

KJZX-LP – Austin, Texas - Facility ID# 195044

November 2019

Description - Minor modification:

- Adjust power - 100 watts ERP
- Updated Engineering Exhibit
- Adjust antenna height - 16.4 m AGL

Second Adjacent Exhibit & Waiver Request

Minor modification requests second adjacent waiver. Exhibit is provided demonstrating no interference will be caused to any population.

The attached D/U Ratio Study dataset exported from V-Soft FM Probe 4 software calculates KAZI with an estimated signal strength of 84.2 dBuV/m at the site, and KMFA at 97.9 dBuV/m. With an additional 40 dBu, KAZI is protected to 124.2 dBuV/m.

Height of radiation center will be 16.4 meters above ground level.

At 100 watts ERP, a worst-case interference radius is rounded to 26 meters at 2m AGL.

Calculated interference is cleared of occupied areas. No population will be subject to interference from the proposed station according to the undesired-to-desired ratio method.

The full data export of engineering parameters are attached with this exhibit.

Export of calculations from Engineering Study
V-Soft Probe 4 software

Signal calculations at reference point:

Point Information Report

Latitude: 30-18-11.5 N
Longitude: 097-41-30.4 W

Signal Strength: 84.21 dBuV/m
Elevation: 185.14 m

Distance From Transmitter: 13.269 km
Azimuth From Transmitter: 77.34 degrees

Call Letters: KAZI
File Number: BLED20180522AAR
Latitude: 30-16-37.75 N
Longitude: 97-49-35.03 W
ERP: 1.70 kW
Channel: 204
Frequency: 88.7 MHz
AMSL Height: 328.0 m
Elevation: 281.0 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No

Point Information Report

Latitude: 30-18-11.5 N
Longitude: 097-41-30.4 W

Signal Strength: 97.92 dBuV/m
Elevation: 185.14 m

Distance From Transmitter: 10.62 km
Azimuth From Transmitter: 49.2 degrees

Call Letters: KMFA
File Number: BLED20020812ABQ
Latitude: 30-19-23.75 N
Longitude: 097-47-59.02 W
ERP: 40.00 kW
Channel: 208
AMSL Height: 614 m
Elevation: 251 m
Horiz. Antenna Pattern: Omni
Vert. Elevation Pattern: No

Study Information:

D/U Ratio Study

Signal Resolution: 0.5 km

Study Date: 11/21/2019

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: KJZX-LP

Latitude: 30-18-11.5 N

Longitude: 097-41-30.4 W

ERP: 0.1 kW

Channel: 206

Frequency: 89.1 MHz

AMSL Height: 195.7 m

Elevation: 179.3 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:

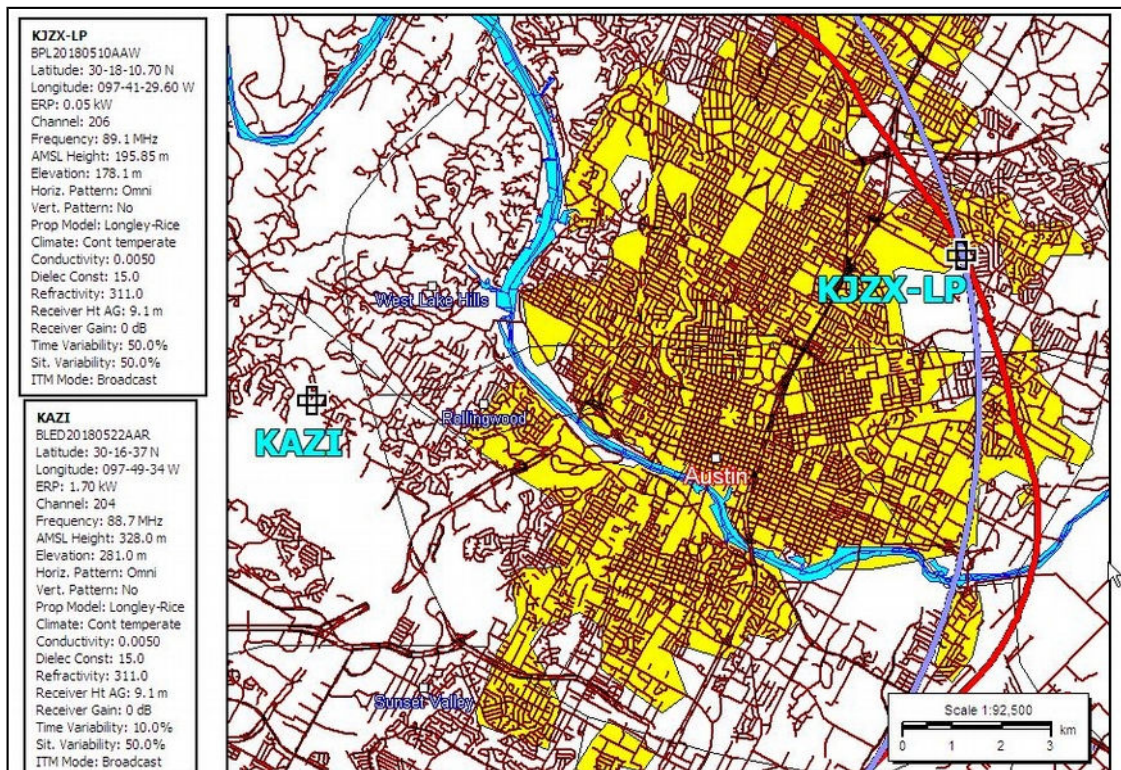
Transmitter Information:

