

## **Technical Report W247BL Minor Modification**

This technical report is submitted for a minor modification to W247BL at Ontario, OH, FCC file no. BLFT-20091020ABN. Changes to the COR, antenna, and ERP are requested for the translator to serve as a fill-in to rebroadcast WVNO-FM HD3 291B at Mansfield, OH, FCC facility I.D. 31855.

### **W247BL Modification Analysis:**

An overlap study in exhibit E-1 shows the W247BL modification is within the second adjacent WLRD(FM) 245A protected contour at Willard, OH, FCC facility I.D. 81963. As a result, the interference ratio is utilized to determine the interference contour in accordance with FCC-02-244, paragraph 12. Using the Probe3 software and the NED 30 meter terrain database, the F(50-50) dBu contour was calculated from WLRD(FM) to the W247BL tower site. The resulting F(50-50) contour is 62.80 dBu, and adding the +40 2nd adjacent F(50-10) interfering contour is 102.80 dBu (exhibit E-2).

Since the W247BL modification is located within an area that might cause interference, the vertical elevation pattern of the antenna was used to determine the actual line of sight reduced ERP from the +40 dBu interfering contour within WLRD(FM). Using the V-Soft CONTOUR software, the  $F^2 \times \text{kW}$  reduced ERP is used to calculate the actual line of sight distance. From this value, the height above ground of the interfering contour is calculated geometrically relative to the tower site elevation at each degree:

$$\text{Height Above Ground} = \text{COR AGL} - (\text{Line of Sight Distance} \times \text{Sine}(x)),$$

where (x) is the depression angle from horizontal. Exhibit E-3 shows a tabulation of the actual line of sight distance at each degree from the 102.80 dBu interfering contour to the base of the tower. The lowest height is 6.8 meters above the tower site elevation. An aerial photo of the tower site (exhibit E-4) shows there are no roads or buildings where the W247BL interfering signal would reach any potential listeners within the interfering contour at the minimum calculated height.

The W247BL modification will employ a directional antenna to avoid any interference overlap to WONE-FM 248B at Akron, OH, FCC facility I.D. 43873, shown in the plot and FMOver study in exhibits E-5 and E-6. Exhibits E-7 and E-8 include an interference plot and FMOver study to WBNS-FM 246B at Columbus, OH, FCC facility I.D. 54701, to show the W247BL modification will not produce any interference overlap.

### **Antenna System:**

W247BL will remain at its current tower site, ASR 1013230, at coordinates:

**40 45 50N 82 37 04W NAD 27.**

A PSI FML-4 0.75 wavelength directional antenna (exhibits E-9 and E-10) will be mounted at a COR AGL of 110 meters, 531 meters AMSL (150 meter HAAT, 30 meter NED terrain), and operate at an ERP of 0.250 kW. The 60 dBu F(50-50) contour overlaps the current W247BL licensed 60 dBu contour and is contained within the primary WVNO-FM HD3 291B 54 dBu contour (exhibit E-11). Since the facility is within the Canadian border zone, exhibit E-12 shows the 34 dBu F(50-10) contour does not reach the border.

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## **RF Exposure Calculation:**

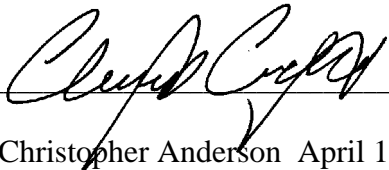
The RF contribution was calculated using the formula from the OET Bulletin 65:

$$S \text{ (RF in microwatts/cm}^2\text{)} = \frac{33.4 \times F^2 \times (H \text{ ERP} + V \text{ ERP in watts})}{R^2 \text{ (distance to radiation center in meters}^2\text{)}}$$

Using a worst-case vertical (F) factor of 0.238 from the antenna data, the resulting RF value is 0.081  $\mu\text{W/cm}^2$  to the ground and is well below 5% of the 200  $\mu\text{W/cm}^2$  maximum permissible for general public exposure requiring consideration.

## **Conclusion:**

It is concluded that the modification of W247BL complies with all Commission rules and policies.



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E-1 W247BL Overlap Study

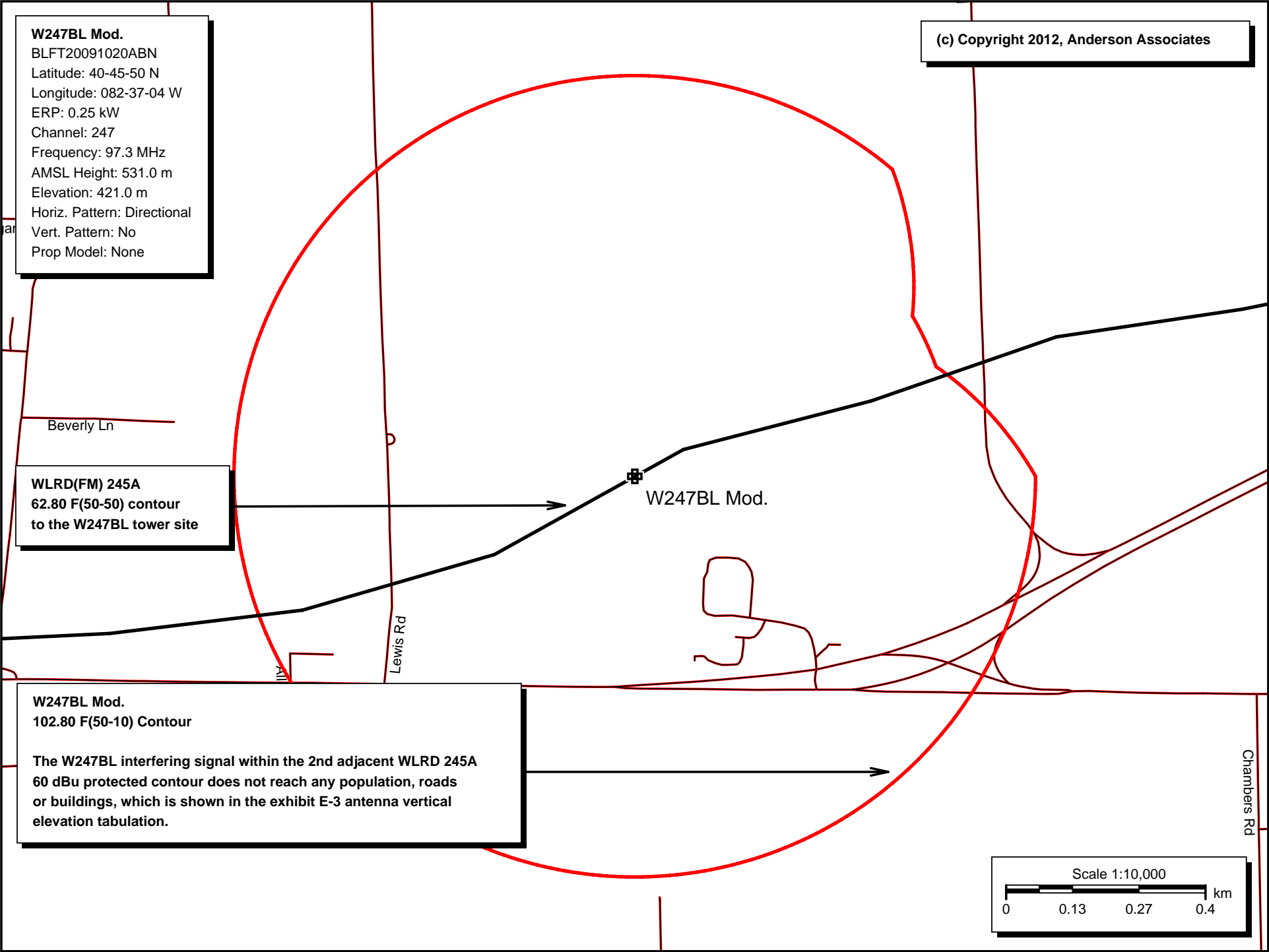
REFERENCE		CH# 247D - 97.3 MHz, Pwr= 0.25 kW DA, HAAT= 150.0 M, COR= 531 M								DISPLAY DATES	
40 45 50.0 N.		Average Protected F(50-50)= 15.9 km								DATA 04-13-12	
82 37 04.0 W.		Standard Directional								SEARCH 04-14-12	
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	
247D	W247BL	LIC	DC	0.0	0.00	40 45 50.0	0.120	17.0	5.0	-34.4*	-60.2*
Ontario			OH	0.0	BLFT20091020ABN	82 37 04.0	161	541	Gsm Media Corporation		
245A	WLRD	LIC	CX	359.3	21.77	40 57 36.0	6.000	2.5	25.3	1.8	-4.6*(1)
Willard			OH	179.3	BMLH20030711AAD	82 37 16.0	100	422	Christian Faith Broadcast,		
246B	WBNS-FM	LIC	CN	201.6	94.66	39 58 16.0	20.500	75.2	63.7	5.2	0.6
Columbus			OH	21.4	BLH19850125LM	83 01 40.0	238	484	Radiohio, Incorporated		
248B	WONE-FM	LIC	C	68.6	93.35	41 03 53.0	12.000	71.4	61.1	7.4	1.8
Akron			OH	249.3	BLH20010810AAQ	81 34 59.0	271	589	Rubber City Radio Group, I		
247A	WJZE	LIC	ZCX	319.8	103.44	41 28 19.0	4.300	82.8	27.1	3.2	21.0
Oak Harbor			OH	139.3	BLH20061207AAU	83 25 05.0	118	307	Urban Radio Licenses, Llc		
248L1	WDCM-LP	LIC		248.9	46.43	40 36 46.0	0.045	6.5	4.6	23.6	17.5
Marion			OH	68.6	BLL20050429AEM	83 07 48.0	44	327	The U.s. Open Junior Drum		
250B	WNCI	LIC	DEX	200.4	94.08	39 58 10.0	175.000	6.9	70.6	73.0	21.7
Columbus			OH	20.1	BMLH20080128AAW	83 00 10.0	171	418	Citicasters Licenses, Inc.		
247B	WKWK-FM	LIC	CN	113.9	178.66	40 05 49.0	50.000	131.6	58.6	31.5	53.8
Wheeling			WV	295.2	BLH19801203AF	80 42 06.0	128	456	Capstar Tx Llc		
244B1	WKOV-FM	CP	CX	155.4	90.00	40 01 36.0	11.500	4.0	45.7	70.1	42.1
Frazeyzburg			OH	335.7	BPH20070405ABF	82 10 38.0	147	427	Jackson County Broadcastin		
249A	WGGN	LIC	CN	348.3	71.78	41 23 48.0	0.640	1.5	22.9	52.7	47.7
Castalia			OH	168.2	BLH19860724KB	82 47 31.0	221	416	Christian Faith Broadcast,		
248D	WOBN	LIC	HX	200.8	75.93	40 07 28.0	0.029	5.8	4.1	55.9	50.5
Westerville			OH	20.6	BLED20081021ABB	82 56 06.0	20	296	Otterbein College		
300A	WVMX«	LIC	CX	204.7	63.43	40 14 41.5	3.000	79.8	23.0	9.5R	53.9M
Westerville			OH	24.5	BLH20090511ASY	82 55 49.1	143	439	Franklin Communications, I		
244A	WBVI	LIC	CN	297.7	81.31	41 06 00.0	3.000	2.0	20.4	62.0	59.7
Fostoria			OH	117.1	BLH19970721KA	83 28 32.0	88	324	Tcb Holdings, Inc., C/o R		
248D	649345	APP	C	289.6	91.53	41 02 08.0	0.080	8.1	5.7	66.2	60.2
Van Buren			OH	109.0	BNPFT20030317FZF	83 38 36.0	41	279	Educational Media Foundati		
248D	634036	APP	C	289.2	93.84	41 02 11.0	0.080	8.4	5.9	68.2	62.4
Findlay			OH	108.5	BNPFT20030311ADQ	83 40 19.0	42	279	Kayser Broadcast Ministrie		
244C1	CHYR-FM«		C	1.9	138.41	42 00 35.0	100.000	10.2	86.8	73.5R	64.9M
Leamington			ON	181.9		82 33 45.0	299	479			
247B	WMEE	LIC	C	280.9	220.48	41 06 39.0	26.000	132.0	66.1	71.4	83.3
Fort Wayne			IN	99.3	BMLH20120307AAF	85 11 44.0	210	457	Pathfinder Communications		
245D	632546	APP	C	68.6	93.35	41 03 53.0	0.010	0.2	5.7	78.4	86.7
Copley			OH	249.3	BNPFT20030314ACK	81 34 59.0	117	435	Educational Media Foundati		
244A	WCMJ	LIC	CN	134.1	115.10	40 02 24.0	2.300	2.1	23.2	98.7	90.6
Cambridge			OH	314.7	BLH19940825KD	81 38 50.0	112	395	Avc Communications, Inc.		
249A	WILE-FM	LIC	CN	134.1	115.10	40 02 24.0	1.800	2.0	23.0	98.7	90.8
Byesville			OH	314.7	BLH19941027KB	81 38 50.0	126	406	Avc Communications, Inc.		

