

Radiotechniques

402 Tenth Ave. • PO Box 367 • Haddon Heights, NJ 08035-0367

Exhibit 12 Table 1

Computation of Signal Level on the Ground
Proposed Translator - 105 and 195 degree Bearing
BNPFT-20030312BEU
July 2003

Horizontal Effective Radiated Power = 31 W
Height of Radiation Center Above Ground = 70 Meters
Antenna Manufacturer / Type = Kathrein/ Scala 5xCA5-FM/RM/CV

Depression Angle - Deg	Horizontal Dist. - m	Slant Dist. - m	Relative Field	ERP Watts	Reflection Loss db	Signal Strength dbμV
1	4010.30	4010.91	1.000	31.00	2.90	76.85
2	2004.54	2005.76	0.995	30.69	2.83	82.90
3	1335.68	1337.51	0.988	30.26	2.76	86.43
4	1001.05	1003.49	0.979	29.71	2.73	88.87
5	800.10	803.16	0.968	29.04	2.70	90.74
6	666.01	669.67	0.955	28.27	2.65	92.25
7	570.10	574.39	0.937	27.21	2.62	93.45
8	498.08	502.97	0.917	26.06	2.55	94.48
9	441.96	447.47	0.985	30.07	2.50	96.17
10	396.99	403.11	0.872	23.57	2.47	96.05
12	329.32	336.68	0.847	22.24	2.47	97.36
14	280.75	289.35	0.790	19.34	2.47	98.07
16	244.12	253.96	0.728	16.43	2.47	98.49
18	215.44	226.52	0.660	13.50	2.47	98.64
20	192.32	204.67	0.588	10.71	2.47	98.51
25	150.12	165.63	0.514	8.19	2.47	99.18
30	121.24	140.00	0.321	3.19	2.47	96.55
35	99.97	122.04	0.146	0.66	2.47	90.90
40	83.42	108.90	0.010	0.00	2.47	68.61
45	70.00	98.99	0.098	0.29	2.47	89.26
50	58.74	91.38	0.150	0.69	2.47	93.65
55	49.01	85.45	0.164	0.83	2.47	95.01
60	40.41	80.83	0.153	0.72	2.47	94.89
65	32.64	77.24	0.136	0.57	2.47	94.26
70	25.48	74.49	0.112	0.38	2.47	92.89
75	18.76	72.47	0.113	0.39	2.47	93.21
80	12.34	71.08	0.118	0.43	2.47	93.75
85	6.12	70.27	0.128	0.50	2.47	94.56
90	0.00	70.00	0.137	0.58	2.47	95.18

Maximum Signal on the Ground = 99.18 dbuV

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Exhibit 12 Table 1

Computation of Signal Level on the Ground
Proposed Translator - 327 degree Bearing
BNPFT-20030312BEU
July 2003

Horizontal Effective Radiated Power = 11.5 W
Height of Radiation Center Above Ground = 70 Meters
Antenna Manufacturer / Type = Kathrein/ Scala 5xCA5-FM/RM/CV

Depression Angle - Deg	Horizontal Dist. - m	Slant Dist. - m	Relative Field	ERP Watts	Reflection Loss db	Signal Strength dbμV
1	4010.30	4010.91	1.000	11.50	2.90	72.55
2	2004.54	2005.76	0.996	11.40	2.83	78.60
3	1335.68	1337.51	0.993	11.34	2.76	82.16
4	1001.05	1003.49	0.989	11.24	2.73	84.65
5	800.10	803.16	0.986	11.18	2.70	86.59
6	666.01	669.67	0.982	11.09	2.65	88.19
7	570.10	574.39	0.976	10.95	2.62	89.50
8	498.08	502.97	0.970	10.82	2.55	90.67
9	441.96	447.47	0.964	10.68	2.50	91.68
10	396.99	403.11	0.958	10.55	2.47	92.56
12	329.32	336.68	0.952	10.42	2.47	94.07
14	280.75	289.35	0.937	10.09	2.47	95.25
16	244.12	253.96	0.922	9.77	2.47	96.24
18	215.44	226.52	0.905	9.41	2.47	97.07
20	192.32	204.67	0.885	9.00	2.47	97.76
25	150.12	165.63	0.866	8.62	2.47	99.41
30	121.24	140.00	0.796	7.28	2.47	100.14
35	99.97	122.04	0.718	5.92	2.47	100.43
40	83.42	108.90	0.628	4.53	2.47	100.26
45	70.00	98.99	0.528	3.20	2.47	99.58
50	58.74	91.38	0.423	2.05	2.47	98.35
55	49.01	85.45	0.329	1.24	2.47	96.75
60	40.41	80.83	0.247	0.70	2.47	94.74
65	32.64	77.24	0.190	0.41	2.47	92.86
70	25.48	74.49	0.142	0.23	2.47	90.64
75	18.76	72.47	0.134	0.20	2.47	90.38
80	12.34	71.08	0.135	0.21	2.47	90.61
85	6.12	70.27	0.142	0.23	2.47	91.15
90	0.00	70.00	0.150	0.25	2.47	91.66

Maximum Signal on the Ground = 100.43 dbμV