

DTV Adjacent Channel

According to the new FCC rule 74.706 (d)(2)

Subpart G--Low Power TV, TV Translator, and TV Booster Stations

Sec. 74.706 Digital TV (DTV) station protection.

(d) A low power TV, TV translator or TV booster station application will not be accepted if the ratio in dB of its field strength to that of the DTV station (L/D ratio) fails to meet the following:

(2) + 48 dB for adjacent channel operations at:

(i) The DTV noise-limited perimeter if a low power TV, TV translator or TV booster station is located outside that perimeter.

(ii) At all points within the DTV noise-limited area if a low power TV or TV translator is located within the DTV noise-limited perimeter, as demonstrated by the applicant.

Please find attached a study which shows your signal does not exceed a ratio of desired to undesired that exceeds the required +48 db within the DTV noise-limited perimeter, therefore, the proposed station complies with the FCC rule and does not cause harmful interference to WUPL DTV Channel 24.

Contour At A Bearing of 000 Degrees From Proposed Station

WUPL -DT Distance-Km	63.22	63.46	63.94	64.43	64.93	67.62	70.56
Bearing-Deg	298.10	298.50	299.29	300.06	300.83	304.48	307.83
ERP-dBk	27.56	27.53	27.46	27.39	27.31	26.91	26.50
HAAT-m	179.68	179.61	179.47	179.33	179.10	178.01	177.00
Field Strength	53.67	53.45	53.00	52.53	51.97	49.08	46.07
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	5.92	4.45	2.97	2.23	1.78	.89	.59
ERP-dBk	-40.07	-34.50	-31.50	-25.20	-23.32	-21.43	-21.43
HAAT-m	155.61	155.61	155.61	155.61	155.61	155.61	155.61
Field Strength	63.33	63.87	61.63	63.86	62.49	52.94	45.95
Difference	9.66	10.42	8.63	11.33	10.52	3.86	-.12

Contour At A Bearing of 030 Degrees From Proposed Station

WUPL -DT Distance-Km	62.47	62.45	62.44	62.44	62.45	62.78	63.49
Bearing-Deg	298.26	298.72	299.64	300.56	301.47	306.04	310.54
ERP-dBk	27.55	27.51	27.43	27.34	27.24	26.72	26.14
HAAT-m	179.65	179.57	179.41	179.18	178.90	177.54	176.33
Field Strength	54.26	54.22	54.15	54.05	53.92	53.06	51.84
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	5.76	4.33	2.89	2.17	1.73	.87	.58
ERP-dBk	-36.48	-31.74	-27.96	-22.27	-20.62	-18.86	-18.86
HAAT-m	151.30	151.30	151.30	151.30	151.30	151.30	151.30
Field Strength	66.92	66.55	65.03	66.62	64.99	55.26	48.27
Difference	12.66	12.33	10.88	12.57	11.07	2.20	-3.57

Contour At A Bearing of 060 Degrees From Proposed Station

WUPL -DT Distance-Km	61.72	61.46	60.94	60.44	59.95	57.68	55.77
Bearing-Deg	298.05	298.45	299.25	300.06	300.89	305.24	309.90
ERP-dBk	27.56	27.53	27.46	27.39	27.30	26.82	26.23
HAAT-m	179.69	179.62	179.48	179.33	179.08	177.78	176.38
Field Strength	54.87	55.05	55.39	55.73	56.03	57.40	58.41
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	6.03	4.53	3.02	2.27	1.82	.91	.61
ERP-dBk	-28.80	-22.93	-20.23	-13.76	-11.71	-9.73	-9.73
HAAT-m	158.48	158.48	158.48	158.48	158.48	158.48	158.48
Field Strength	74.60	75.50	72.98	75.41	74.22	64.80	57.81
Difference	19.73	20.45	17.59	19.68	18.19	7.40	-.60