(1) The W247BL licensed facility is within the 2nd adjacent WLRD(FM) 245A protected contour. The attached exhibits show the W247BL modification will not produce any interfering signal to potential listeners within the interfering contour.

Terrain database is NED 30 Meter, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM In & Out distances between contours are shown at closest points. Reference Zone= East Zone, Co to 3rd adjacent. Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X) \*\*\*affixed to 'IN' or 'OUT' values = site inside protected contour.

« = Station meets FCC minimum distance spacing for its class.

E-2 W247BL Interference Plot Within WLRD(FM) 245A



# **E- 3 W247BL Antenna Vertical Elevation Tabulation** **102.80 dBu Interfering Contour to WLRD(FM) 245A**

Depression Angle Below Horizontal	Antenna F Factor <sup>(1)</sup>	F <sup>2</sup> X 0.250 kW Reduced Vertical ERP	Interfering Contour F(50-10) Line of Sight Distance (m) <sup>(2)</sup>	Interfering Contour Height Above Site Elevation (m) <sup>(3)</sup>
0	1.000	0.250	803.4	110.0
1	0.996	0.248	800.2	96.0
2	0.982	0.241	788.8	82.5
3	0.961	0.231	772.3	69.6
4	0.931	0.217	748.5	57.8
5	0.894	0.200	718.6	47.4
6	0.850	0.181	683.6	38.5
7	0.799	0.160	642.8	31.7
8	0.743	0.138	596.9	26.9
9	0.682	0.116	547.3	24.4
10	0.617	0.095	495.3	24.0
11	0.550	0.076	443.0	25.5
12	0.481	0.058	387.0	29.5
13	0.411	0.042	329.3	35.9
14	0.341	0.029	273.6	43.8
15	0.272	0.018	215.6	54.2
16	0.205	0.011	168.5	63.6
17	0.141	0.005	113.6	76.8
18	0.081	0.002	71.9	87.8
19	0.025	0.000	0.0	110.0
20	0.027	0.000	0.0	110.0
21	0.073	0.001	50.8	91.8
22	0.114	0.003	88.0	77.0
23	0.149	0.006	124.5	61.4
24	0.178	0.008	143.7	51.6
25	0.201	0.010	160.7	42.1
26	0.219	0.012	176.8	32.5
27	0.230	0.013	183.2	26.8
28	0.237	0.014	190.1	20.8
29	0.238	0.014	190.1	17.8
30	0.234	0.014	190.1	15.0
31	0.226	0.013	183.2	15.6
32	0.215	0.012	176.8	16.3
33	0.199	0.010	160.7	22.5
34	0.181	0.008	143.7	29.6
35	0.161	0.006	124.5	38.6
36	0.139	0.005	113.6	43.2
37	0.116	0.003	88.0	57.0
38	0.092	0.002	71.9	65.7
39	0.067	0.001	50.8	78.0
40	0.043	0.000	0.0	110.0
41	0.018	0.000	0.00	110.0
42	0.004	0.000	0.00	110.0
43	0.027	0.000	0.00	110.0
44	0.047	0.001	50.80	74.7
45	0.066	0.001	50.80	74.1

(1) The vertical elevation F factor data is provided from the antenna manufacturer shown in exhibit E-10.

(2) Based on the reduced ERP, the actual line of sight distance is calculated using the V-Soft CONTOUR program.

(3) The interfering contour height above the ground is calculated relative to the tower site elevation at each degree, and the height is calculated geometrically: COR AGL - Sine(depression angle) x reduced ERP line of sight distance.

Depression Angle Below Horizontal	Antenna F Factor <sup>(1)</sup>	F <sup>2</sup> X 0.250 kW Reduced Vertical ERP	Interfering Contour F(50-10) Line of Sight Distance (m) <sup>(2)</sup>	Interfering Contour Height Above Site Elevation (m) <sup>(3)</sup>
46	0.083	0.002	71.90	58.3
47	0.099	0.002	71.90	57.4
48	0.112	0.003	88.00	44.6
49	0.124	0.004	101.60	33.3
50	0.133	0.004	101.60	32.2
51	0.141	0.005	113.60	21.7
52	0.146	0.005	113.60	20.5
53	0.150	0.006	124.50	10.6
54	0.152	0.006	124.50	9.3
55	0.152	0.006	124.50	8.0
56	0.150	0.006	124.50	6.8*
57	0.148	0.005	113.60	14.7
58	0.144	0.005	113.60	13.7
59	0.139	0.005	113.60	12.6
60	0.133	0.004	101.60	22.0
61	0.127	0.004	101.60	21.1
62	0.120	0.004	101.60	20.3
63	0.112	0.003	88.00	31.6
64	0.105	0.003	88.00	30.9
65	0.097	0.002	71.90	44.8
66	0.088	0.002	71.90	44.3
67	0.080	0.002	71.90	43.8
68	0.072	0.001	50.80	62.9
69	0.065	0.001	50.80	62.6
70	0.057	0.001	50.80	62.3
71	0.050	0.001	50.80	62.0
72	0.044	0.000	0.00	110.0
73	0.037	0.000	0.00	110.0
74	0.032	0.000	0.00	110.0
75	0.027	0.000	0.00	110.0
76	0.022	0.000	0.00	110.0
77	0.018	0.000	0.00	110.0
78	0.014	0.000	0.00	110.0
79	0.011	0.000	0.00	110.0
80	0.008	0.000	0.00	110.0
81	0.006	0.000	0.00	110.0
82	0.004	0.000	0.00	110.0
83	0.003	0.000	0.00	110.0
84	0.002	0.000	0.00	110.0
85	0.001	0.000	0.00	110.0
86	0.001	0.000	0.00	110.0
87	0.001	0.000	0.00	110.0
88	0.001	0.000	0.00	110.0
89	0.001	0.000	0.00	110.0
90	0.001	0.000	0.00	110.0

\*The lowest point within the interfering contour above the tower site elevation = 6.8 meters.