Call Letters: KAZI
File Number: BLED20180522AAR
Latitude: 30-16-37.75 N
Longitude: 97-49-35.03 W
ERP: 1.70 kW
Channel: 204
Frequency: 88.7 MHz
AMSL Height: 328.0 m
Elevation: 281.0 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: KMFA
File Number: BLED20020812ABQ
Latitude: 30-19-23.74 N
Longitude: 097-47-59.02 W
ERP: 40.00 kW
Channel: 208
Frequency: 89.5 MHz
AMSL Height: 614 m
Elevation: 251 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

KAZI – Elevation profile and 84.21 dBu signal at antenna site:



KAZI – Elevation to KJZX-LP



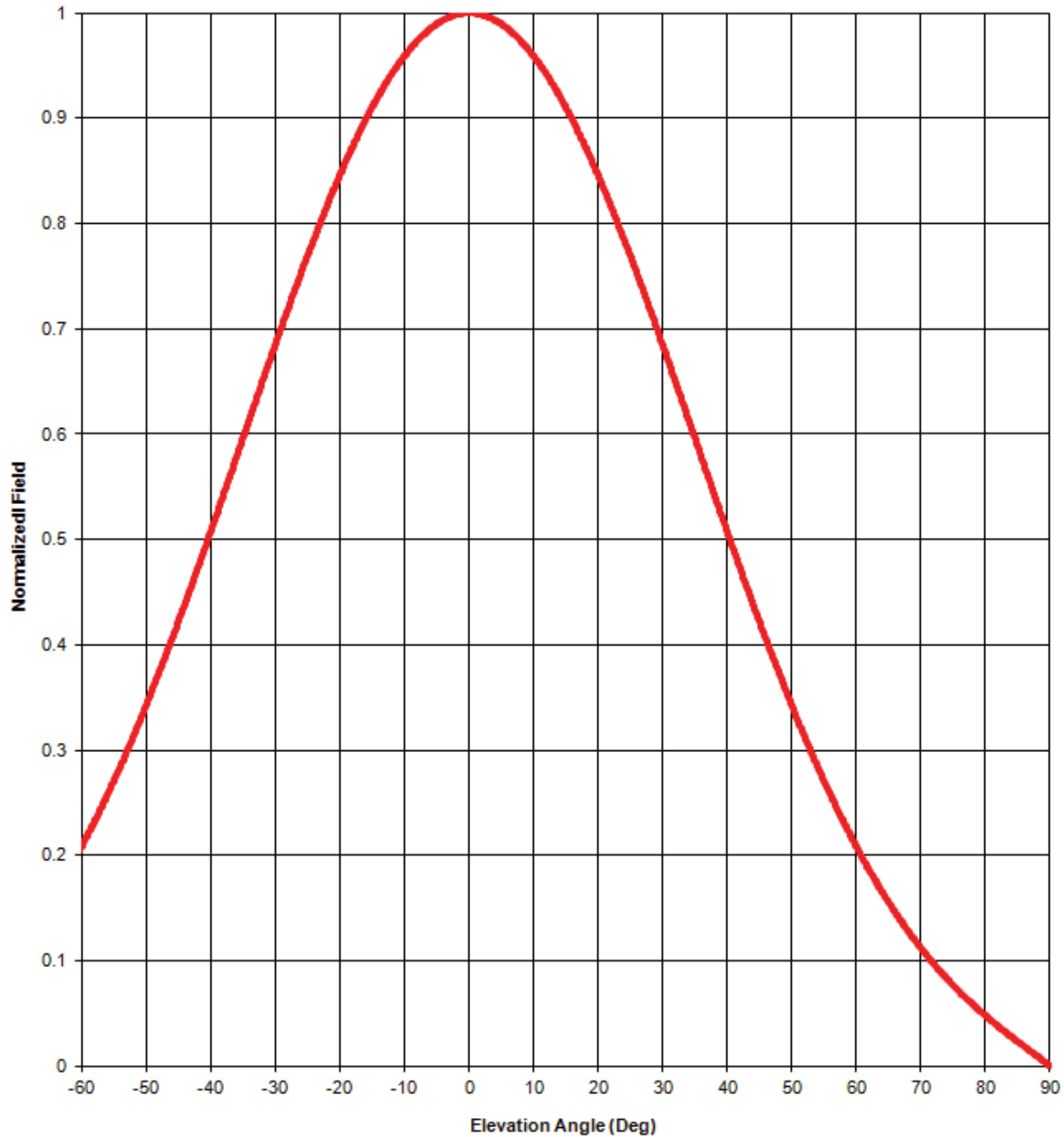
Depression Angle Calculations

Shively 2-bay half-wave array

100 watts ERP

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	43.223	0	43	16
5	0.990	-0.09	98.01	42.791	4	43	13
10	0.959	-0.36	91.97	41.451	7	41	9
15	0.910	-0.82	82.81	39.333	10	38	6
20	0.846	-1.45	71.57	36.567	13	34	4
25	0.770	-2.27	59.29	33.282	14	30	2
30	0.685	-3.29	46.92	29.608	15	26	2
35	0.596	-4.50	35.52	25.761	15	21	2
40	0.508	-5.88	25.81	21.957	14	17	2
45	0.422	-7.49	17.81	18.240	13	13	4
50	0.342	-9.32	11.70	14.782	11	10	5
55	0.271	-11.34	7.34	11.714	10	7	7
60	0.208	-13.64	4.33	8.990	8	4	9
65	0.156	-16.14	2.43	6.743	6	3	10
70	0.112	-19.02	1.25	4.841	5	2	12
75	0.077	-22.27	0.59	3.328	3	1	13
80	0.048	-26.38	0.23	2.075	2	0	14
