

KHANNA & GUILL, Inc. – Consulting Engineers
Radio – Television

NIGHTTIME ALLOCATION STUDIES
KCKY, APACHE JUNCTION, ARIZONA
1150 kHz – 0.185 kW N/5 kW D – DA-1

*Exhibit 16 - Form 301, Section III-A AM Engineering
Technical Specifications*

Engineering Exhibit of KCKY, Apache Junction, Arizona

NIGHTTIME RSS LIMITS TO PERTINENT STATIONS
FROM THE PRESENT 1 KW NIGHTTIME OPERATION OF
KCKY, APACHE JUNCTION, ARIZONA
DECEMBER 2004

(Page 1 of 8)

Night Allocation Protection Report

Call: KCKY
 Freq: 1150 kHz
 COOLIDGE, AZ, US
 Lat: 33-00-27 N
 Lng: 111-32-54 W
 Power: 1.0 kW
 Theo RMS: 315.43 mV/m @ 1km
 # of Augmentations: 1

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Switch	TL Switch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	84.2	0	0	0.0	0.0	0.0	0.0
2	0.800	-70.0	240.0	166.0	84.2	0	0	0.0	0.0	0.0	0.0

Call Letters	Ct	St	City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
KSVE	US	TX	EL PASO	104.75	14.88	24.34	121.42	9.71	400.06	444.51	-44.45
50% = 14.985, 25% = 16.18; KCKY=10.79 WJBO=7.64 KDEF=7.05 KSAL=6.10											
XERM/A	MX	BN	MEXICALI	264.84	26.41	26.41	149.58	8.06	269.44	269.44	0.00
50% = 10.422, 25% = 11.288; KCKY=8.06 KXTA=6.61 KSAL=3.28 KSVE=2.84											
KDEF	US	NM	ALBUQUERQUE	60.47	14.40	23.65	116.90	4.65	199.03	199.03	0.00
50% = 12.31, 25% = 14.093; KSAL=10.98 KSVE=5.57 WJBO=5.04 KCKY=4.65											
CKX/A (0)	CA	MB	BRANDON	16.31	0.00	0.00	4.87	0.50	512.95S	375.83	137.12
CKX/A (5)	CA	MB	BRANDON	17.44	0.00	0.00	4.79	0.50	522.20S	368.97	153.23
CKX/A (70)	CA	MB	BRANDON	26.10	0.00	0.00	7.77	0.50	321.78S	302.53	19.25
CKX/A (75)	CA	MB	BRANDON	26.38	0.00	0.00	7.86	0.50	318.11S	299.98	18.13

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(Page 2 of 8)

Call Letters	Ct	St	City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
CKX/A (80)	CA	MB	BRANDON	26.55	0.02	0.02	7.99	0.50	312.83S	298.40	14.42
CKX/A (85)	CA	MB	BRANDON	26.68	0.08	0.08	8.13	0.50	307.67S	297.19	10.48
CKX/A (90)	CA	MB	BRANDON	26.77	0.14	0.14	8.26	0.50	302.51S	296.39	6.12
KSL (0)	US	UT	SALT LAKE CITY	357.50	5.47	10.49	40.93	0.50	610.81G	437.93	172.88
KSL (5)	US	UT	SALT LAKE CITY	358.35	5.51	10.55	41.21	0.50	606.63G	436.47	170.16
KSL (290)	US	UT	SALT LAKE CITY	346.69	6.44	11.92	48.12	0.50	519.48G	445.37	74.11
KSL (295)	US	UT	SALT LAKE CITY	347.20	6.29	11.70	47.01	0.50	531.82G	445.50	86.31
WJBO	US	LA	BATON ROUGE	92.93	0.00	2.67	15.54	1.55	498.11	498.11	0.00
50% = 3.987, 25% = 4.876; XETVR/A=2.36 XERRF/A=1.88 HJBT-A=1.85 YVMV-A=1.84 KCKY=1.55 XEJP/A=1.51 XEXZ/A=1.28 WJRD=1.26											
KAGO	US	OR	KLAMATH FALLS	321.63	2.96	6.87	26.75	2.16	404.35	404.35	0.00
50% = 5.646, 25% = 7.253; KKNW=3.86 KSL=3.03 KGEM=2.79 KCKY=2.16 KXTA=2.15 KNRC=2.09 KSEN=1.88 CKBL/ =1.87											
KKNW	US	WA	SEATTLE	334.24	0.27	3.18	14.05	1.24	442.50	442.50	0.00
50% = 3.161, 25% = 4.27; KGEM=2.64 KSL=1.75 KSAL=1.47 CKBL/ =1.32 KCKY=1.24 KAGO=1.19 KXTA=1.18											
KSAL	US	KS	SALINA	58.64	2.59	6.35	24.81	0.92	184.42	172.32	12.10
50% = 2.693, 25% = 3.728; WJBO=2.22 KSL=1.52 KSVE=1.34 KWKY=1.15 KDEF=0.97 XETVR/A=0.94 KXTA=0.93 KNRC=0.92											
KSAL	US	KS	SALINA	58.63	2.59	6.35	24.81	0.92	184.58	172.26	12.33
50% = 2.692, 25% = 3.728; WJBO=2.22 KSL=1.52 KSVE=1.34 KWKY=1.15 KDEF=0.97 XETVR/A=0.94 KXTA=0.93 KNRC=0.92											
KSEN	US	MT	SHELBY	359.17	0.90	4.02	15.45	1.42	459.17	439.84	19.33
50% = 4.688, 25% = 5.677; KSAL=3.19 KSL=2.53 KAGO=2.33 CKBL/ =2.20 KKNW=1.81 KIMM=1.46											