(1) The vertical elevation F factor data is provided from the antenna manufacturer shown in exhibit E-10.

(2) Based on the reduced ERP, the actual line of sight distance is calculated using the V-Soft CONTOUR program.

(3) The interfering contour height above the ground is calculated relative to the tower site elevation at each degree, and the height is calculated geometrically:  $COR\ AGL - \sin(\text{depression angle}) \times \text{reduced ERP line of sight distance}$ .



# E-4 W247BL Interference Contour Within WLRD(FM) 245A Aerial Photo

82°38' 82°37'45" 82°37'30" 82°37'15" 82°37' 82°36'45" 82°36'30" 82°36'15" 82°36'

40°46'15"

40°46'

40°45'45"

40°45'30"

40°46'15"

40°46'

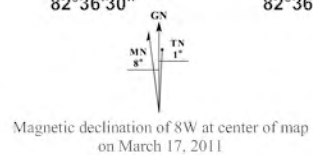
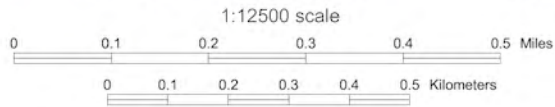
40°45'45"

40°45'30"

W247BL  
102.80 dBu F(50-10) Contour  
Distance to contour = 803.4 meters



Universal Transverse Mercator (UTM) Projection Zone 17  
North American Datum of 1983



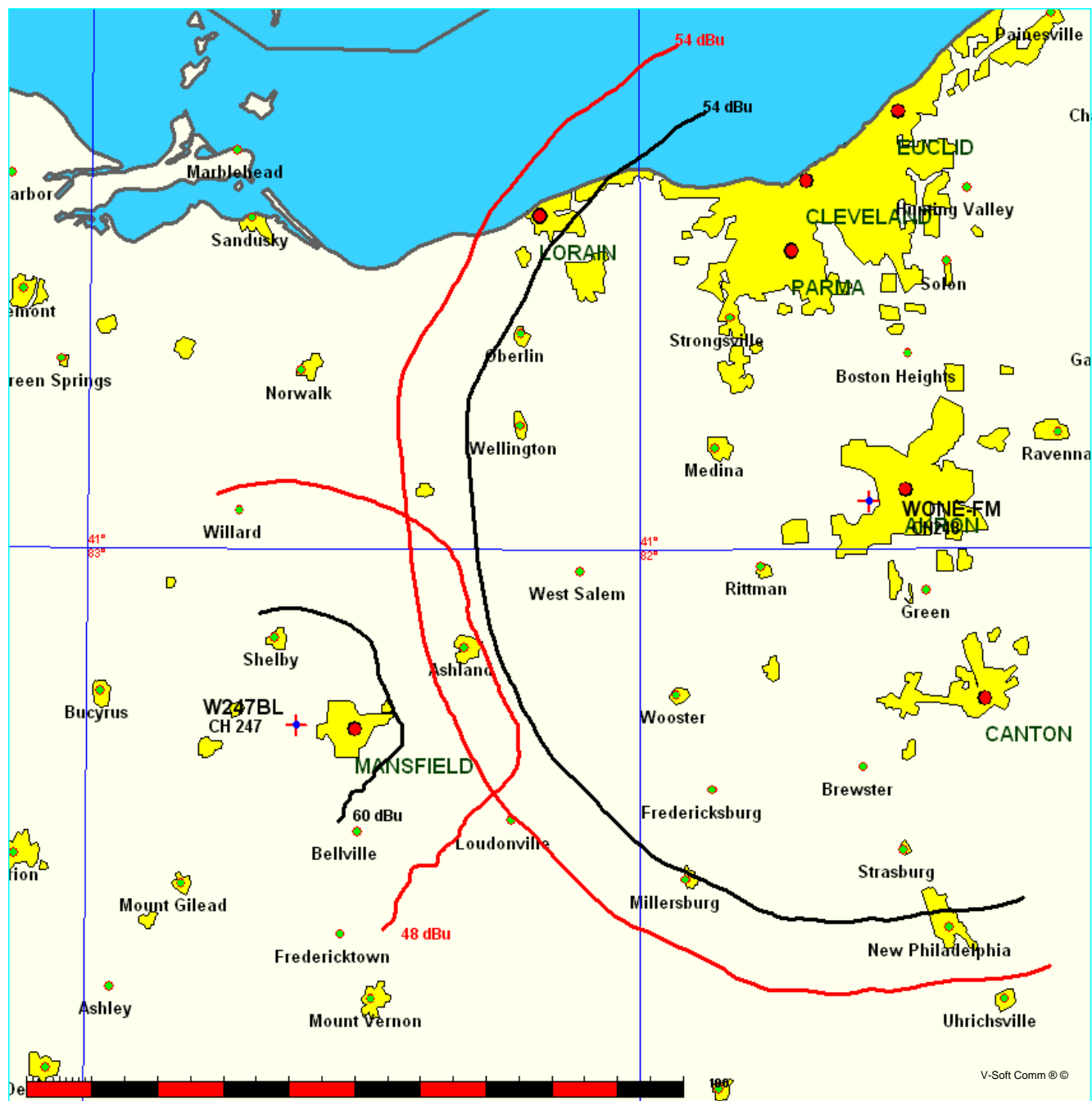


## E-5 W247BL Interference Plot to WONE-FM 248B

FMCommander Single Allocation Study - 04-14-2012 - NED 30 Meter Terrain  
W247BL's Overlaps (In= 7.36 km, Out= 1.79 km)

W247BL CH 247 D DA  
Lat= 40 45 50.0, Lng= 82 37 04.0  
0.25 kW 150 M HAAT, 531 M COR  
Prot.= 60 dBu, Intef.= 48 dBu

WONE-FM CH 248 B BLH20010810AAQ  
Lat= 41 03 53.0, Lng= 81 34 59.0  
12.0 kW 271 M HAAT, 589 M COR  
Prot.= 54 dBu, Intef.= 54 dBu