Contour At A Bearing of 090 Degrees From Proposed Station

WUPL -DT Distance-Km	61.20	60.76	59.87	59.00	58.12	53.81	49.63
Bearing-Deg	297.52	297.74	298.18	298.64	299.11	301.70	304.73
ERP-dBk	27.61	27.59	27.55	27.51	27.47	27.22	26.88
HAAT-m	179.79	179.75	179.67	179.59	179.50	178.84	177.93
Field Strength	55.35	55.69	56.38	57.07	57.77	61.32	64.96
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	6.18	4.64	3.10	2.33	1.86	.93	.62
ERP-dBk	-5.69	-.45	2.30	8.55	10.83	12.94	12.94
HAAT-m	162.42	162.42	162.42	162.42	162.42	162.42	162.42
Field Strength	97.71	98.05	95.62	97.86	96.93	87.68	80.69
Difference	42.36	42.36	39.24	40.79	39.16	26.36	15.73

Contour At A Bearing of 120 Degrees From Proposed Station

WUPL -DT Distance-Km	61.04	60.54	59.54	58.55	57.55	52.57	47.59
Bearing-Deg	296.81	296.78	296.73	296.67	296.61	296.28	295.89
ERP-dBk	27.67	27.67	27.67	27.68	27.68	27.71	27.74
HAAT-m	179.91	179.92	179.93	179.94	179.95	180.01	180.08
Field Strength	55.55	55.96	56.79	57.63	58.50	63.04	67.79
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	6.36	4.78	3.19	2.39	1.92	.96	.64
ERP-dBk	-1.47	3.02	5.83	11.78	14.37	16.63	16.63
HAAT-m	167.22	167.22	167.22	167.22	167.22	167.22	167.22
Field Strength	101.92	101.60	99.29	101.27	100.67	91.62	84.64
Difference	46.37	45.64	42.50	43.64	42.17	28.58	16.85

Contour At A Bearing of 150 Degrees From Proposed Station

WUPL -DT Distance-Km	61.28	60.87	60.05	59.23	58.42	54.45	50.67
Bearing-Deg	296.12	295.86	295.32	294.77	294.20	291.12	287.56
ERP-dBk	27.72	27.74	27.79	27.83	27.87	28.11	28.32
HAAT-m	180.04	180.08	180.18	180.28	180.38	180.92	181.31
Field Strength	55.41	55.77	56.49	57.23	57.96	61.73	65.54
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	6.47	4.86	3.24	2.43	1.95	.97	.65
ERP-dBk	-1.09	2.98	5.83	11.60	14.37	16.72	16.72
HAAT-m	170.05	170.05	170.05	170.05	170.05	170.05	170.05
Field Strength	102.31	101.61	99.36	101.18	100.78	91.86	84.88
Difference	46.90	45.84	42.87	43.95	42.82	30.13	19.34

Contour At A Bearing of 180 Degrees From Proposed Station

WUPL -DT Distance-Km	61.87	61.66	61.24	60.84	60.45	58.71	57.37
Bearing-Deg	295.65	295.23	294.38	293.52	292.65	288.14	283.38
ERP-dBk	27.76	27.79	27.86	27.93	27.99	28.29	28.53
HAAT-m	180.12	180.19	180.34	180.50	180.65	181.27	181.64
Field Strength	54.98	55.19	55.60	56.00	56.40	58.18	59.59
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	6.49	4.88	3.26	2.44	1.96	.98	.65
ERP-dBk	-2.27	1.71	4.56	10.29	13.10	15.48	15.48
HAAT-m	170.68	170.68	170.68	170.68	170.68	170.68	170.68
Field Strength	101.13	100.35	98.11	99.89	99.54	90.65	83.67
Difference	46.15	45.16	42.51	43.89	43.14	32.47	24.08

Contour At A Bearing of 210 Degrees From Proposed Station

WUPL -DT Distance-Km	62.63	62.67	62.77	62.88	63.01	63.88	65.12
Bearing-Deg	295.51	295.06	294.15	293.24	292.34	287.89	283.58
ERP-dBk	27.77	27.81	27.88	27.95	28.02	28.30	28.52
HAAT-m	180.14	180.22	180.39	180.55	180.71	181.29	181.62
Field Strength	54.38	54.39	54.39	54.38	54.36	54.00	53.15
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	6.48	4.87	3.25	2.44	1.95	.98	.65
ERP-dBk	-16.76	-12.73	-9.88	-4.13	-1.34	1.02	1.02
HAAT-m	170.29	170.29	170.29	170.29	170.29	170.29	170.29
Field Strength	86.64	85.90	83.66	85.46	85.08	76.18	69.20
Difference	32.26	31.51	29.27	31.08	30.72	22.18	16.05

