

Azimuth Pattern

Systems With Reliability Inc

Scale: Linear

Unit: Relative Field

CLIENT: *WGFL-TV*

Date: 9/09/2008

ANTENNA TYPE: SWDDP 1-1-1-1

FREQUENCY: 189 MHz

PATTERN POL.: Horizontal

CIRCULARITY(+/-dB):

AZ. DIRECTIVITY: 1.61 / 2.07 dB

PATTERN RMS: 0.787

Relative Field Tabulation(Azimuth)

Azimuth Heading	Normalized Field(dB)	Azimuth Heading	Normalized Field(dB)
0	.9377 (-0.558)	180	.4512 (-6.912)
5	.9598 (-0.356)	185	.5280 (-5.547)
10	.9418 (-0.521)	190	.5860 (-4.642)
15	.9311 (-0.62)	195	.6562 (-3.66)
20	.9090 (-0.829)	200	.7187 (-2.869)
25	.9000 (-0.915)	205	.7794 (-2.165)
30	.9133 (-0.788)	210	.8392 (-1.523)
35	.9477 (-0.466)	215	.8965 (-0.949)
40	.9789 (-0.185)	220	.9445 (-0.496)
45	1.0000 (0)	225	.9828 (-0.151)
50	.9905 (-0.083)	230	.9905 (-0.083)
55	.9828 (-0.151)	235	1.0000 (0)
60	.9445 (-0.496)	240	.9789 (-0.185)
65	.8965 (-0.949)	245	.9477 (-0.466)
70	.8392 (-1.523)	250	.9133 (-0.788)
75	.7794 (-2.165)	255	.9000 (-0.915)
80	.7187 (-2.869)	260	.9090 (-0.829)
85	.6562 (-3.66)	265	.9311 (-0.62)
90	.5860 (-4.642)	270	.9418 (-0.521)
95	.5280 (-5.547)	275	.9598 (-0.356)
100	.4512 (-6.912)	280	.9377 (-0.558)
105	.3832 (-8.331)	285	.9217 (-0.708)
110	.3076 (-10.239)	290	.8919 (-0.993)
115	.2420 (-12.322)	295	.8731 (-1.179)
120	.2018 (-13.902)	300	.8758 (-1.152)
125	.1953 (-14.186)	305	.9021 (-0.895)
130	.2004 (-13.961)	310	.9316 (-0.616)
135	.2048 (-13.774)	315	.9548 (-0.401)
140	.2030 (-13.852)	320	.9518 (-0.429)
145	.2048 (-13.774)	325	.9548 (-0.401)
150	.2004 (-13.961)	330	.9316 (-0.616)
155	.1953 (-14.186)	335	.9021 (-0.895)
160	.2018 (-13.902)	340	.8758 (-1.152)
165	.2420 (-12.322)	345	.8731 (-1.179)
170	.3076 (-10.239)	350	.8919 (-0.993)
175	.3832 (-8.331)	355	.9217 (-0.708)

