

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Rainbird Community Broadcasting Corp
KETCHIKAN, AK
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
May 12, 2016

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1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

2. SUMMARY OF RESULTS

No great circle interference cases were identified during the interference study of the proposed earth station.

3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Coordination data for this earth station was sent to the below listed carriers with a letter dated 03/22/2016.

<u>Company</u>
Comsearch

4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Date: 05/12/2016
Job Number: 160322COMSGE05

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E030241
Licensee Code KRBD
Licensee Name Rainbird Community Broadcasting Corp

Site Information

KETCHIKAN, AK
Venue Name KRBD
Latitude (NAD 83) 55° 20' 57.9" N
Longitude (NAD 83) 131° 39' 5.9" W
Climate Zone A
Rain Zone 3
Ground Elevation (AMSL) 95.7 m / 314.0 ft

Link Information

Satellite Type Geostationary
Mode RO - Receive-Only
Modulation Digital
Satellite Arc 67° W to 143° West Longitude
Azimuth Range 111.3° to 193.7°
Corresponding Elevation Angles 5.4° / 26.1°
Antenna Centerline (AGL) 11.89 m / 39.0 ft

Antenna Information

Receive - P40371
Manufacturer PRODELIN CORPORATION
Model 136-750
Gain / Diameter 41.7 dBi / 3.7 m
3-dB / 15-dB Beamwidth 1.40° / 2.40°

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Frequency Information

Receive 4.0 GHz
Emission / Frequency Range (MHz) 30K0F1D - 10M3G7W / 3700.0 - 4200.0

Max Great Circle Coordination Distance 534.5 km / 332.1 mi
Precipitation Scatter Contour Radius 428.2 km / 266.0 mi

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Coordination Values

KETCHIKAN, AK

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Antenna Model PRODELIN CORPORATION 136-750
Antenna Mode Receive 4.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	15.85	110.93	-10.30	100.00
5	12.31	106.17	-10.30	100.00
10	9.36	101.27	-10.30	100.00
15	7.40	96.29	-10.30	108.86
20	5.97	91.29	-10.30	124.35
25	6.00	86.29	-10.30	124.03
30	8.43	81.31	-10.30	100.00
35	7.49	76.30	-10.30	107.97
40	7.64	71.31	-10.30	106.33
45	9.15	66.35	-10.30	100.00
50	9.24	61.36	-10.30	100.00
55	8.71	56.36	-10.30	100.00
60	7.33	51.32	-10.30	109.68
65	8.60	46.38	-9.58	100.20
70	8.53	41.39	-7.86	107.63
75	9.45	36.49	-5.89	107.71
80	9.97	31.59	-3.94	111.54
85	9.95	26.65	-2.63	117.32
90	10.26	21.81	-1.02	122.09
95	11.44	17.34	1.30	124.70
100	12.18	13.14	4.56	134.23
105	11.67	8.85	8.85	163.44
110	10.56	5.08	14.54	534.54
115	8.66	0.92	35.49	475.64
120	5.10	4.72	15.26	317.17
125	1.44	10.35	6.35	314.75
130	1.44	12.69	5.01	302.99
135	0.69	15.57	2.36	322.06
140	0.93	17.41	1.25	295.60
145	0.49	19.71	-0.13	318.28
150	0.49	21.41	-0.86	312.71
155	0.00	23.35	-1.64	344.18
160	0.00	24.60	-2.14	340.46
165	0.00	25.59	-2.42	338.40
170	0.00	26.32	-2.56	337.33
175	1.12	25.64	-2.43	260.57
180	0.40	26.50	-2.60	310.13
185	0.00	26.75	-2.65	336.69

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Coordination Values

KETCHIKAN, AK

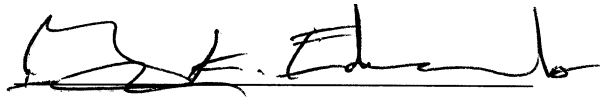
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Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	26.32	-2.56	337.33
195	0.00	26.10	-2.52	337.65
200	0.00	26.77	-2.65	336.66
205	1.02	27.33	-2.77	261.90
210	0.61	29.93	-3.29	284.84
215	2.83	31.11	-3.75	206.15
220	3.43	34.16	-4.96	187.54
225	2.96	38.19	-6.58	189.61
230	5.95	40.82	-7.63	135.16
235	9.93	43.80	-8.82	100.00
240	9.93	48.42	-9.98	100.00
245	9.93	53.08	-10.30	100.00
250	9.93	57.79	-10.30	100.00
255	9.93	62.52	-10.30	100.00
260	12.42	67.00	-10.30	100.00
265	12.43	71.84	-10.30	100.00
270	12.43	76.69	-10.30	100.00
275	12.43	81.54	-10.30	100.00
280	12.42	86.40	-10.30	100.00
285	11.34	91.25	-10.30	100.00
290	11.34	96.08	-10.30	100.00
295	11.34	100.92	-10.30	100.00
300	11.34	105.74	-10.30	100.00
305	11.37	110.56	-10.30	100.00
310	12.38	115.49	-10.30	100.00
315	14.03	120.53	-10.30	100.00
320	15.75	125.61	-10.30	100.00
325	17.07	130.68	-10.30	100.00
330	18.35	135.75	-10.30	100.00
335	19.01	134.64	-10.30	100.00
340	19.19	129.86	-10.30	100.00
345	19.37	125.06	-10.30	100.00
350	18.93	120.34	-10.30	100.00
355	18.40	115.57	-10.30	100.00

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: _



Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: May 12, 2016