85	0.023	-32.77	0.05	0.994	1	0	15
90	0.001	-60.00	0.00	0.043	0	0	16

Elevation pattern



Antenna model: 6812b, 2-bay half-wave-spaced

Test frequency: 98.1 MHz

Gain (maximum):

Power	dB
0.63	-1.97 dB

Document No. 6812b 2-bay hw (130701)

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Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field	Degrees	Rel. Field
1	1.000	19	0.860	37	0.561	55	0.271	73	0.090
2	0.998	20	0.846	38	0.543	56	0.258	74	0.083
3	0.996	21	0.832	39	0.525	57	0.245	75	0.077
4	0.993	22	0.817	40	0.508	58	0.232	76	0.070
5	0.990	23	0.801	41	0.490	59	0.220	77	0.064
6	0.985	24	0.786	42	0.473	60	0.208	78	0.059
7	0.980	25	0.770	43	0.456	61	0.197	79	0.053
8	0.974	26	0.753	44	0.439	62	0.186	80	0.048
9	0.967	27	0.736	45	0.422	63	0.176	81	0.043
10	0.959	28	0.720	46	0.405	64	0.165	82	0.038
11	0.951	29	0.702	47	0.389	65	0.156	83	0.033
12	0.942	30	0.685	48	0.373	66	0.146	84	0.028
13	0.932	31	0.667	49	0.358	67	0.137	85	0.023
14	0.921	32	0.650	50	0.342	68	0.128	86	0.019
15	0.910	33	0.632	51	0.327	69	0.120	87	0.014
16	0.899	34	0.614	52	0.313	70	0.112	88	0.009
17	0.886	35	0.596	53	0.298	71	0.104	89	0.005
18	0.873	36	0.578	54	0.284	72	0.097	90	0.000

Elevation Pattern Tabulation

Antenna model: 6812b, 2-bay half-wave-spaced

Relative Field at 0° Depression = 1.000