Systems With Reliability Inc

CLIENT: *WGFL-TV*

Date: 9/09/2008

ANTENNA TYPE: SWDDP 1-1-1-1

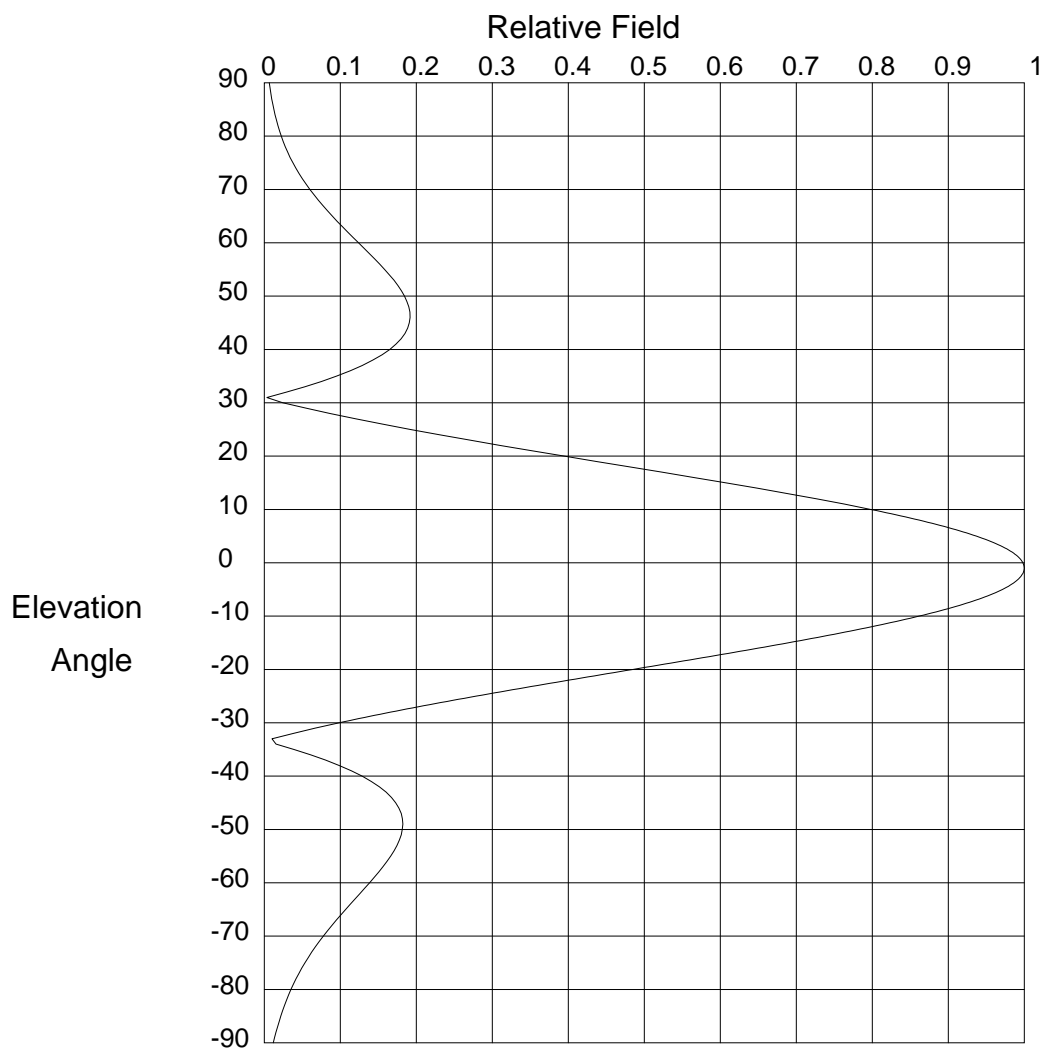
FREQUENCY: 189 MHz

PATTERN POL.: Horizontal

CIRCULARITY(+/-dB):