# E-6 W247BL FMOver Analysis to WONE-FM 248B

Terrain Data: NED 30 Meter

WONE-FM BLH20010810AAQ

W247BL

Channel = 248B

Max ERP = 12 kW

RCAMSL = 589 M

N. Lat. 41 03 53.0

W. Lng. 81 34 59.0

Protected

54 dBu

Channel = 247D

Max ERP = 0.25 kW

RCAMSL = 531 M

N. Lat. 40 45 50.0

W. Lng. 82 37 04.0

Interfering

48 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
189.0	012.0000	0279.8	063.4	110.4	000.2500	0128.9	082.9	28.59	
190.0	012.0000	0281.6	063.5	110.6	000.2500	0128.0	081.9	28.85	
191.0	012.0000	0284.7	063.8	110.9	000.2500	0127.1	080.8	29.12	
192.0	012.0000	0287.0	063.9	111.2	000.2500	0126.8	079.8	29.42	
193.0	012.0000	0285.7	063.8	111.3	000.2500	0126.8	078.6	29.74	
194.0	012.0000	0283.3	063.7	111.3	000.2500	0126.8	077.5	30.08	
195.0	012.0000	0282.3	063.6	111.3	000.2500	0126.8	076.4	30.41	
196.0	012.0000	0282.4	063.6	111.4	000.2500	0126.9	075.3	30.74	
197.0	012.0000	0278.2	063.3	111.2	000.2500	0126.8	074.2	31.08	
198.0	012.0000	0274.1	062.9	111.0	000.2500	0126.9	073.0	31.43	
199.0	012.0000	0270.8	062.7	110.9	000.2500	0127.2	071.9	31.78	
200.0	012.0000	0268.6	062.5	110.8	000.2500	0127.5	070.8	32.14	
201.0	012.0000	0267.1	062.4	110.7	000.2500	0127.8	069.7	32.49	
202.0	012.0000	0266.8	062.4	110.7	000.2500	0127.9	068.6	32.84	
203.0	012.0000	0266.4	062.3	110.6	000.2500	0128.0	067.6	33.19	
204.0	012.0000	0266.1	062.3	110.6	000.2500	0128.2	066.5	33.55	
205.0	012.0000	0265.4	062.3	110.5	000.2500	0128.6	065.4	33.92	
206.0	012.0000	0265.9	062.3	110.4	000.2500	0128.8	064.3	34.28	
207.0	012.0000	0265.9	062.3	110.3	000.2500	0129.2	063.2	34.66	
208.0	012.0000	0266.6	062.4	110.3	000.2500	0129.4	062.1	35.05	
209.0	012.0000	0268.3	062.5	110.2	000.2500	0129.5	061.0	35.43	
210.0	012.0000	0270.9	062.7	110.3	000.2500	0129.4	059.9	35.83	
211.0	012.0000	0270.8	062.7	110.1	000.2500	0130.1	058.8	36.26	
212.0	012.0000	0270.9	062.7	109.9	000.2500	0130.8	057.7	36.70	
213.0	012.0000	0269.7	062.6	109.5	000.2500	0131.7	056.7	37.14	
214.0	012.0000	0267.1	062.4	109.1	000.2500	0132.9	055.7	37.59	
215.0	012.0000	0266.7	062.4	108.8	000.2500	0133.7	054.6	38.04	
216.0	012.0000	0264.8	062.2	108.3	000.2500	0135.6	053.6	38.52	
217.0	012.0000	0262.4	062.0	107.7	000.2500	0137.4	052.7	39.00	
218.0	012.0000	0260.4	061.9	107.2	000.2500	0139.1	051.7	39.47	
219.0	012.0000	0258.6	061.7	106.6	000.2500	0140.4	050.7	39.91	
220.0	012.0000	0258.1	061.7	106.1	000.2500	0141.3	049.8	40.34	
221.0	012.0000	0257.6	061.7	105.5	000.2500	0142.8	048.8	40.79	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
222.0	012.0000	0256.0	061.5	104.8	000.2500	0144.0	047.9	41.21
223.0	012.0000	0253.9	061.4	104.0	000.2500	0146.2	047.0	41.67
224.0	012.0000	0253.2	061.3	103.3	000.2500	0148.2	046.1	42.14
225.0	012.0000	0253.2	061.3	102.6	000.2500	0149.5	045.2	42.59
226.0	012.0000	0252.4	061.3	101.8	000.2500	0151.1	044.3	43.04
227.0	012.0000	0253.5	061.4	101.1	000.2500	0152.5	043.4	43.51
228.0	012.0000	0255.8	061.5	100.4	000.2500	0153.7	042.4	44.00
229.0	012.0000	0257.6	061.7	099.7	000.2500	0154.0	041.5	44.44
230.0	012.0000	0258.5	061.7	098.8	000.2500	0153.0	040.6	44.78
231.0	012.0000	0259.2	061.8	097.8	000.2500	0152.6	039.8	45.15
232.0	012.0000	0259.3	061.8	096.7	000.2500	0151.7	039.0	45.47
233.0	012.0000	0259.7	061.8	095.6	000.2500	0150.5	038.2	45.77
234.0	012.0000	0258.4	061.7	094.3	000.2500	0149.4	037.6	46.02
235.0	012.0000	0256.9	061.6	092.9	000.2500	0149.2	037.0	46.30
236.0	012.0000	0255.7	061.5	091.4	000.2500	0148.4	036.4	46.53
237.0	012.0000	0255.0	061.5	090.0	000.2499	0148.7	035.8	46.82
238.0	012.0000	0255.1	061.5	088.5	000.2426	0146.0	035.2	46.83
239.0	012.0000	0254.6	061.4	086.9	000.2350	0144.3	034.7	46.83
240.0	012.0000	0253.4	061.3	085.3	000.2270	0143.8	034.3	46.86
241.0	012.0000	0251.3	061.2	083.5	000.2187	0142.3	034.0	46.75
242.0	012.0000	0250.1	061.1	081.8	000.2106	0142.1	033.7	46.73
243.0	012.0000	0249.4	061.0	080.0	000.2026	0143.5	033.4	46.79
244.0	012.0000	0250.2	061.1	078.3	000.1949	0144.5	033.1	46.86
245.0	012.0000	0250.4	061.1	076.5	000.1870	0145.3	032.8	46.87
246.0	012.0000	0251.2	061.2	074.7	000.1791	0146.5	032.6	46.88
247.0	012.0000	0251.4	061.2	072.8	000.1713	0149.4	032.4	46.95
248.0	012.0000	0251.7	061.2	070.9	000.1636	0153.2	032.3	47.03
249.0	012.0000	0250.0	061.1	069.0	000.1600	0153.9	032.4	46.93
250.0	012.0000	0248.8	061.0	067.1	000.1600	0153.8	032.5	46.86
251.0	012.0000	0248.3	061.0	065.2	000.1600	0152.6	032.6	46.73
252.0	012.0000	0247.6	060.9	063.4	000.1600	0153.3	032.8	46.68
253.0	012.0000	0247.3	060.9	061.6	000.1600	0153.1	033.0	46.57
254.0	012.0000	0246.4	060.8	059.8	000.1609	0152.4	033.3	46.40
255.0	012.0000	0245.1	060.7	058.1	000.1678	0151.9	033.7	46.37
256.0	012.0000	0243.6	060.6	056.4	000.1747	0152.5	034.1	46.35
257.0	012.0000	0242.8	060.5	054.8	000.1815	0156.1	034.5	46.51
258.0	012.0000	0242.1	060.5	053.2	000.1883	0157.4	035.0	46.51
259.0	012.0000	0241.5	060.4	051.7	000.1949	0157.8	035.5	46.43
260.0	012.0000	0241.3	060.4	050.2	000.2015	0158.7	036.0	46.37
261.0	012.0000	0242.1	060.5	048.7	000.2083	0159.4	036.5	46.31
262.0	012.0000	0242.3	060.5	047.3	000.2147	0161.7	037.0	46.28
263.0	012.0000	0241.7	060.4	046.1	000.2206	0163.6	037.7	46.18
264.0	012.0000	0241.2	060.4	044.8	000.2264	0164.0	038.3	45.99
265.0	012.0000	0240.5	060.4	043.7	000.2319	0163.4	039.1	45.72
266.0	012.0000	0241.1	060.4	042.5	000.2377	0163.7	039.7	45.52
267.0	012.0000	0242.1	060.5	041.3	000.2434	0163.4	040.4	45.30
268.0	012.0000	0243.4	060.6	040.2	000.2490	0163.8	041.1	45.09
269.0	012.0000	0243.8	060.6	039.2	000.2500	0163.5	041.9	44.75
270.0	012.0000	0244.8	060.7	038.2	000.2500	0163.1	042.6	44.38
271.0	012.0000	0246.1	060.8	037.2	000.2500	0162.5	043.4	44.01
272.0	012.0000	0247.7	060.9	036.3	000.2500	0163.1	044.2	43.69

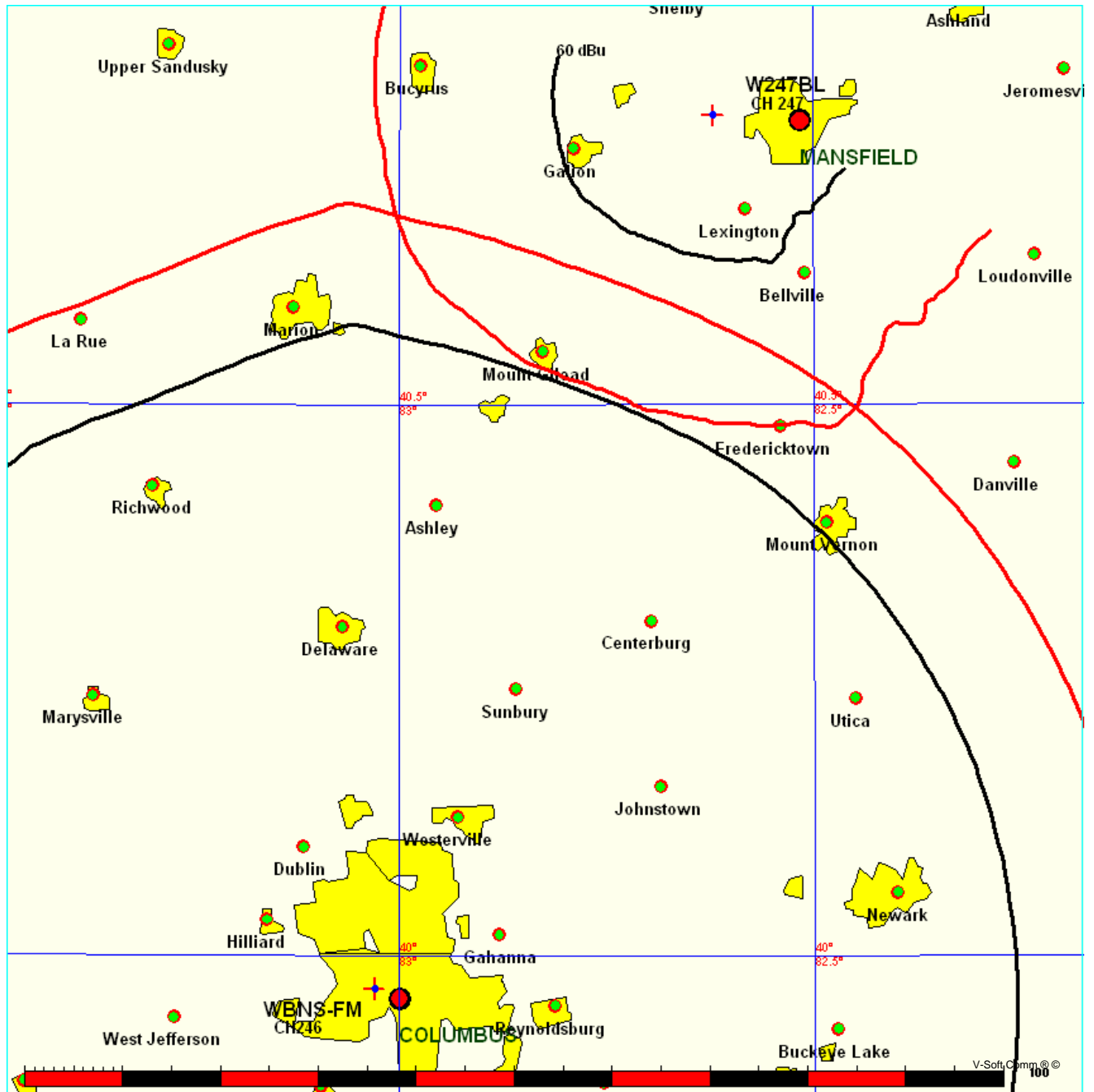
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
273.0	012.0000	0249.3	061.0	035.4	000.2500	0163.9	045.0	43.39
274.0	012.0000	0251.0	061.2	034.5	000.2500	0164.2	045.9	43.05
275.0	012.0000	0252.2	061.3	033.8	000.2500	0164.3	046.7	42.70
276.0	012.0000	0255.7	061.5	032.9	000.2500	0164.1	047.5	42.36
277.0	012.0000	0260.5	061.9	031.9	000.2500	0164.2	048.3	42.06
278.0	012.0000	0263.7	062.1	031.1	000.2500	0164.6	049.2	41.74
279.0	012.0000	0265.9	062.3	030.5	000.2500	0164.7	050.2	41.38
280.0	012.0000	0268.3	062.5	029.8	000.2500	0164.9	051.1	41.02
281.0	012.0000	0270.7	062.7	029.2	000.2500	0164.9	052.1	40.65
282.0	012.0000	0273.1	062.9	028.7	000.2500	0165.1	053.1	40.28
283.0	012.0000	0274.9	063.0	028.2	000.2500	0165.2	054.1	39.90
284.0	012.0000	0275.9	063.1	027.8	000.2500	0165.3	055.1	39.51
285.0	012.0000	0276.2	063.1	027.5	000.2500	0165.4	056.2	39.11
286.0	012.0000	0274.2	062.9	027.4	000.2500	0165.4	057.3	38.70
287.0	012.0000	0271.4	062.7	027.4	000.2500	0165.4	058.4	38.28
288.0	012.0000	0268.6	062.5	027.4	000.2500	0165.4	059.5	37.88
289.0	012.0000	0266.4	062.3	027.4	000.2500	0165.4	060.6	37.48
290.0	012.0000	0265.0	062.2	027.4	000.2500	0165.4	061.7	37.09
291.0	012.0000	0262.5	062.0	027.4	000.2500	0165.4	062.8	36.71
292.0	012.0000	0258.7	061.8	027.6	000.2500	0165.3	063.9	36.33
293.0	012.0000	0254.9	061.5	027.7	000.2500	0165.3	065.0	35.96
294.0	012.0000	0252.0	061.2	027.8	000.2500	0165.3	066.1	35.60
295.0	012.0000	0250.2	061.1	027.9	000.2500	0165.3	067.2	35.24
296.0	012.0000	0249.4	061.0	027.9	000.2500	0165.3	068.2	34.89
297.0	012.0000	0249.7	061.1	027.9	000.2500	0165.3	069.3	34.54
298.0	012.0000	0248.6	061.0	027.9	000.2500	0165.3	070.3	34.19
299.0	012.0000	0248.4	061.0	027.9	000.2500	0165.3	071.4	33.84
300.0	012.0000	0248.3	061.0	027.9	000.2500	0165.3	072.5	33.49
301.0	012.0000	0249.7	061.1	027.9	000.2500	0165.3	073.5	33.15
302.0	012.0000	0252.0	061.2	027.8	000.2500	0165.3	074.6	32.80
303.0	012.0000	0255.0	061.5	027.7	000.2500	0165.3	075.7	32.45
304.0	012.0000	0257.0	061.6	027.6	000.2500	0165.3	076.8	32.11
305.0	012.0000	0258.5	061.7	027.6	000.2500	0165.3	077.9	31.76
306.0	012.0000	0260.2	061.9	027.6	000.2500	0165.3	078.9	31.42
307.0	012.0000	0261.7	062.0	027.7	000.2500	0165.3	080.0	31.08
308.0	012.0000	0262.3	062.0	027.8	000.2500	0165.3	081.1	30.74

