5YWC, who set up his portable 10 GHz system in the back of his pickup truck, thus avoiding setup and tear down time at each stop — and the 100 degree heat. Ray Perrin, VE3FN; Doug Leach, VE3XK, and Dave Goodwin, VE3AAQ, challenged themselves to design their station as light as possible, since they had to hike in to operate from King Mountain on the Ontario/Quebec border.

Working Long Distances to Maximize Contest Points

Path lengths of 200 to 300 km are common on 10 GHz. For example, for this year's contest, the average best DX on 10 GHz was 456 kilometers, and the median was 385 kilometers. The challenge is to find ways to make contacts beyond this range.

One way is to take advantage of weather inversions. Those who operated along the Baja/California coastline this year took advantage of the nearly continuous weather inversion to make contacts in excess of 1000 kilometers.

Others outside of this area found different ways to meet this challenge. Stephen Gocala, KB8VAO, was able to bounce his microwave signals to Jim Von Striver, W6ASL, off of Mt Diablo, for a 375 kilometer contact. Tommy



COURTESY TOM RING, KOTAR

Jon Lieberg, KØFQA, and other members of the Northern Lights Radio Society (Minnesota) working a 10 GHz rover at 220 kilometers.

Sullivan, W1AUU, was able to find a superior location with a good horizon to work John Jaminet, W3HMS, and Joe Lockbaum, WA3PTV, at 586 kilometers.

Rain can also be used as a scatter media to propagate microwave signals farther. Known rain scatter contacts included Mike King, KMØT, to Barry Malowanchuk, VE4MA at 753 kilometers, and Glen Overby, KCØIYT, and Jon Platt, WØZQ, also to VE4MA, at 632 kilometers. Taking advantage of what Mother Nature offers you can significantly improve your contest score!

2006 Contest Results

From 1997 to 2003, there has been a steady increase in the number of contest logs received. To date, the 2003 contest represents the high water mark, with 142 logs. Since 2003, although the total number of contacts made has continued to climb, the number of logs received has been dropping slightly. This year's 115 logs represent the third straight year of decline in logs received.

Of these 115 logs, 6-landers led the way with 30 logs followed closely by Ø-landers with 29 logs and 1-landers with 19 logs. These three regions together accounted for two thirds of all contest logs received. What do these three separate regions have in common? Each region has an active VHF and microwave club that is the center of activity. If you lack activity, how about starting a club in your region?

Top 10 Scores

10 GHz Only	Score	10 GHz and Up	Score
4C2HWH	198,734	WBØLJC	114,097
4B2HWH	196,832	WA6CGR	89,494
KG6EG	174,493	WØZQ	69,273
KE6HPZ	169,784	WØGHZ	64,605
XE2HWH	142,725	WØAUS	52,427
W9FZ	121,505	KH6WZ	49,952
WA2VOI	120,842	WØJT	49,212
NØNAS	113,252	N6RMJ	49,034
KCØIYT	97,743	K6JEY	42,951
NØUK	89,534	KB8VAO	37,526

Top 10 Total QSOs Completed

10 GHz Only	Score	10 GHz and Up	Score
W9FZ	596	WBØLJC	561
WA2VOI	590	WØZQ	347
NØNAS	565	WØGHZ	323
KCØIYT	475	WA6CGR	279
NØUK	386	WØAUS	258
KG6EG	352	WØJT	239
NØKP	344	NØUGY	228
KE6HPZ	343	NØIO	195
WBØVHF	291	N6RMJ	177
4C2HWH	280	KH6WZ	162

Participation by Call Area

Call Area	Entries	Call Area	Entries
6	30	3	4
0	29	5	4
1	19	9	4
VE	6	20	4
8	6	4	2
2	5	7	2

In the 10 GHz Only category, Frank Kelly, WB6CWN (operating as 4C2HWH), led all 76 operators in this class with a score of 198,734. This year there were eight logs that topped the 100,000 mark; last year's first place score of 143,069 would have resulted in a fifth place finish this year! Frank also captured the Best 10 GHz record at 1099 kilometers, a record shared with Baja

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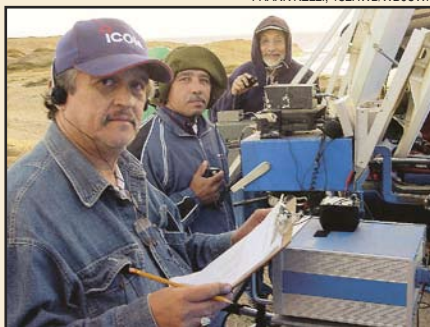
Working the 2006 ARRL 10 GHz and Up Contest from Mexico (*con permiso*)

Frank Kelly, WB6CWN, and Miguel Ramirez, W6YLZ

This year, the *Federación Mexicana de Radio Experimentadores* (the FMRE is roughly the Mexican equivalent of the ARRL in the US) required foreign hams to obtain both a Mexican radio license and a contest endorsement to operate as entrants in the 10 GHz and Up Cumulative Contest. It also required those operators to be accompanied by an equal number of Mexican licensed operators during the contest operation.