Engineering Exhibit of KCKY, Apache Junction, Arizona

NIGHTTIME RSS LIMITS TO PERTINENT STATIONS
FROM THE PRESENT 1 kW NIGHTTIME OPERATION OF
KCKY, APACHE JUNCTION, ARIZONA
DECEMBER 2004

(Page 3 of 8)

Call Letters	Ct St City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
NEW	US CA AUBERRY	304.26	7.66	13.73	58.77	3.64	310.08	276.98	33.11
50% = 14.578, 25% = 14.578; KXTA=14.58									
KXTA	US CA LOS ANGELES	282.59	11.97	20.11	95.18	2.12	111.54	62.98	48.56
50% = 7.059, 25% = 8.493; XERM/A=6.13 KSFN=3.51 KSAL=2.86 KSL=2.82 WJBO=2.49									
KXTA	US CA DOWNEY	282.59	11.97	20.11	95.18	2.12	111.54	62.98	48.56
50% = 7.059, 25% = 8.493; XERM/A=6.13 KSFN=3.51 KSAL=2.86 KSL=2.82 WJBO=2.49									
NEW	US CA EASTON	302.66	7.73	13.84	59.39	4.17	351.48	261.19	90.29
50% = 16.698, 25% = 16.698; KXTA=16.70									
XESO/A	MX SO CD.OBREGON	165.75	15.48	15.48	107.19	3.96	184.87	93.35	91.52
50% = 8.735, 25% = 11.192; XERM/A=5.82 XEAD/A=5.17 WJBO=3.96 KSVE=3.88 KXTA=3.73 XEJP/A=3.28 XEXZ/A=3.03									
XEJS/O	MX CH HIDALGO DEL PAR	138.32	10.25	10.25	76.73	4.72	307.53	178.46	129.07
50% = 9.439, 25% = 13.941; WJBO=7.71 XEAD/A=5.44 KCCT=4.56 XEXZ/A=4.48 XEJP/A=4.11 XEBF/A=4.04 KSVE=4.02 XESO/A=3.88									
KNED	US OK MCALESTER	77.25	2.26	5.90	24.24	3.05	629.52	421.21	208.31
50% = 12.21, 25% = 12.21; KSAL=10.83 WJBO=5.64									
TGRR-D (0)	GT RELOJ	123.45	0.00	0.00	4.66	0.51	543.38s	298.90	244.48
TGRR-D (5)	GT RELOJ	122.99	0.00	0.00	4.56	0.51	554.10s	303.37	250.73
TGRR-D (10)	GT RELOJ	122.53	0.00	0.00	4.47	0.50	564.30s	307.80	256.50
TGRR-D (15)	GT RELOJ	122.06	0.00	0.00	4.37	0.50	573.16s	312.37	260.79
TGRR-D (20)	GT RELOJ	121.73	0.00	0.00	4.26	0.50	586.96s	315.56	271.40
TGRR-D (330)	GT RELOJ	127.87	0.00	0.00	4.38	0.60	679.93s	256.74	423.19
TGRR-D (335)	GT RELOJ	127.58	0.00	0.00	4.33	0.60	696.41s	259.41	437.00

NIGHTTIME RSS LIMITS TO PERTINENT STATIONS
FROM THE PRESENT 1 kW NIGHTTIME OPERATION OF
KCKY, APACHE JUNCTION, ARIZONA
DECEMBER 2004

(Page 4 of 8)

