

# LPFM CHANNEL 236

Calculations for Azimuth of 90 Deg

IX Contour of 103.65 F(50,10) dBu

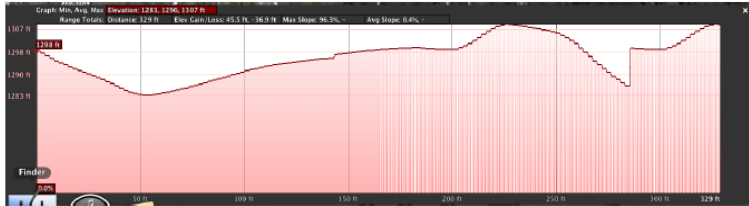
Distance and bearing from Tower to Hwy = 324 feet @ 90 deg

RCAMSL = 1391 Feet

Elevation at Western Hwy Edge = 1307 feet

Depression angle at western Hwy edge = 14.5 degree

Depression Angle						Height from Ix Contour to antenna RCAGL			Ground Elevation @	
						Horizontal distance from IX Contour tower base (feet)	IX Contour Vertical Distance above ground (feet)			
	Azimuth	Field Elevation	ERP (watts)	ERP (dbm)	Distance to IX contour along depression angle (mtrs)	IX contour (mtrs)	Hor. Dist.-Twr to IX Contour (feet)	Hor. Dist.-Twr to IX Contour (feet)	(feet)	
0	1.0	1	2.50	33.98	56.4	56.4	185.1	0.0	1306	85.0
5	1.0	0.975	2.38	33.76	55.0	54.8	179.8	15.7	1306	69.3
10	1.0	0.903	2.04	33.09	51.0	50.2	164.6	29.0	1307	55.0
15	1.0	0.792	1.57	31.95	44.7	43.2	141.6	37.9	1298	55.1
20	1.0	0.65	1.06	30.24	36.7	34.5	113.1	41.2	1299	50.8
25	1.0	0.493	0.61	27.84	27.8	25.2	82.7	38.6	1295	57.4
30	1.0	0.331	0.27	24.38	18.7	16.2	53.1	30.6	1287	73.4
35	1.0	0.178	0.08	18.99	10.0	8.2	27.0	18.9	1287	85.1
40	1.0	0.043	0.00	6.65	2.4	1.9	6.1	5.1	1294	91.9
45	1.0	0.068	0.01	10.63	3.8	2.7	8.9	8.9	1293	89.1
50	1.0	0.149	0.06	17.44	8.4	5.4	17.7	21.1	1290	79.9
55	1.0	0.202	0.10	20.09	11.4	6.5	21.5	30.6	1289	71.4
60	1.0	0.227	0.13	21.10	12.8	6.4	21.0	36.4	1289	65.6
70	1.0	0.205	0.11	20.21	11.6	4.0	13.0	35.7	1294	61.3
80	1.0	0.118	0.03	15.42	6.7	1.2	3.8	21.5	1297	72.5
90	1.0	0.001	0.00	-26.02	0.1	0.0	0.0	0.2	1300	90.8



## Calculations for Azimuth of 230 Deg

IX Contour of 103.65 F(50,10) dBu

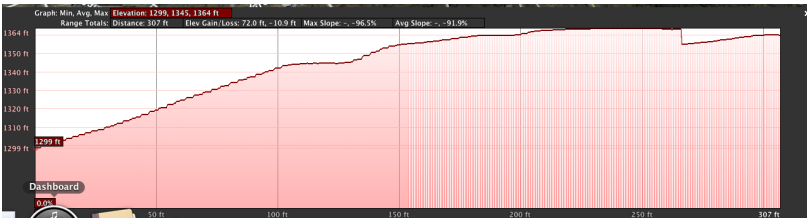
Distance and bearing from Tower to Road = 306 feet @ 230 deg