Contour At A Bearing of 240 Degrees From Proposed Station

WUPL -DT Distance-Km	63.36	63.65	64.22	64.80	65.40	68.51	71.84
Bearing-Deg	295.75	295.38	294.64	293.92	293.21	289.86	286.81
ERP-dBk	27.75	27.78	27.84	27.90	27.95	28.20	28.36
HAAT-m	180.10	180.17	180.30	180.43	180.55	181.13	181.37
Field Strength	53.78	53.59	53.21	52.75	52.27	49.76	47.09
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	6.31	4.74	3.17	2.38	1.90	.95	.63
ERP-dBk	-36.10	-31.42	-28.62	-22.59	-20.09	-17.87	-17.87
HAAT-m	165.97	165.97	165.97	165.97	165.97	165.97	165.97
Field Strength	67.29	67.14	64.80	66.84	66.16	57.06	50.08
Difference	13.51	13.55	11.59	14.09	13.89	7.30	2.99

Contour At A Bearing of 270 Degrees From Proposed Station

WUPL -DT Distance-Km	63.87	64.32	65.22	66.12	67.02	71.58	76.19
Bearing-Deg	296.28	296.08	295.70	295.32	294.96	293.27	291.78
ERP-dBk	27.71	27.73	27.76	27.79	27.82	27.95	28.06
HAAT-m	180.01	180.04	180.11	180.18	180.24	180.54	180.81
Field Strength	53.33	53.00	52.22	51.43	50.65	46.85	43.23
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	6.19	4.65	3.11	2.33	1.87	.93	.62
ERP-dBk	-40.00	-34.83	-32.07	-25.85	-23.54	-21.43	-21.43
HAAT-m	162.81	162.81	162.81	162.81	162.81	162.81	162.81
Field Strength	63.39	63.68	61.26	63.48	62.57	53.34	46.35
Difference	10.06	10.68	9.04	12.05	11.92	6.49	3.12

Contour At A Bearing of 300 Degrees From Proposed Station

WUPL -DT Distance-Km	64.03	64.52	65.52	66.52	67.51	72.49	77.48
Bearing-Deg	296.96	296.98	297.03	297.08	297.12	297.32	297.50
ERP-dBk	27.65	27.65	27.65	27.64	27.64	27.62	27.61
HAAT-m	179.89	179.88	179.87	179.86	179.86	179.82	179.79
Field Strength	53.15	52.74	51.82	50.91	50.01	45.73	41.73
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	6.09	4.57	3.05	2.29	1.83	.92	.61
ERP-dBk	-41.91	-36.27	-33.55	-27.17	-25.03	-23.01	-23.01
HAAT-m	159.95	159.95	159.95	159.95	159.95	159.95	159.95
Field Strength	61.49	62.18	59.69	62.06	60.96	51.60	44.62
Difference	8.34	9.44	7.87	11.15	10.95	5.87	2.89

Contour At A Bearing of 330 Degrees From Proposed Station

WUPL -DT Distance-Km	63.79	64.21	65.06	65.91	66.76	71.09	75.50
Bearing-Deg	297.62	297.86	298.33	298.79	299.24	301.30	303.13
ERP-dBk	27.60	27.58	27.54	27.50	27.46	27.26	27.06
HAAT-m	179.77	179.72	179.64	179.56	179.48	178.96	178.41
Field Strength	53.27	52.92	52.12	51.30	50.48	46.49	42.66
Proposed Distance-Km	1.50	2.00	3.00	4.00	5.00	10.00	15.00
Tilt (Deg)	5.90	4.43	2.96	2.22	1.78	.89	.59
ERP-dBk	-42.42	-36.99	-33.86	-27.67	-25.82	-23.95	-23.95
HAAT-m	154.93	154.93	154.93	154.93	154.93	154.93	154.93
Field Strength	60.98	61.37	59.24	61.36	59.95	50.38	43.39
Difference	7.71	8.45	7.12	10.06	9.47	3.89	.73