AZ. DIRECTIVITY: 1.61 / 2.07 dB

PATTERN RMS: 0.787



Elevation Pattern

Scale: Linear

Units: Field, Relative

Systems With Reliability Inc

CLIENT: *WNBW*

Date: 9/22/2008

ANTENNA TYPE: SWDDP 1-1-1-1 / 9-DT

FREQUENCY: 189 MHz

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 2.491/3.964 dBd

Beam Tilt (Deg.) : -1

DIRECTIVITY(Horiz): 2.482/3.949 dBd

Null Fill(s)(%) : 0, 0, 0

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
90.0	.007 (-43.643)	52.0	.176 (-15.098)	14.0	.648 (-3.768)
89.0	.008 (-42.347)	51.0	.181 (-14.868)	13.0	.688 (-3.249)
88.0	.009 (-41.156)	50.0	.185 (-14.676)	12.0	.726 (-2.775)
87.0	.01 (-40.035)	49.0	.188 (-14.524)	11.0	.763 (-2.345)
86.0	.011 (-38.962)	48.0	.19 (-14.414)	10.0	.798 (-1.956)
85.0	.013 (-37.922)	47.0	.192 (-14.351)	9.8	.805 (-1.883)
84.0	.014 (-36.906)	46.0	.192 (-14.337)	9.6	.812 (-1.811)
83.0	.016 (-35.909)	45.0	.191 (-14.378)	9.4	.818 (-1.741)
82.0	.018 (-34.927)	44.0	.189 (-14.478)	9.2	.825 (-1.672)
81.0	.02 (-33.959)	43.0	.185 (-14.645)	9.0	.831 (-1.605)
80.0	.022 (-33.005)	42.0	.18 (-14.888)	8.8	.838 (-1.54)
79.0	.025 (-32.065)	41.0	.173 (-15.217)	8.6	.844 (-1.476)
78.0	.028 (-31.141)	40.0	.165 (-15.647)	8.4	.85 (-1.413)
77.0	.031 (-30.232)	39.0	.155 (-16.198)	8.2	.856 (-1.352)
76.0	.034 (-29.341)	38.0	.143 (-16.897)	8.0	.862 (-1.292)
75.0	.038 (-28.469)	37.0	.129 (-17.786)	7.8	.868 (-1.234)
74.0	.042 (-27.616)	36.0	.113 (-18.926)	7.6	.873 (-1.177)
73.0	.046 (-26.784)	35.0	.095 (-20.419)	7.4	.879 (-1.122)
72.0	.05 (-25.974)	34.0	.075 (-22.454)	7.2	.884 (-1.068)
71.0	.055 (-25.185)	33.0	.053 (-25.445)	7.0	.89 (-1.015)
70.0	.06 (-24.42)	32.0	.029 (-30.63)	6.8	.895 (-0.964)
69.0	.065 (-23.678)	31.0	.003 (-49.464)	6.6	.90 (-0.914)
68.0	.071 (-22.96)	30.0	.025 (-32.151)	6.4	.905 (-0.866)
67.0	.077 (-22.266)	29.0	.055 (-25.243)	6.2	.91 (-0.819)
66.0	.083 (-21.597)	28.0	.087 (-21.253)	6.0	.915 (-0.773)
65.0	.09 (-20.953)	27.0	.12 (-18.4)	5.8	.919 (-0.729)
64.0	.096 (-20.335)	26.0	.156 (-16.161)	5.6	.924 (-0.686)
63.0	.103 (-19.743)	25.0	.192 (-14.312)	5.4	.928 (-0.645)
62.0	.11 (-19.177)	24.0	.231 (-12.735)	5.2	.933 (-0.604)
61.0	.117 (-18.638)	23.0	.27 (-11.36)	5.0	.937 (-0.565)
60.0	.124 (-18.127)	22.0	.311 (-10.144)	4.8	.941 (-0.528)
59.0	.131 (-17.643)	21.0	.353 (-9.056)	4.6	.945 (-0.492)
58.0	.138 (-17.187)	20.0	.395 (-8.075)	4.4	.949 (-0.457)
57.0	.145 (-16.761)	19.0	.437 (-7.185)	4.2	.952 (-0.423)
56.0	.152 (-16.365)	18.0	.48 (-6.374)	4.0	.956 (-0.391)
55.0	.159 (-15.999)	17.0	.523 (-5.633)	3.8	.959 (-0.36)
54.0	.165 (-15.665)	16.0	.565 (-4.956)	3.6	.963 (-0.33)
53.0	.171 (-15.365)	15.0	.607 (-4.335)	3.4	.966 (-0.302)