Call Letters	Ct	St	City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
TGRR-D (340)	GT		RELOJ	127.32	0.00	0.00	4.28	0.61	708.30s	261.85	446.45
TGRR-D (345)	GT		RELOJ	125.64	0.00	0.00	4.72	0.53	564.38s	277.85	286.52
TGRR-D (350)	GT		RELOJ	125.13	0.00	0.00	4.66	0.53	570.75s	282.77	287.98
TGRR-D (355)	GT		RELOJ	123.92	0.00	0.00	4.76	0.51	531.60s	294.37	237.23
KNRC	US	CO	LITTLETON	37.39	6.50	12.01	48.67	4.00	410.86	172.25	238.61
50% = 14.718, 25% = 15.998; KSAL=14.72 KDEF=4.53 KSL=4.33											
KNRC	US	CO	ENGLEWOOD	37.39	6.50	12.01	48.67	4.00	410.86	172.25	238.61
50% = 14.718, 25% = 15.998; KSAL=14.72 KDEF=4.53 KSL=4.33											
KNRC	US	CO	ENGLEWOOD	37.39	6.50	12.01	48.67	4.00	410.86	172.25	238.61
50% = 14.718, 25% = 15.998; KSAL=14.72 KDEF=4.53 KSL=4.33											
WJRD	US	AL	TUSCALOOSA	82.71	0.00	1.11	11.49	1.72	749.88	465.51	284.37
50% = 5.923, 25% = 7.094; WJBO=5.92 WGOW=2.26 WNDB=1.98 YVMV-A=1.79 HJBT-A=1.72											
WJRD	US	AL	TUSCALOOSA	82.71	0.00	1.11	11.49	1.72	750.03	465.52	284.50
50% = 5.927, 25% = 7.096; WJBO=5.93 WGOW=2.26 WNDB=1.99 YVMV-A=1.79 HJBT-A=1.72											
WJRD	US	AL	NORTHPORT	82.71	0.00	1.11	11.49	1.72	750.03	465.52	284.50
50% = 5.927, 25% = 7.096; WJBO=5.93 WGOW=2.26 WNDB=1.99 YVMV-A=1.79 HJBT-A=1.72											
NEW	US	MT	BOZMAN	1.62	2.65	6.44	23.57	3.43	727.44	433.48	293.96
50% = 11.194, 25% = 13.717; KSEN=11.19 KSL=4.79 KIMM=4.49 KSAL=4.45											

NIGHTTIME RSS LIMITS TO PERTINENT STATIONS
FROM THE PROPOSED 0.185 kW SECONDARY NIGHTTIME OPERATION OF
KCKY, APACHE JUNCTION, ARIZONA
DECEMBER 2004
 (Page 5 of 8)

Night Allocation Protection Report

Call: KCKY
 Freq: 1150 kHz
 APACHE JUNCTION, AZ, US
 Lat: 33-00-27 N
 Lng: 111-32-57 W
 Power: 0.185 kW
 Theo RMS: 132.83 mV/m @ 1km

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swch	TL Swch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	84.2	0	0	0.0	0.0	0.0	0.0
2	0.400	-120.0	240.0	166.0	84.2	0	0	0.0	0.0	0.0	0.0

Call Letters	Ct	St	City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
KSVE	US	TX	EL PASO	104.75	14.88	24.34	121.43	4.05	166.56	162.55	4.01
50% = 14.985, 25% = 16.18; KCKY=10.79 WJBO=7.64 KDEF=7.05 KSAL=6.10											
KXTA	US	CA	DOWNEY	282.59	11.97	20.11	95.17	2.12	111.55	91.69	19.86
50% = 7.059, 25% = 8.493; XERM/A=6.13 KSFN=3.51 KSAL=2.86 KSL=2.82 WJBO=2.49											
KXTA	US	CA	LOS ANGELES	282.59	11.97	20.11	95.17	2.12	111.55	91.69	19.86
50% = 7.059, 25% = 8.493; XERM/A=6.13 KSFN=3.51 KSAL=2.86 KSL=2.82 WJBO=2.49											
KCKY	US	AZ	COOLIDGE	320.02	89.98	89.99	457.21	2.77	30.24	0.00	30.24
50% = 9.426, 25% = 11.068; KSAL=5.37 KXTA=4.81 WJBO=4.35 KSVE=4.23 KSL=3.03 XESO/A=2.93 KDEF=2.87 KNRC=2.77											
CKX/A (0)	CA	MB	BRANDON	16.31	0.00	0.00	4.87	0.50	512.96S	165.25	347.70