## E-7 W247BL Interference Plot to WBNS-FM 246B

FMCommander Single Allocation Study - 04-14-2012 - NED 30 Meter Terrain  
W247BL's Overlaps (In= 5.24 km, Out= 0.64 km)

W247BL CH 247 D DA  
Lat= 40 45 50.0, Lng= 82 37 04.0  
0.25 kW 150 M HAAT, 531 M COR  
Prot.= 60 dBu, Intef.= 48 dBu

WBNS-FM CH 246 B BLH19850125LM  
Lat= 39 58 16.0, Lng= 83 01 40.0  
20.5 kW 238 M HAAT, 484 M COR  
Prot.= 54 dBu, Intef.= 54 dBu



# E-8 W247BL FMOver Analysis to WBNS-FM 246B

Terrain Data: NED 30 Meter

WBNS-FM BLH19850125LM

W247BL

Channel = 246B

Max ERP = 20.5 kW

RCAMSL = 484 M

N. Lat. 39 58 16.0

W. Lng. 83 01 40.0

Protected

54 dBu

Channel = 247D

Max ERP = 0.25 kW

RCAMSL = 531 M

N. Lat. 40 45 50.0

W. Lng. 82 37 04.0

Interfering

48 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
321.0	020.5000	0227.7	064.4	243.4	000.2500	0153.1	084.2	29.28	
322.0	020.5000	0228.2	064.4	243.6	000.2500	0153.3	083.2	29.58	
323.0	020.5000	0229.1	064.5	243.8	000.2500	0153.5	082.1	29.93	
324.0	020.5000	0229.2	064.5	243.9	000.2500	0153.7	081.0	30.27	
325.0	020.5000	0229.6	064.6	244.1	000.2500	0153.8	079.9	30.62	
326.0	020.5000	0231.0	064.7	244.3	000.2500	0154.1	078.8	30.97	
327.0	020.5000	0232.0	064.8	244.5	000.2500	0154.2	077.7	31.32	
328.0	020.5000	0230.4	064.6	244.4	000.2500	0154.2	076.5	31.68	
329.0	020.5000	0228.7	064.5	244.4	000.2500	0154.2	075.4	32.03	
330.0	020.5000	0227.1	064.3	244.4	000.2500	0154.2	074.3	32.39	
331.0	020.5000	0225.2	064.2	244.3	000.2500	0154.1	073.1	32.75	
332.0	020.5000	0224.3	064.1	244.3	000.2500	0154.1	072.0	33.11	
333.0	020.5000	0223.7	064.0	244.2	000.2500	0154.0	070.9	33.47	
334.0	020.5000	0221.6	063.8	244.1	000.2500	0153.9	069.8	33.82	
335.0	020.5000	0220.0	063.7	244.0	000.2500	0153.7	068.7	34.17	
336.0	020.5000	0219.2	063.6	243.9	000.2500	0153.6	067.5	34.53	
337.0	020.5000	0218.8	063.6	243.8	000.2500	0153.5	066.4	34.89	
338.0	020.5000	0218.6	063.6	243.7	000.2500	0153.5	065.3	35.26	
339.0	020.5000	0218.9	063.6	243.6	000.2500	0153.4	064.2	35.62	
340.0	020.5000	0219.5	063.7	243.6	000.2500	0153.3	063.1	35.99	
341.0	020.5000	0220.2	063.7	243.5	000.2500	0153.2	062.0	36.37	
342.0	020.5000	0221.0	063.8	243.4	000.2500	0153.1	060.9	36.76	
343.0	020.5000	0222.0	063.9	243.3	000.2500	0153.0	059.8	37.15	
344.0	020.5000	0223.3	064.0	243.2	000.2500	0153.0	058.7	37.56	
345.0	020.5000	0224.7	064.1	243.1	000.2500	0153.0	057.5	37.97	
346.0	020.5000	0226.1	064.3	243.0	000.2500	0153.0	056.4	38.39	
347.0	020.5000	0227.8	064.4	242.9	000.2500	0152.9	055.3	38.82	
348.0	020.5000	0230.1	064.6	242.8	000.2500	0152.9	054.1	39.25	
349.0	020.5000	0232.4	064.8	242.7	000.2500	0152.8	053.0	39.68	
350.0	020.5000	0235.2	065.0	242.5	000.2500	0152.8	051.8	40.12	
351.0	020.5000	0237.7	065.3	242.4	000.2500	0152.7	050.7	40.56	
352.0	020.5000	0240.3	065.5	242.2	000.2500	0152.6	049.6	41.00	
353.0	020.5000	0242.8	065.7	241.9	000.2500	0152.5	048.4	41.44	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
354.0	020.5000	0244.8	065.8	241.6	000.2500	0152.5	047.3	41.88
355.0	020.5000	0247.1	066.0	241.2	000.2500	0152.5	046.2	42.34
356.0	020.5000	0250.9	066.3	241.0	000.2500	0152.5	045.0	42.83
357.0	020.5000	0256.4	066.8	240.8	000.2500	0152.5	043.7	43.36
358.0	020.5000	0257.4	066.9	240.2	000.2500	0152.4	042.7	43.83
359.0	020.5000	0254.7	066.6	239.2	000.2500	0152.1	041.7	44.22
000.0	020.5000	0250.3	066.3	237.9	000.2500	0150.2	040.9	44.48
001.0	020.5000	0247.1	066.0	236.7	000.2500	0148.5	040.1	44.77
002.0	020.5000	0243.6	065.7	235.4	000.2500	0146.5	039.3	45.02
003.0	020.5000	0240.3	065.5	234.1	000.2500	0144.0	038.6	45.23
004.0	020.5000	0238.2	065.3	232.8	000.2500	0142.3	037.8	45.49
005.0	020.5000	0236.9	065.2	231.5	000.2500	0140.4	037.1	45.74
006.0	020.5000	0235.8	065.1	230.1	000.2500	0139.1	036.3	46.02
007.0	020.5000	0233.2	064.9	228.5	000.2500	0137.7	035.7	46.23
008.0	020.5000	0231.3	064.7	227.0	000.2500	0137.1	035.1	46.49
009.0	020.5000	0230.5	064.6	225.4	000.2500	0135.3	034.5	46.69
010.0	020.5000	0228.5	064.5	223.7	000.2500	0134.8	034.0	46.91
011.0	020.5000	0226.9	064.3	222.0	000.2500	0135.1	033.5	47.17
012.0	020.5000	0225.8	064.2	220.2	000.2500	0134.4	033.0	47.36
013.0	020.5000	0224.6	064.1	218.4	000.2500	0134.0	032.6	47.54
014.0	020.5000	0223.0	064.0	216.5	000.2500	0131.9	032.3	47.57
015.0	020.5000	0221.9	063.9	214.5	000.2500	0129.2	032.0	47.55
016.0	020.5000	0221.6	063.9	212.6	000.2500	0127.0	031.7	47.57
017.0	020.5000	0221.3	063.8	210.6	000.2500	0126.0	031.4	47.64
018.0	020.5000	0220.7	063.8	208.6	000.2500	0124.0	031.2	47.61
019.0	020.5000	0220.4	063.7	206.6	000.2500	0121.5	031.1	47.53
020.0	020.5000	0220.3	063.7	204.6	000.2500	0121.2	031.0	47.57
021.0	020.5000	0220.1	063.7	202.5	000.2500	0120.5	030.9	47.55
022.0	020.5000	0220.0	063.7	200.5	000.2500	0120.9	030.9	47.57
023.0	020.5000	0220.4	063.7	198.4	000.2500	0121.0	030.9	47.56
024.0	020.5000	0220.2	063.7	196.4	000.2500	0123.5	031.1	47.65
025.0	020.5000	0220.5	063.7	194.3	000.2500	0124.3	031.2	47.62
026.0	020.5000	0220.7	063.8	192.3	000.2500	0124.3	031.4	47.51
027.0	020.5000	0221.1	063.8	190.4	000.2500	0124.0	031.7	47.36
028.0	020.5000	0221.7	063.9	188.5	000.2500	0124.4	032.0	47.23
029.0	020.5000	0222.2	063.9	186.6	000.2500	0125.5	032.4	47.13
030.0	020.5000	0223.1	064.0	184.7	000.2500	0125.5	032.7	46.94
031.0	020.5000	0223.9	064.1	182.9	000.2500	0126.3	033.2	46.78
032.0	020.5000	0224.4	064.1	181.2	000.2500	0127.6	033.7	46.60
033.0	020.5000	0225.1	064.2	179.6	000.2500	0129.8	034.2	46.48
034.0	020.5000	0226.1	064.3	178.0	000.2500	0130.3	034.8	46.23
035.0	020.5000	0226.9	064.3	176.5	000.2500	0130.2	035.4	45.93
036.0	020.5000	0227.4	064.4	175.0	000.2500	0130.5	036.1	45.62
037.0	020.5000	0228.7	064.5	173.6	000.2500	0131.7	036.8	45.37
038.0	020.5000	0228.9	064.5	172.3	000.2500	0133.9	037.5	45.14
039.0	020.5000	0229.0	064.5	171.2	000.2500	0135.1	038.4	44.83
040.0	020.5000	0229.4	064.5	170.1	000.2500	0136.2	039.2	44.51
041.0	020.5000	0230.0	064.6	169.0	000.2500	0135.2	040.0	44.07
042.0	020.5000	0230.2	064.6	168.0	000.2500	0136.1	040.9	43.72
043.0	020.5000	0229.9	064.6	167.1	000.2500	0137.7	041.9	43.39
044.0	020.5000	0230.2	064.6	166.3	000.2500	0137.7	042.8	42.98