Systems With Reliability Inc

Page 1 of 3

CLIENT: WNBW

Date: 9/22/2008

ANTENNA TYPE: SWDDP 1-1-1-1 / 9-DT

FREQUENCY: 189 MHz

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 2.491/3.964 dBd

Beam Tilt (Deg.) : -1

DIRECTIVITY(Horiz): 2.482/3.949 dBd

Null Fill(s)(%) : 0, 0, 0

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
3.2	.969 (-0.275)	-4.4	.979 (-0.183)	-12.0	.799 (-1.952)
3.0	.972 (-0.249)	-4.6	.977 (-0.205)	-12.2	.792 (-2.026)
2.8	.974 (-0.225)	-4.8	.974 (-0.228)	-12.4	.785 (-2.101)
2.6	.977 (-0.201)	-5.0	.971 (-0.253)	-12.6	.778 (-2.178)
2.4	.98 (-0.179)	-5.2	.968 (-0.279)	-12.8	.771 (-2.257)
2.2	.982 (-0.159)	-5.4	.965 (-0.306)	-13.0	.764 (-2.337)
2.0	.984 (-0.139)	-5.6	.962 (-0.334)	-13.2	.757 (-2.419)
1.8	.986 (-0.121)	-5.8	.959 (-0.364)	-13.4	.75 (-2.502)
1.6	.988 (-0.104)	-6.0	.956 (-0.395)	-13.6	.742 (-2.587)
1.4	.99 (-0.089)	-6.2	.952 (-0.427)	-13.8	.735 (-2.674)
1.2	.991 (-0.075)	-6.4	.948 (-0.461)	-14.0	.728 (-2.762)
1.0	.993 (-0.061)	-6.6	.945 (-0.496)	-14.2	.72 (-2.852)
.8	.994 (-0.05)	-6.8	.941 (-0.532)	-14.4	.713 (-2.943)
.6	.996 (-0.039)	-7.0	.937 (-0.57)	-14.6	.705 (-3.037)
.4	.997 (-0.03)	-7.2	.932 (-0.608)	-14.8	.697 (-3.132)
.2	.997 (-0.022)	-7.4	.928 (-0.649)	-15.0	.69 (-3.229)
.0	.998 (-0.015)	-7.6	.924 (-0.69)	-15.2	.682 (-3.327)
-.2	.999 (-0.01)	-7.8	.919 (-0.733)	-15.4	.674 (-3.427)
-.4	.999 (-0.005)	-8.0	.914 (-0.777)	-15.6	.666 (-3.529)
-.6	1.00 (-0.002)	-8.2	.91 (-0.823)	-15.8	.658 (-3.633)
-.8	1.00 (-0.001)	-8.4	.905 (-0.869)	-16.0	.65 (-3.739)
-1.0	1.00 (0)	-8.6	.90 (-0.918)	-16.2	.642 (-3.847)
-1.2	1.00 (-0.001)	-8.8	.895 (-0.967)	-16.4	.634 (-3.956)
-1.4	1.00 (-0.003)	-9.0	.889 (-1.018)	-16.6	.626 (-4.068)
-1.6	.999 (-0.006)	-9.2	.884 (-1.07)	-16.8	.618 (-4.181)
-1.8	.999 (-0.01)	-9.4	.879 (-1.124)	-17.0	.61 (-4.297)
-2.0	.998 (-0.016)	-9.6	.873 (-1.179)	-17.2	.602 (-4.414)
-2.2	.997 (-0.023)	-9.8	.867 (-1.236)	-17.4	.593 (-4.534)
-2.4	.996 (-0.031)	-10.0	.862 (-1.294)	-17.6	.585 (-4.655)
-2.6	.995 (-0.041)	-10.2	.856 (-1.353)	-17.8	.577 (-4.779)
-2.8	.994 (-0.052)	-10.4	.85 (-1.414)	-18.0	.569 (-4.904)
-3.0	.993 (-0.064)	-10.6	.844 (-1.476)	-18.2	.56 (-5.032)
-3.2	.991 (-0.077)	-10.8	.838 (-1.539)	-18.4	.552 (-5.163)
-3.4	.99 (-0.091)	-11.0	.831 (-1.604)	-18.6	.544 (-5.295)
-3.6	.988 (-0.107)	-11.2	.825 (-1.671)	-18.8	.535 (-5.43)
-3.8	.986 (-0.124)	-11.4	.819 (-1.739)	-19.0	.527 (-5.567)
-4.0	.984 (-0.142)	-11.6	.812 (-1.808)	-19.2	.518 (-5.706)
-4.2	.982 (-0.162)	-11.8	.805 (-1.879)	-19.4	.51 (-5.848)