Engineering Exhibit of KCKY, Apache Junction, Arizona

NIGHTTIME RSS LIMITS TO PERTINENT STATIONS
FROM THE PROPOSED 0.185 KW SECONDARY NIGHTTIME OPERATION OF
KCKY, APACHE JUNCTION, ARIZONA
DECEMBER 2004
 (Page 6 of 8)

Call Letters	Ct	St	City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
CKX/A (70)	CA	MB	BRANDON	26.10	0.00	0.00	7.77	0.50	321.79S	154.68	167.11
CKX/A (75)	CA	MB	BRANDON	26.38	0.00	0.00	7.86	0.50	318.12S	154.26	163.85
CKX/A (80)	CA	MB	BRANDON	26.55	0.02	0.02	7.99	0.50	312.84S	154.00	158.83
CKX/A (85)	CA	MB	BRANDON	26.68	0.08	0.08	8.13	0.50	307.68S	153.80	153.88
CKX/A (90)	CA	MB	BRANDON	26.77	0.14	0.14	8.26	0.50	302.52S	153.67	148.85
XESO/A 50% = 8.735, 25% = 11.192; XERM/A=5.82 XEAD/A=5.17 WJBO=3.96 KSVE=3.88 KXTA=3.73 XEJP/A=3.28 XEXZ/A=3.03	MX	SO	CD.OBREGON	165.75	15.48	15.48	107.19	3.96	184.87	108.36	76.51
KDEF 50% = 12.31, 25% = 14.093; KSAL=10.98 KSVE=5.57 WJBO=5.04 KCKY=4.65	US	NM	ALBUQUERQUE	60.46	14.40	23.65	116.90	3.52	150.70	70.69	80.01
XERM/A 50% = 10.422, 25% = 11.288; KCKY=8.06 KXTA=6.61 KSAL=3.28 KSVE=2.84	MX	BN	MEXICALI	264.84	26.41	26.41	149.57	5.21	174.19	70.65	103.54
KSAL 50% = 2.693, 25% = 3.728; WJBO=2.22 KSL=1.52 KSVE=1.34 KWKY=1.15 KDEF=0.97 XETVR/A=0.94 KXTA=0.93 KNRC=0.92	US	KS	SALINA	58.63	2.59	6.35	24.81	0.92	184.42	75.33	109.08
KSAL 50% = 2.692, 25% = 3.728; WJBO=2.22 KSL=1.52 KSVE=1.34 KWKY=1.15 KDEF=0.97 XETVR/A=0.94 KXTA=0.93 KNRC=0.92	US	KS	SALINA	58.63	2.59	6.35	24.81	0.92	184.58	75.34	109.24
KSL (0)	US	UT	SALT LAKE CITY	357.50	5.47	10.49	40.93	0.50	610.84G	169.56	441.28
KSL (5)	US	UT	SALT LAKE CITY	358.35	5.51	10.55	41.21	0.50	606.66G	169.51	437.15
KSL (290)	US	UT	SALT LAKE CITY	346.68	6.44	11.92	48.12	0.50	519.51G	169.34	350.17
KSL (295)	US	UT	SALT LAKE CITY	347.20	6.29	11.70	47.01	0.50	531.85G	169.39	362.46

NIGHTTIME RSS LIMITS TO PERTINENT STATIONS
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(Page 7 of 8)

Call Letters	Ct St City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
NEW	US CA AUBERRY	304.26	7.66	13.73	58.76	3.64	310.11	149.07	161.04
50% = 14.578, 25% = 14.578; KXTA=14.58									
KAGO	US OR KLAMATH FALLS	321.63	2.96	6.87	26.75	1.81	338.94	168.04	170.90
50% = 5.646, 25% = 7.253; KKNW=3.86 KSL=3.03 KGEM=2.79 KCKY=2.16 KXTA=2.15 KNRC=2.09 KSEN=1.88 CKBL/ =1.87									
XEJS/O	MX CH HIDALGO DEL PAR	138.32	10.25	10.25	76.74	4.72	307.51	129.34	178.16
50% = 9.439, 25% = 13.941; WJBO=7.71 XEAD/A=5.44 KCCT=4.56 XEXZ/A=4.48 XEJP/A=4.11 XEBF/A=4.04 KSVE=4.02 XESO/A=3.88									
NEW	US CA EASTON	302.66	7.73	13.84	59.38	4.17	351.51	146.29	205.22
50% = 16.698, 25% = 16.698; KXTA=16.70									
KKNW	US WA SEATTLE	334.24	0.27	3.18	14.05	1.07	379.89	170.71	209.18
50% = 3.161, 25% = 4.27; KGEM=2.64 KSL=1.75 KSAL=1.47 CKBL/ =1.32 KCKY=1.24 KAGO=1.19 KXTA=1.18									
WJBO	US LA BATON ROUGE	92.93	0.00	2.67	15.54	1.22	392.05	157.89	234.16
50% = 3.987, 25% = 4.876; XETVR/A=2.36 XERRF/A=1.88 HJBT-A=1.85 YVMV-A=1.84 KCKY=1.55 XEJP/A=1.51 XEXZ/A=1.28 WJRD=1.26									
KNRC	US CO ENGLEWOOD	37.38	6.50	12.01	48.67	4.00	410.86	129.49	281.37
50% = 14.718, 25% = 15.998; KSAL=14.72 KDEF=4.53 KSL=4.33									
KNRC	US CO ENGLEWOOD	37.38	6.50	12.01	48.67	4.00	410.86	129.49	281.37
50% = 14.718, 25% = 15.998; KSAL=14.72 KDEF=4.53 KSL=4.33									
KNRC	US CO LITTLETON	37.38	6.50	12.01	48.67	4.00	410.86	129.49	281.37
50% = 14.718, 25% = 15.998; KSAL=14.72 KDEF=4.53 KSL=4.33									