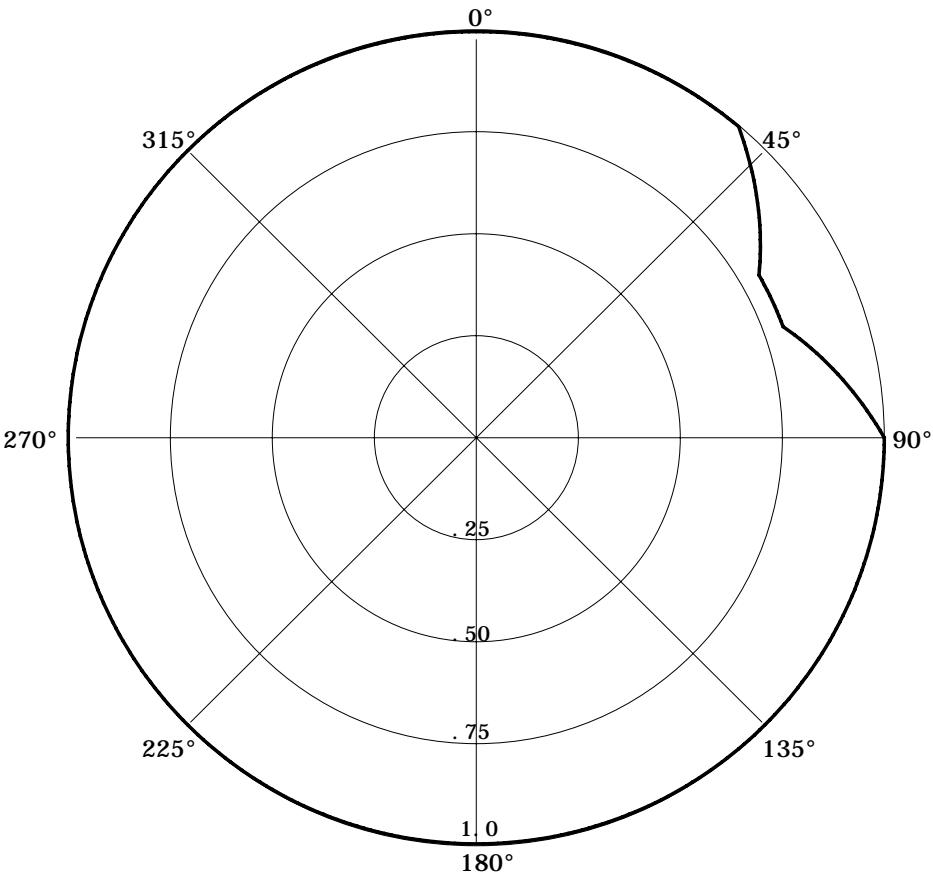
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
045.0	020.5000	0230.9	064.7	165.4	000.2500	0137.4	043.7	42.56
046.0	020.5000	0230.7	064.7	164.7	000.2500	0137.5	044.7	42.16
047.0	020.5000	0230.7	064.7	164.0	000.2500	0138.8	045.7	41.81
048.0	020.5000	0231.3	064.7	163.4	000.2500	0139.9	046.7	41.46
049.0	020.5000	0230.9	064.7	162.8	000.2500	0141.9	047.7	41.16
050.0	020.5000	0231.4	064.7	162.3	000.2500	0144.4	048.8	40.89
051.0	020.5000	0231.6	064.7	161.8	000.2500	0146.3	049.8	40.58
052.0	020.5000	0231.9	064.8	161.3	000.2500	0146.9	050.8	40.21
053.0	020.5000	0232.0	064.8	160.9	000.2500	0147.4	051.9	39.82
054.0	020.5000	0232.0	064.8	160.5	000.2500	0148.5	053.0	39.46
055.0	020.5000	0232.0	064.8	160.2	000.2500	0149.4	054.1	39.09
056.0	020.5000	0232.5	064.8	159.9	000.2500	0149.7	055.2	38.69
057.0	020.5000	0232.5	064.8	159.6	000.2500	0149.8	056.3	38.28
058.0	020.5000	0232.7	064.8	159.3	000.2500	0150.2	057.4	37.89
059.0	020.5000	0232.7	064.8	159.1	000.2500	0150.5	058.5	37.49
060.0	020.5000	0233.2	064.9	158.9	000.2500	0150.9	059.6	37.11
061.0	020.5000	0233.4	064.9	158.7	000.2500	0151.2	060.7	36.72
062.0	020.5000	0233.7	064.9	158.6	000.2500	0151.3	061.8	36.33
063.0	020.5000	0234.3	065.0	158.4	000.2500	0151.4	062.9	35.95
064.0	020.5000	0234.7	065.0	158.3	000.2500	0151.3	064.1	35.56
065.0	020.5000	0235.0	065.0	158.2	000.2500	0151.2	065.2	35.18
066.0	020.5000	0235.1	065.0	158.2	000.2500	0151.1	066.3	34.80
067.0	020.5000	0235.5	065.1	158.1	000.2500	0151.0	067.5	34.42
068.0	020.5000	0236.4	065.1	158.0	000.2500	0150.7	068.6	34.04
069.0	020.5000	0236.4	065.1	158.0	000.2500	0150.8	069.7	33.68
070.0	020.5000	0236.6	065.2	158.1	000.2500	0150.8	070.9	33.31
071.0	020.5000	0236.3	065.1	158.1	000.2500	0151.0	072.0	32.95
072.0	020.5000	0236.4	065.1	158.2	000.2500	0151.1	073.1	32.60
073.0	020.5000	0236.6	065.2	158.2	000.2500	0151.2	074.3	32.24
074.0	020.5000	0236.8	065.2	158.3	000.2500	0151.3	075.4	31.89
075.0	020.5000	0237.1	065.2	158.4	000.2500	0151.4	076.5	31.54
076.0	020.5000	0237.3	065.2	158.4	000.2500	0151.4	077.7	31.19
077.0	020.5000	0237.4	065.2	158.6	000.2500	0151.3	078.8	30.84
078.0	020.5000	0237.7	065.2	158.7	000.2500	0151.3	079.9	30.49
079.0	020.5000	0238.1	065.3	158.8	000.2500	0151.2	081.1	30.14
080.0	020.5000	0238.1	065.3	158.9	000.2500	0150.9	082.2	29.79