Systems With Reliability Inc

Page 2 of 3

CLIENT: WNBW

Date: 9/22/2008

ANTENNA TYPE: SWDDP 1-1-1-1 / 9-DT

FREQUENCY: 189 MHz

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 2.491/3.964 dBd

Beam Tilt (Deg.) : -1

DIRECTIVITY(Horiz): 2.482/3.949 dBd

Null Fill(s)(%) : 0, 0, 0

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
-19.6	.502 (-5.992)	-27.2	.195 (-14.188)	-54.0	.171 (-15.348)
-19.8	.493 (-6.139)	-27.4	.188 (-14.519)	-55.0	.166 (-15.575)
-20.0	.485 (-6.289)	-27.6	.181 (-14.86)	-56.0	.162 (-15.834)
-20.2	.476 (-6.441)	-27.8	.174 (-15.212)	-57.0	.156 (-16.124)
-20.4	.468 (-6.595)	-28.0	.166 (-15.576)	-58.0	.151 (-16.443)
-20.6	.46 (-6.753)	-28.2	.159 (-15.953)	-59.0	.145 (-16.791)
-20.8	.451 (-6.913)	-28.4	.152 (-16.343)	-60.0	.139 (-17.165)
-21.0	.443 (-7.076)	-28.6	.145 (-16.748)	-61.0	.132 (-17.565)
-21.2	.434 (-7.243)	-28.8	.139 (-17.169)	-62.0	.126 (-17.991)
-21.4	.426 (-7.412)	-29.0	.132 (-17.607)	-63.0	.12 (-18.44)
-21.6	.418 (-7.584)	-29.2	.125 (-18.063)	-64.0	.113 (-18.912)
-21.8	.409 (-7.759)	-29.4	.118 (-18.54)	-65.0	.107 (-19.407)
-22.0	.401 (-7.938)	-29.6	.112 (-19.04)	-66.0	.101 (-19.923)
-22.2	.393 (-8.12)	-29.8	.105 (-19.564)	-67.0	.095 (-20.46)
-22.4	.384 (-8.306)	-30.0	.099 (-20.117)	-68.0	.089 (-21.018)
-22.6	.376 (-8.495)	-31.0	.067 (-23.434)	-69.0	.083 (-21.594)
-22.8	.368 (-8.688)	-32.0	.038 (-28.442)	-70.0	.078 (-22.19)
-23.0	.36 (-8.884)	-33.0	.01 (-39.824)	-71.0	.072 (-22.804)
-23.2	.351 (-9.085)	-34.0	.015 (-36.194)	-72.0	.067 (-23.435)
-23.4	.343 (-9.289)	-35.0	.039 (-28.124)	-73.0	.062 (-24.083)
-23.6	.335 (-9.498)	-36.0	.061 (-24.289)	-74.0	.058 (-24.748)
-23.8	.327 (-9.711)	-37.0	.081 (-21.847)	-75.0	.054 (-25.429)
-24.0	.319 (-9.928)	-38.0	.099 (-20.113)	-76.0	.049 (-26.126)
-24.2	.311 (-10.15)	-39.0	.115 (-18.812)	-77.0	.046 (-26.839)
-24.4	.303 (-10.377)	-40.0	.129 (-17.807)	-78.0	.042 (-27.567)
-24.6	.295 (-10.609)	-41.0	.141 (-17.018)	-79.0	.038 (-28.311)
-24.8	.287 (-10.846)	-42.0	.151 (-16.395)	-80.0	.035 (-29.073)
-25.0	.279 (-11.088)	-43.0	.16 (-15.905)	-81.0	.032 (-29.852)
-25.2	.271 (-11.336)	-44.0	.167 (-15.524)	-82.0	.029 (-30.652)
-25.4	.263 (-11.59)	-45.0	.173 (-15.236)	-83.0	.027 (-31.475)
-25.6	.256 (-11.85)	-46.0	.177 (-15.026)	-84.0	.024 (-32.326)
-25.8	.248 (-12.116)	-47.0	.18 (-14.887)	-85.0	.022 (-33.211)
-26.0	.24 (-12.389)	-48.0	.182 (-14.809)	-86.0	.02 (-34.139)
-26.2	.233 (-12.669)	-49.0	.182 (-14.786)	-87.0	.018 (-35.121)
-26.4	.225 (-12.956)	-50.0	.182 (-14.813)	-88.0	.016 (-36.176)
-26.6	.217 (-13.251)	-51.0	.18 (-14.886)	-89.0	.014 (-37.326)
-26.8	.21 (-13.555)	-52.0	.178 (-15.002)	-90.0	.012 (-38.608)
-27.0	.203 (-13.867)	-53.0	.175 (-15.157)	90.0	.00 (-50)

Systems With Reliability Inc

Page 3 of 3

CLIENT: *WNBW*

Date: 9/22/2008

ANTENNA TYPE: SWDDP 1-1-1-1 / 9-DT

FREQUENCY: 189 MHz

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 2.491/3.964 dBd

Beam Tilt (Deg.) : -1

DIRECTIVITY(Horiz): 2.482/3.949 dBd

Null Fill(s)(%) : 0, 0, 0