

# ANALYSIS OF POTENTIAL 2nd/3rd ADJACENT INTERFERENCE

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## FM ANTENNA

NUMBER OF ELEMENTS: 4  
 SPACING BETWEEN ELEMENTS: 270.0 E.Degrees .75 Lambda  
 CENTER OF RADIATION: 423.0 Feet AGL 128.93 Meters  
 EFFECTIVE RADIATED POWER: 100.0 Watts

SIGNAL LEVELS ARE COMPUTED AT: 30.0 Feet AGL 9.14 Meters

INTERFERING CONTOUR: 102.3 dBu Free Space  
 DISTANCE FROM ANTENNA: 1765.9 Feet 538.24 Meters  
 DISTANCE FROM TOWER: 1721.6 Feet 524.74 Meters  
 DEPRESSION ANGLE: 12.86 Degrees

DISTANCE FROM TOWER	FROM ANTENNA	ANGLE (DEG)	FIELD RATIO	dBu at 30.0' AGL WORST CASE	30.0' AGL EXPECTED	LOCATION 102.3 dBu FR TWR	102.3 dBu AGL
*****	*****	*****	*****	*****	*****	*****	*****
Feet	Feet					Feet	Feet
.0	393.0	90.0	.000	115.351+	-48.093	.00	423.00
50.0	396.2	82.7	.006	115.282+	71.094	1.38	412.18
100.0	405.5	75.7	.032	115.079+	85.285	14.10	367.59
150.0	420.7	69.1	.079	114.761+	92.676	49.53	293.23
200.0	441.0	63.0	.129	114.351+	96.584	103.57	219.48
250.0	465.8	57.5	.162	113.876+	98.063	153.50	181.70
255.0	468.5	57.0	.164	113.825+	98.096	157.16	180.80
260.0	471.2	56.5	.165	113.775+	98.108	160.46	180.45 <--
265.0	474.0	56.0	.166	113.724+	98.100	163.40	180.67
300.0	494.4	52.6	.161	113.357+	97.477	172.18	197.44
350.0	526.3	48.3	.123	112.815+	94.639	144.89	260.31
400.0	560.8	44.5	.059	112.264+	87.753	74.94	349.37
450.0	597.5	41.1	.016	111.713+	76.000	21.79	403.97
500.0	636.0	38.2	.091	111.170+	90.320	125.88	324.06
550.0	676.0	35.5	.154	110.640+	94.378	220.94	265.13
600.0	717.3	33.2	.201	110.126+	96.172	296.31	228.92
650.0	759.6	31.2	.230	109.628+	96.847	346.96	213.22
700.0	802.8	29.3	.242	109.147+	96.812	372.15	214.06
750.0	846.7	27.7	.239	108.684+	96.252	373.84	227.11
800.0	891.3	26.2	.224	108.238+	95.251	355.35	248.43
850.0	936.5	24.8	.200	107.809+	93.828	320.50	274.81
900.0	982.1	23.6	.169	107.396+	91.939	273.02	303.78
950.0	1028.1	22.5	.133	106.999+	89.444	216.24	333.54
1000.0	1074.5	21.5	.093	106.615+	85.996	153.04	362.86
1100.0	1168.1	19.7	.010	105.890+	65.685	16.24	417.20
1200.0	1262.7	18.1	.074	105.213+	82.583	123.98	382.40
1300.0	1358.1	16.8	.154	104.580+	88.315	259.83	344.45
1400.0	1454.1	15.7	.228	103.987+	91.137	387.26	314.29
1500.0	1550.6	14.7	.295	103.429+	92.835	504.48	290.83
1600.0	1647.6	13.8	.356	102.902+	93.940	611.08	272.90
1700.0	1744.8	13.0	.411	102.404+	94.684	707.34	259.48
1800.0	1842.4	12.3	.460	101.931	95.190	793.95	249.65

VERTICAL FORM FACTOR BASED UPON: ERI ROTOTILLER DISTRIBUTION  
 BELOW PROTECTION BY 4.19 dB Max ERP is 262.5 Watts

**The interfering 102.3 dBu Contour remains at least 180' AGL.**  
**Interference never hits ground.**  
**The site is on a ridge with a base elevation of 390' AMSL.**  
**The 4 bay FM antenna is 423' AGL.**



## Figure 2A - FM Translator 3rd Adjacent Waiver - WZZK-284C0 New FM "Fill-In" Translator for WMXB-AM

Ch. 281 - 104.1 MHz - 100 Watts-DA - Tuscaloosa, AL - March 2018