

OCTOBER 17, 2019

KMSW-LP – San Antonio, TX - Facility ID# 197562

Modification - 100 w ERP

- Modification of licensed timeshared facility to increase power to 100 watts ERP **with current authorized facility**. Updated Second Adjacent Waiver Exhibit is attached. Station parameters are as follows:

Coordinates: 29 26 33.36 N, 98 29 56.97 W (NAD 83)

AGL: 15.5 meters

Elevation: 204.8 meters

COR AMSL: 220.3 meters

HAAT: - 6 meters

Second Adjacent Exhibit & Waiver Request

Modification of Special Temporary Authority for existing location.

The attached D/U Ratio Study exported from V-Soft FM Probe 4 software calculates of estimated signal strength for KQXT-FM at 117.25 dBuV/m, and KONO-FM at 94.23 dBuV/m, With additional 40 dBu protection, KONO-FM is protected to 134.23 dBuV/m.

Using a single-bay antenna, a worst-case interference to KONO is calculated to a radius of 6.9 meters will fall no lower than 7 meters below the center of radiation. Facility is placed on mast over roof of building. The uppermost occupied floors are unoccupied storage areas. Any residual interference will remain sufficiently cleared of any population or 4-laned roadways. No population will receive interference according to the D/U ratio method.

Engineering Study Calculations
via V-Soft Probe 4 software

KONO-FM signal calculations at reference point:

Point Information Report

Latitude: 29-26-32.50 N
Longitude: 098-29-55.90 W

Signal Strength: 94.228 dBuV/m
Elevation: 201.932 m

Distance From Transmitter: 23.584 km
Azimuth From Transmitter: 112.39 degrees

Call Letters: KONO-FM
File Number: BMLH20001010ACP
Latitude: 29-31-25 N
Longitude: 098-43-25 W
ERP: 98.00 kW
Channel: 266
Frequency: 101.1 MHz
AMSL Height: 612.0 m
Elevation: 280.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No

KQXT-FM signal calculations at reference point:

Point Information Report

Latitude: 29-26-32.50 N
Longitude: 098-29-55.90 W

Signal Strength: 117.255 dBuV/m
Elevation: 201.932 m

Distance From Transmitter: 3.047 km
Azimuth From Transmitter: 330.95 degrees

Call Letters: KQXT-FM
File Number: BLH20070817ACA
Latitude: 29-25-06 N
Longitude: 098-29-01 W
ERP: 100.00 kW
Channel: 270
Frequency: 101.9 MHz
AMSL Height: 408.0 m
Elevation: 198.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No

Study Information:

D/U Ratio Study

Signal Resolution: 0.5 km

Study Date: 4/9/2019

Land Cover was not considered in this study.

Primary Terrain: V-Soft 30 Second US Database

Secondary Terrain: V-Soft 3 Second Alaska Terrain

Coordinate System: NAD27

Transmitters:

Transmitter Information:

Call Letters: KEPJ-LP

File Number: BLL20180517AAB

Latitude: 29-26-32.50 N

Longitude: 098-29-55.90 W

ERP: 0.1 kW

Channel: 243

Frequency: 96.5 MHz

AMSL Height: 222.3 m

Elevation: 204.8 m

Horiz. Antenna Pattern: Omni

Vert. Elevation Pattern: No

Propagation Model: Longley-Rice

Climate: Continental temperate

Conductivity: 0.0050

Dielectric Constant: 15.0

Refractivity: 311.0

Receiver Height AG: 9.1 m

Receiver Gain: 0 dB

Time Variability: 50.0%

Situation Variability: 50.0%

ITM Mode: Broadcast

Transmitter Information:

Call Letters: KXXM

File Number: BLH20100510AVZ

Latitude: 29-38-01 N

Longitude: 098-37-54 W

ERP: 100.00 kW

Channel: 241

Frequency: 96.1 MHz

AMSL Height: 540.0 m
Elevation: 437.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No
Propagation Model: Longley-Rice
Climate: Continental temperate
Conductivity: 0.0050
Dielectric Constant: 15.0
Refractivity: 311.0
Receiver Height AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 10.0%
Situation Variability: 50.0%
ITM Mode: Broadcast

Study Information:

D/U Ratio Study

Signal Resolution: 0.5 km
Study Date: 10/17/2019

Land Cover was not considered in this study.