E-9 W247BL Antenna Pattern

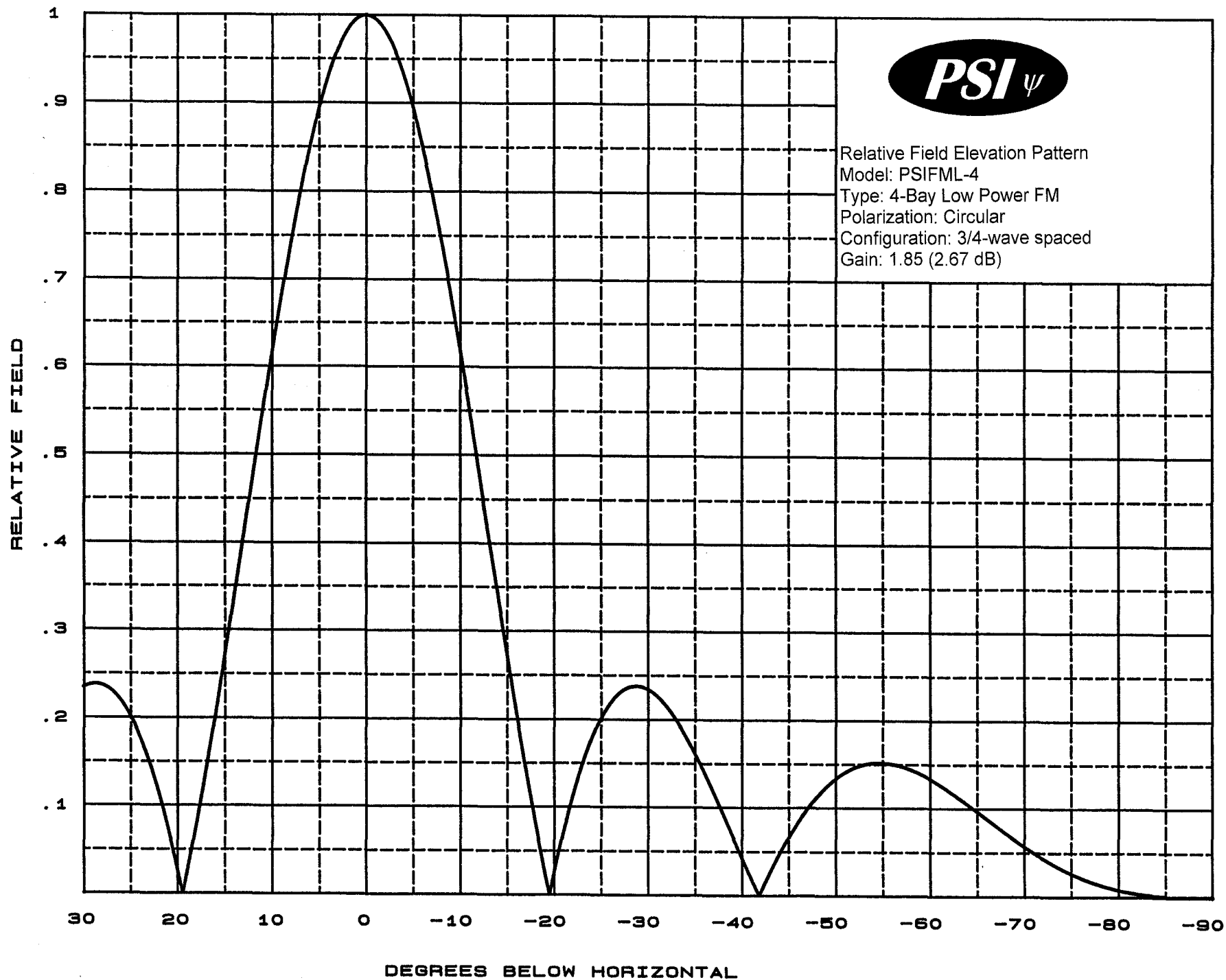
RMS(V) = .985

Graph is Relative Field

Azi	Field	dBk	kW
000	1.000	-06.021	0.250
010	1.000	-06.021	0.250
020	1.000	-06.021	0.250
030	1.000	-06.021	0.250
040	1.000	-06.021	0.250
050	0.900	-06.936	0.202
060	0.800	-07.959	0.160
070	0.800	-07.959	0.160
080	0.900	-06.936	0.202
090	1.000	-06.021	0.250
100	1.000	-06.021	0.250
110	1.000	-06.021	0.250
120	1.000	-06.021	0.250
130	1.000	-06.021	0.250
140	1.000	-06.021	0.250
150	1.000	-06.021	0.250
160	1.000	-06.021	0.250
170	1.000	-06.021	0.250
180	1.000	-06.021	0.250
190	1.000	-06.021	0.250
200	1.000	-06.021	0.250
210	1.000	-06.021	0.250
220	1.000	-06.021	0.250
230	1.000	-06.021	0.250
240	1.000	-06.021	0.250
250	1.000	-06.021	0.250
260	1.000	-06.021	0.250
270	1.000	-06.021	0.250
280	1.000	-06.021	0.250
290	1.000	-06.021	0.250
300	1.000	-06.021	0.250
310	1.000	-06.021	0.250
320	1.000	-06.021	0.250
330	1.000	-06.021	0.250
340	1.000	-06.021	0.250
350	1.000	-06.021	0.250



# E-10 W247BL Antenna Vertical Elevation Pattern and Tabulation





**Propagation Systems Inc.**  
 Elevation Pattern Tabulation  
 Antenna: PSIFML-4 Special  
 Bay spacing: 3/4 wave

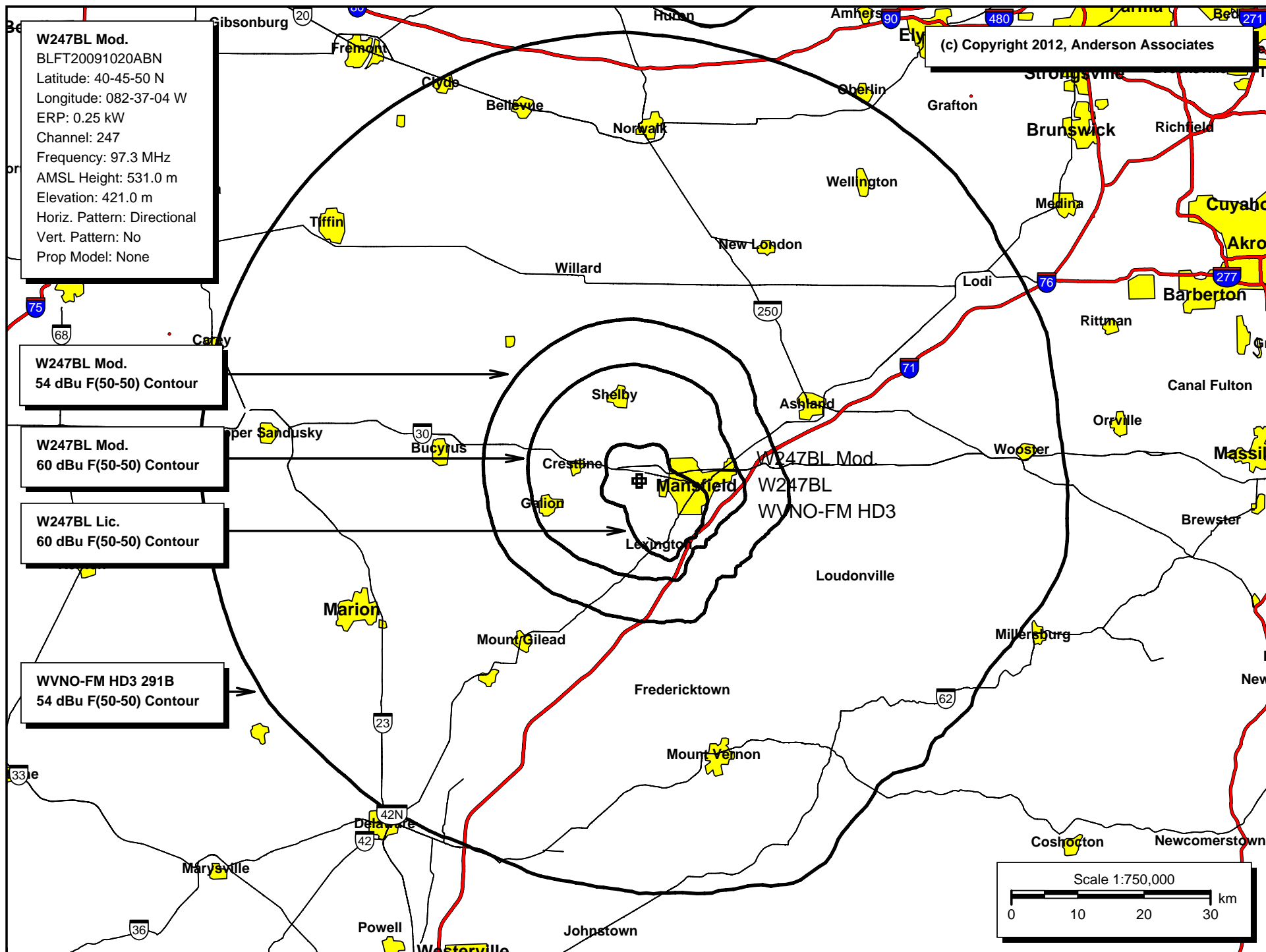
Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90.0	0.001	-60.828	-50.0	0.133	-17.511	-10.0	0.617	-4.190
-89.0	0.001	-60.828	-49.0	0.124	-18.146	-9.0	0.682	-3.325
-88.0	0.001	-60.828	-48.0	0.112	-18.995	-8.0	0.743	-2.583
-87.0	0.001	-60.828	-47.0	0.099	-20.093	-7.0	0.799	-1.950
-86.0	0.001	-60.828	-46.0	0.083	-21.568	-6.0	0.850	-1.415
-85.0	0.001	-60.828	-45.0	0.066	-23.581	-5.0	0.894	-0.974
-84.0	0.002	-54.807	-44.0	0.047	-26.536	-4.0	0.931	-0.618
-83.0	0.003	-50.816	-43.0	0.027	-31.530	-3.0	0.961	-0.346
-82.0	0.004	-47.448	-42.0	0.004	-47.143	-2.0	0.982	-0.154
-81.0	0.006	-44.350	-41.0	0.018	-34.664	-1.0	0.996	-0.038
-80.0	0.008	-41.584	-40.0	0.043	-27.417	0.0	1.000	0.000
-79.0	0.011	-39.244	-39.0	0.067	-23.482	1.0	0.996	-0.038
-78.0	0.014	-37.021	-38.0	0.092	-20.770	2.0	0.983	-0.153
-77.0	0.018	-35.027	-37.0	0.116	-18.740	3.0	0.961	-0.345
-76.0	0.022	-33.164	-36.0	0.139	-17.134	4.0	0.931	-0.618
-75.0	0.027	-31.481	-35.0	0.161	-15.860	5.0	0.894	-0.972
-74.0	0.032	-29.946	-34.0	0.181	-14.829	6.0	0.850	-1.415
-73.0	0.037	-28.537	-33.0	0.199	-14.006	7.0	0.799	-1.948
-72.0	0.044	-27.203	-32.0	0.215	-13.370	8.0	0.743	-2.582
-71.0	0.050	-25.968	-31.0	0.226	-12.904	9.0	0.682	-3.325
-70.0	0.057	-24.841	-30.0	0.234	-12.607	10.0	0.617	-4.188
-69.0	0.065	-23.782	-29.0	0.238	-12.473	11.0	0.550	-5.193
-68.0	0.072	-22.802	-28.0	0.237	-12.517	12.0	0.481	-6.361
-67.0	0.080	-21.905	-27.0	0.230	-12.748	13.0	0.411	-7.728
-66.0	0.088	-21.078	-26.0	0.219	-13.200	14.0	0.341	-9.347
-65.0	0.097	-20.308	-25.0	0.201	-13.920	15.0	0.272	-11.305
-64.0	0.105	-19.614	-24.0	0.178	-14.983	16.0	0.205	-13.752
-63.0	0.112	-18.995	-23.0	0.149	-16.540	17.0	0.141	-16.993
-62.0	0.120	-18.427	-22.0	0.114	-18.867	18.0	0.081	-21.840
-61.0	0.127	-17.926	-21.0	0.073	-22.712	19.0	0.025	-32.147
-60.0	0.133	-17.491	-20.0	0.027	-31.431	20.0	0.027	-31.481
-59.0	0.139	-17.125	-19.0	0.025	-32.201	21.0	0.073	-22.730
-58.0	0.144	-16.827	-18.0	0.081	-21.840	22.0	0.114	-18.867
-57.0	0.148	-16.602	-17.0	0.141	-16.993	23.0	0.149	-16.540
-56.0	0.150	-16.452	-16.0	0.205	-13.752	24.0	0.178	-14.990
-55.0	0.152	-16.374	-15.0	0.272	-11.310	25.0	0.201	-13.920
-54.0	0.152	-16.391	-14.0	0.341	-9.351	26.0	0.219	-13.200
-53.0	0.150	-16.496	-13.0	0.411	-7.731	27.0	0.230	-12.748
-52.0	0.146	-16.709	-12.0	0.481	-6.364	28.0	0.237	-12.517
-51.0	0.141	-17.040	-11.0	0.550	-5.195	29.0	0.238	-12.473
						30.0	0.234	-12.607