RCAMSL = 1391 Feet

Elevation at Western Hwy Edge = 1364 feet

Depression angle at western Hwy edge = 5.0 degree

Depression Angle	Height from IX Contour to antenna RCAGL									
	Contour to IX Contour Vertical Distance					Ground Elevation @ IX Contour Vertical Distance				
	Azimuth	Field Elevation	Field ERP (watts)	Field ERP (dBm)	Distance to IX contour along depression angle (mtrs)	Hor. Dist.-Twr to IX contour (mtrs)	Hor. Dist.-Twr to IX contour (feet)	tower base (feet)	above ground (feet)	
0	1.0	1	2.50	33.98	56.4	56.4	185.1	0.0	1360	31.0
5	1.0	0.975	2.38	33.76	55.0	54.8	179.8	15.7	1360	15.3
10	1.0	0.903	2.04	33.09	51.0	50.2	164.6	29.0	1356	6.0
15	1.0	0.792	1.57	31.95	44.7	43.2	141.6	37.9	1350	3.1
20	1.0	0.65	1.06	30.24	36.7	34.5	113.1	41.2	1345	4.8
25	1.0	0.493	0.61	27.84	27.8	25.2	82.7	38.6	1335	17.4
30	1.0	0.331	0.27	24.38	18.7	16.2	53.1	30.6	1320	40.4
35	1.0	0.178	0.08	18.99	10.0	8.2	27.0	18.9	1309	63.1
40	1.0	0.043	0.00	6.65	2.4	1.9	6.1	5.1	1300	85.9
45	1.0	0.068	0.01	10.63	3.8	2.7	8.9	8.9	1302	80.1
50	1.0	0.149	0.06	17.44	8.4	5.4	17.7	21.1	1305	64.9
55	1.0	0.202	0.10	20.09	11.4	6.5	21.5	30.6	1308	52.4
60	1.0	0.227	0.13	21.10	12.8	6.4	21.0	36.4	1308	46.6
70	1.0	0.205	0.11	20.21	11.6	4.0	13.0	35.7	1304	51.3
80	1.0	0.118	0.03	15.42	6.7	1.2	3.8	21.5	1300	69.5
90	1.0	0.001	0.00	-26.02	0.1	0.0	0.0	0.2	1299	91.8



## Calculations for Azimuth of 330 Deg

IX Contour of 103.65 F(50,10) dBu

Distance and bearing from Tower to Street = 517 feet @ 230 deg

RCAMSL = 1391 feet

Elevation at northwestern street edge = 1358 feet

Depression angle at northwestern street edge = 3.6 degree

Depression Angle	Height from IX Contour to antenna RCAGL									
	Contour to tower base					Ground Elevation @ tower base				
	Azimuth	Field Elevation	Field ERP (watts)	Field ERP (dBm)	Distance to IX contour along depression angle (mtrs)	Hor. Dist.-Twr to IX contour (mtrs)	Hor. Dist.-Twr to IX contour (mtrs)	Horizontal distance from IX Contour to tower base (feet)	Vertical Distance above ground (feet)	Vertical Distance above ground (feet)
0	1.0	1	2.50	33.98	56.4	56.4	185.1	0.0	1342	49.0
5	1.0	0.975	2.38	33.76	55.0	54.8	179.8	15.7	1345	30.3
10	1.0	0.903	2.04	33.09	51.0	50.2	164.6	29.0	1333	29.0
15	1.0	0.792	1.57	31.95	44.7	43.2	141.6	37.9	1324	29.1
20	1.0	0.65	1.06	30.24	36.7	34.5	113.1	41.2	1311	38.8
25	1.0	0.493	0.61	27.84	27.8	25.2	82.7	38.6	1299	53.4
30	1.0	0.331	0.27	24.38	18.7	16.2	53.1	30.6	1300	60.4
35	1.0	0.178	0.08	18.99	10.0	8.2	27.0	18.9	1302	70.1
40	1.0	0.043	0.00	6.65	2.4	1.9	6.1	5.1	1299	86.9
45	1.0	0.068	0.01	10.63	3.8	2.7	8.9	8.9	1300	82.1
50	1.0	0.149	0.06	17.44	8.4	5.4	17.7	21.1	1302	67.9
55	1.0	0.202	0.10	20.09	11.4	6.5	21.5	30.6	1302	58.4
60	1.0	0.227	0.13	21.10	12.8	6.4	21.0	36.4	1302	52.6
70	1.0	0.205	0.11	20.21	11.6	4.0	13.0	35.7	1301	54.3
80	1.0	0.118	0.03	15.42	6.7	1.2	3.8	21.5	1300	69.5
90	1.0	0.001	0.00	-26.02	0.1	0.0	0.0	0.2	1300	90.8