Primary Terrain: V-Soft 30 Second US Database
Secondary Terrain: V-Soft 3 Second Alaska Terrain
Coordinate System: NAD27

Transmitters:

Transmitter Information:

Call Letters: KMSW-LP
File Number: BLL20180517AAA
Latitude: 29-26-32.50 N
Longitude: 098-29-55.90 W
ERP: 0.05 kW
Channel: 268
Frequency: 101.5 MHz
AMSL Height: 220.3 m
Elevation: 204.8 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No
Propagation Model: Longley-Rice
Climate: Continental temperate
Conductivity: 0.0050
Dielectric Constant: 15.0
Refractivity: 311.0
Receiver Height AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 50.0%
Situation Variability: 50.0%
ITM Mode: Broadcast

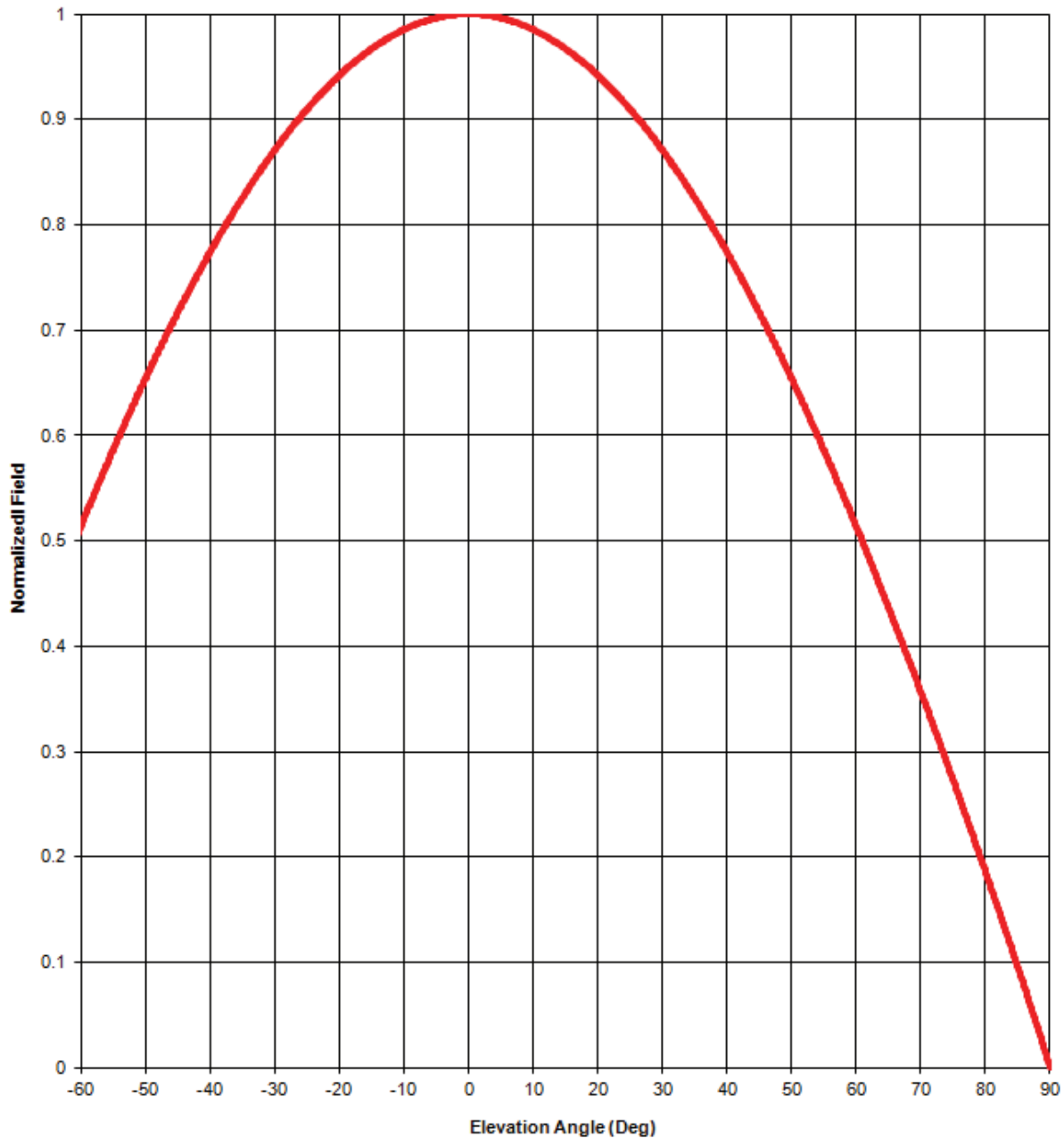
Transmitter Information:

Call Letters: KQXT-FM
File Number: BLH20070817ACA
Latitude: 29-25-06 N
Longitude: 098-29-01 W
ERP: 100.00 kW
Channel: 270
Frequency: 101.9 MHz
AMSL Height: 408.0 m
Elevation: 198.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No
Propagation Model: Longley-Rice
Climate: Continental temperate
Conductivity: 0.0050
Dielectric Constant: 15.0
Refractivity: 311.0
Receiver Height AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 10.0%
Situation Variability: 50.0%
ITM Mode: Broadcast

Transmitter Information:

Call Letters: KONO-FM
File Number: BMLH20001010ACP
Latitude: 29-31-25 N
Longitude: 098-43-25 W
ERP: 98.00 kW
Channel: 266
Frequency: 101.1 MHz
AMSL Height: 612.0 m
Elevation: 280.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No
Propagation Model: Longley-Rice
Climate: Continental temperate
Conductivity: 0.0050
Dielectric Constant: 15.0
Refractivity: 311.0
Receiver Height AG: 9.1 m
Receiver Gain: 0 dB
Time Variability: 10.0%
Situation Variability: 50.0%
ITM Mode: Broadcast

Elevation pattern



Antenna model: 6812b, single bay

Test frequency: 98.1 MHz

Gain (maximum):

Power	dB
0.46	-3.39 dB

Document No. 6812b 1-bay fw (130701)

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Degrees	Rel. Field
1	1.000
2	0.999
3	0.999
4	0.998
5	0.996
6	0.995
7	0.993
8	0.991
9	0.988
10	0.985
11	0.982
12	0.979
13	0.975
14	0.971
15	0.967
16	0.963
17	0.958
18	0.953

Degrees	Rel. Field
19	0.948
20	0.942
21	0.936
22	0.930
23	0.924
24	0.917
25	0.910
26	0.903
27	0.895
28	0.887
29	0.879
30	0.871
31	0.862
32	0.854
33	0.845
34	0.835
35	0.826
36	0.816

Degrees	Rel. Field
37	0.806
38	0.796
39	0.785
40	0.774
41	0.763
42	0.752
43	0.741
44	0.729
45	0.717
46	0.705
47	0.693
48	0.680
49	0.667
50	0.654
51	0.641
52	0.628
53	0.614
54	0.600

Degrees	Rel. Field
55	0.586
56	0.572
57	0.558
58	0.544
59	0.529
60	0.514
61	0.499
62	0.484
63	0.469
64	0.453
65	0.437
66	0.422
67	0.406
68	0.390
69	0.373
70	0.357
71	0.341
72	0.324

Degrees	Rel. Field
73	0.307
74	0.290
75	0.273
76	0.256
77	0.239
78	0.221
79	0.204
80	0.186
81	0.168
82	0.151
83	0.133
84	0.114
85	0.096
86	0.078
87	0.059
88	0.040
89	0.021
90	0.000

Elevation Pattern Tabulation

Antenna model: 6812b, single bay

Relative Field at 0° Depression = 1.000

Antenna Depression Angle Calculations

Shively 6812 – 1 Bay

Power – 100 w

Height – 14.5 m m

Contour – 134.23

depression angle below horizon	relative field	db from relative	ERP	angular distance to contour	vertical distance	horizontal distance	clearance above ground
0	1.000	0.00	100.00	13.621	0.000	13.621	15.500
5	0.996	-0.03	99.20	13.567	1.182	13.515	14.318
10	0.985	-0.13	97.02	13.417	2.330	13.213	13.170
15	0.967	-0.29	93.51	13.172	3.409	12.723	12.091
20	0.942	-0.52	88.74	12.831	4.389	12.057	11.111
25	0.910	-0.82	82.81	12.395	5.239	11.234	10.261
30	0.871	-1.20	75.86	11.864	5.932	10.275	9.568
35	0.826	-1.66	68.23	11.251	6.453	9.216	9.047
40	0.774	-2.23	59.91	10.543	6.777	8.076	8.723
45	0.717	-2.89	51.41	9.766	6.906	6.906	8.594
50	0.654	-3.69	42.77	8.908	6.824	5.726	8.676
55	0.586	-4.64	34.34	7.982	6.539	4.578	8.961
60	0.514	-5.78	26.42	7.001	6.063	3.501	9.437
65	0.437	-7.19	19.10	5.953	5.395	2.516	10.105
70	0.357	-8.95	12.74	4.863	4.570	1.663	10.930
75	0.273	-11.28	7.45	3.719	3.592	0.962	11.908
80	0.186	-14.61	3.46	2.534	2.495	0.440	13.005
85	0.096	-20.35	0.92	1.308	1.303	0.114	14.197
90	0.001	-60.00	0.00	0.014	0.014	0.000	15.486