file: FML 4-bay elevation tabulation

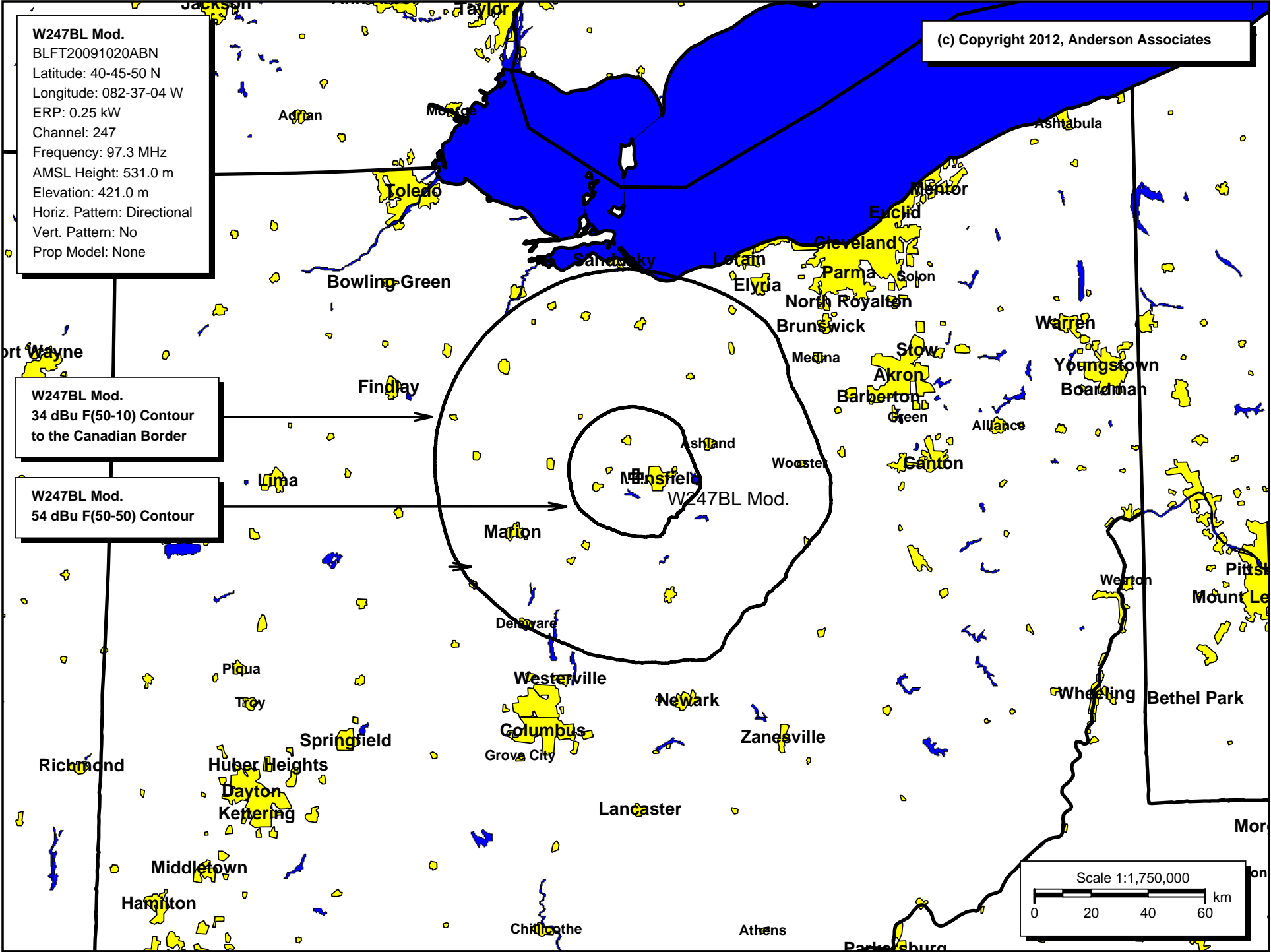
revision: A

Date: 1/28/08

# E-11 W247BL 54 and 60 dBu dBu Contour Plots



E-12 W247BL 34 dBu F(50-10) Contour Plot to the Canadian Border



## E-13 W247BL Tower ASR

ASR Registration Search

### Registration 1013230

 [Map Registration](#)

Registration Detail			
Reg Number	1013230	Status	Constructed
File Number	A0015853	Constructed	03/04/1990
FAA Study	89-AGL-379-OE	EMI	No
FAA Issue Date	08/21/1989	NEPA	No
Antenna Structure			
Structure Type	TOWER - Free standing or Guyed Structure used for Communications Purposes		
Location (in NAD83 Coordinates)			
Lat/Long	40-45-50.0 N 082-37-04.0 W	2900 PARK AVE W	
City, State	ONTARIO , OH		
Center of AM Array			
Heights (meters)			
Elevation of Site Above Mean Sea Level		Overall Height Above Ground (AGL)	
420.6		143.9	
Overall Height Above Mean Sea Level		Overall Height Above Ground w/o Appurtenances	
564.5		143.9	
Painting and Lighting Specifications			
FAA Chapters 3, 4, 5, 9 Paint and Light in Accordance with FAA Circular Number 70/7460-1G			
.			
Owner & Contact Information			
FRN		Licensee ID	
Owner			
MID STATE TELEVISION INC Attention To: GUNTHER MEISSE 2900 PARK AVE W MANSFIELD , OH 44906		P: (419)529-5900 E:	
Contact			
		P: E:	
.			
Last Action Status			
Status	Constructed	Received	02/06/1997
Purpose	New	Entered	02/07/1997
Mode	Mail In (Manual)		
Related Applications			