Engineering Exhibit of KCKY, Apache Junction, Arizona

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(Page 8 of 8)

Call Letters	Ct St City	Azi (deg)	Ang Low (deg)	Ang High (deg)	SWFF (100uV/m)	Req Prot (mV/m)	Permis (mV/m)	Cur Rad (mV/m)	Margin (mV/m)
KSEN	US MT SHELBY	359.17	0.90	4.02	15.45	1.42	459.18	170.60	288.58
50% = 4.688, 25% = 5.677; KSAL=3.19 KSL=2.53 KAGO=2.33 CKBL/=2.20 KKNW=1.81 KIMM=1.46									
XEUAS2/A	MX SI CULIACAN	154.82	8.62	8.62	64.13	5.62	438.55	111.02	327.53
50% = 11.249, 25% = 13.888; XEAD/A=8.58 XEJP/A=7.28 XEXZ/A=4.55 WJBO=4.17 XESO/A=4.01 XEBF/A=3.48									
TGRR-D (0)	GT RELOJ	123.45	0.00	0.00	4.66	0.51	543.36s	154.08	389.28
TGRR-D (5)	GT RELOJ	122.99	0.00	0.00	4.56	0.51	554.08s	154.82	399.26
TGRR-D (10)	GT RELOJ	122.53	0.00	0.00	4.47	0.50	564.28s	155.54	408.75
TGRR-D (15)	GT RELOJ	122.06	0.00	0.00	4.37	0.50	573.14s	156.27	416.87
TGRR-D (20)	GT RELOJ	121.73	0.00	0.00	4.26	0.50	586.94s	156.78	430.16
TGRR-D (330)	GT RELOJ	127.87	0.00	0.00	4.38	0.60	679.91s	146.75	533.16
TGRR-D (335)	GT RELOJ	127.58	0.00	0.00	4.33	0.60	696.39s	147.23	549.15
TGRR-D (340)	GT RELOJ	127.32	0.00	0.00	4.28	0.61	708.28s	147.68	560.60
TGRR-D (345)	GT RELOJ	125.64	0.00	0.00	4.72	0.53	564.36s	150.51	413.85
TGRR-D (350)	GT RELOJ	125.13	0.00	0.00	4.66	0.53	570.73s	151.36	419.37
TGRR-D (355)	GT RELOJ	123.92	0.00	0.00	4.76	0.51	531.58s	153.33	378.25
XEBF/A	MX CI SAN PEDRO DE LA	132.04	6.81	6.81	49.36	5.22	528.64	139.52	389.12
50% = 11.472, 25% = 14.0; WJBO=8.77 XEXZ/A=5.25 XETVR/A=5.22 KCCT=4.88 XEJP/A=3.99 KNED=3.60 KDEF=3.42									
NEW	US CA HURON	297.27	7.60	13.64	58.48	7.51	642.56	135.24	507.33
50% = 30.059, 25% = 30.059; KXTA=30.06									
KNED	US OK MCALESTER	77.25	2.26	5.90	24.25	3.05	629.51	110.98	518.53
50% = 12.21, 25% = 12.21; KSAL=10.83 WJBO=5.64									
NEW	US MT BOZMAN	1.62	2.65	6.44	23.57	3.43	727.46	170.14	557.33
50% = 11.194, 25% = 13.717; KSEN=11.19 KSL=4.79 KIMM=4.49 KSAL=4.45									