The paperwork and political logistics were aptly managed by Miguel Ramirez, W6YLZ, in the US, with the help of his friends Ramon Santoyo, XE1KK, and Pepe Lozano, XE2MX, on the Mexican side. Miguel joined the FMRE and enlisted the help of FMRE President Dr Carlos Levy, XE1YK, who sent a letter of support to COFETEL, Mexico's equivalent to the FCC. Pepe is interested in microwaves and looked to enter the contest representing the Mexican contingent, but a broken leg soon changed his plans. Bernardo Gonzalez, XE2HWW, took his place and soon Antonio Hernandez-Garza, XE2HWH, joined as *compadres* to Miguel and Frank, WB6CWN. The Mexican licenses and contest endorsements arrived via international mail in July; Miguel and Frank were issued the call signs 4C3HWH and 4C2HWW, respectively.

Dave Glawson, WA6CGR, and Pat Coker, N6RMJ, of the San Bernardino Microwave Society generously loaned the growing team 10 GHz radios they built for the purpose of helping others



Antonio Hernandez-Garza, XE2HWH; Bernardo Gonzalez, XE2HWW, and Miguel Ramirez, 4C3HWH, operating from Punta San Antonio, Baja California, Mexico.

get on the air, and Chip Angle, N6CA, helped Miguel with improvements to his rig. Frank took the same radio (which includes a DSP receiver and 15 W output) he's used for several years in Mexico.

After the licenses and permits were obtained, the focus turned to travel planning, and then packing. The first contest weekend in August included a two day drive down Baja's Highway 1 to a point near Bahia Tortugas on the Vizcaino Peninsula at the end of 60 miles of very rough dirt road. Saturday and Sunday operations were in different grid squares; the whole *campamento* had to be broken down, packed, moved and set back up Sunday morning as quickly as possible. The drive home Monday morning took another two days. The September weekend took only a day's drive down and back, but also required three more nights in sleeping bags and the Sunday morning grid square move.



Frank Kelly, 4C2HWW, Bernardo Gonzalez, XE2HWH, and Miguel Ramirez, 4C3HWH, listen for a distant beacon with Frank's battery portable radio.

The result of all this work are the bonds of friendship built between the hams of two countries, the enjoyment of participating in real adventure with radios in the great outdoors in a beautiful part of the world and an opportunity to work some real 10 GHz DX. For example, the average contact distance was 800 or more kilometers for the August weekend, and 600 or more kilometers in September. Roving stations along the California coast could make an average of 3200 points per stop in 10 minutes by working the four side-by-side stations in Mexico. This year's best DX was almost 1100 kilometers, which required signal ducting over water, refraction passing over 4000 foot high mountains and tropo scattering up California's San Joaquin Valley.

cohort Miguel Ramirez, W6YLZ (operating as 4B2HWW). A review of the Best 10 GHz DX data shows that the top 20 spots all belong to 6-land or XE2 stations, all 20 with distances of 760 kilometers or more. The top five spots were all greater than 1000 kilometers.

Outside of the 6-land/XE2 group, the next best 10 GHz DX spot goes to Mike King, KMØT, for a nice 753 kilometer rain scatter contact with Barry Malowanchuk, VE4MA. From 1-land, Dale Clement, AF1T, and Allen Bardwell, NS1O, secured the best 10 GHz DX from their region with a 635 kilometer contact. In the flat lands of the Upper Midwest, and for the third year in a row, Bruce Richardson, W9FZ, captured the title for Most Contacts. Bruce's 596 contacts, made with 24 different operators,

eclipses his record of 561 made last year. Donn Baker, WA2VOI, was right behind Bruce with 590 contacts, followed by Doug Reed, NØNAS, with 565.

In the "and Up" category, and for a second year in a row, Gary Danielius, WBØLJC, led all 39 operators with a score of 114,097. Gary also led in the Most Contacts category with 561 contacts made with 23 different operators. In the most number of unique calls category, David Glawson, WA6CGR, worked 60 different stations. The top DX spots for the "and Up" category go to Wayne Yoshida, KH6WZ, for 1076 kilometers on 10 GHz; Mark Foster, KA1OJ, for 285 kilometers on 24 GHz; Mark Lewis, NØIO, and Bill McCaa, KØRZ, for 126 kilometers on 47 GHz; Ken Schofield, W1RIL, and Tom Williams, WA1MBA, for 19 kilometers on

75 GHz, and LeRoy Scheppmann, KDØIF, for his 7 kilometer contact on 300+ GHz. Overall, there were 35 stations active on 24 GHz, 10 on 47 GHz, 2 on 75 GHz and 3 on 300+ GHz.

Congratulations to all 115 microwave enthusiasts who met the challenges and participated in the 2006 contest. For 2007, it will be a challenge to reverse the short term trend in the drop in the number of logs submitted. If you live in one of those areas of the country where there is high activity, join in the fun! If you live in an area that is not as active, now is a good time to start talking it up — the next contest is scheduled for August 18-19 and September 15-16, 2007.

Be sure to check out the full contest report and Online Soapbox on the Web at www.arrl.org/contests.

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