Telecom
RADIO ANTENNAS

BEXT

PROUD MEMBER
NAB
BROADCASTERS

10 Bay TFC2K 98.1MHz

October 2015

General data of antenna System

TX station	
Site Name	
System of coordinates	WGS84
Longitude	-04°21'22.296"
Latitude	00°00'05.703"
Ground level a.s.l. (m)	1.0
Antenna system height (m)	20.0
Transmitter power(Watt)	1.000
Carrier wave frequency (MHz)	98.100
Antenna system central frequency (MHz)	98.100
Antenna base diagrams type 1	TFC2K
Polarization (H/V/C/X)	C
Transmitting cable attenuation (dB)	0.0
Additional attenuations(dB)	0.0
Base diagrams sectors (T = All, F = Front)	T
Velocity factor of cables to Antennas (0÷1)	1.00
Coordinate System(C = cartesian, P = polar)	P
Mast side / diameter(cm)	0.0
Mast cross section (T/Q/C)	Q
Structure rotation w.r.t. North (°)	0.0
Mast rotation w.r.t. North (°)	0.0

Information about antennas used in the System

	Antenna
Manufacturer	Telecom
Antenna model	TFC2K
Band start(MHz)	87
Band stop(MHz)	108
diagrams Frequency(MHz)	98.1
Polariz (H/V/C/X)	C
Vertical dist (cm)	320
Height (cm)	250
Width (cm)	170
Thickness (cm)	150
Weight (Kg)	80
Maximum power (KW)	4
Gain (dBd)	-3.4
North E.C. (cm)	70
East E.C. (cm)	0
Return loss (dB)	0
R.C.Phase (°)	0

Geometrical and electrical data of antenna System

	Power (%)	Tilt (°)	Az. (°/N)	Phase (°)		V dist. (m)	Scr-d (cm)	Scr-Az (°/N)	Rot. (1÷4)	Type (1÷2)	L cables (cm)	Car. phase (°)
1	10.000	0	0	0	+0.0	11.70	0.0	0.0	1	1	0.0	0.0
2	10.000	0	0	0	+0.0	9.10	0.0	0.0	1	1	0.0	0.0
3	10.000	0	0	0	+0.0	6.50	0.0	0.0	1	1	0.0	0.0
4	10.000	0	0	0	+0.0	3.90	0.0	0.0	1	1	0.0	0.0
5	10.000	0	0	0	+0.0	1.30	0.0	0.0	1	1	0.0	0.0
6	10.000	0	0	0	+0.0	-1.30	0.0	0.0	1	1	0.0	0.0
7	10.000	0	0	0	+0.0	-3.90	0.0	0.0	1	1	0.0	0.0
8	10.000	0	0	0	+0.0	-6.50	0.0	0.0	1	1	0.0	0.0
9	10.000	0	0	0	+0.0	-9.10	0.0	0.0	1	1	0.0	0.0
10	10.000	0	0	0	+0.0	-11.70	0.0	0.0	1	1	0.0	0.0

Plan of antenna system

North

West — East

South
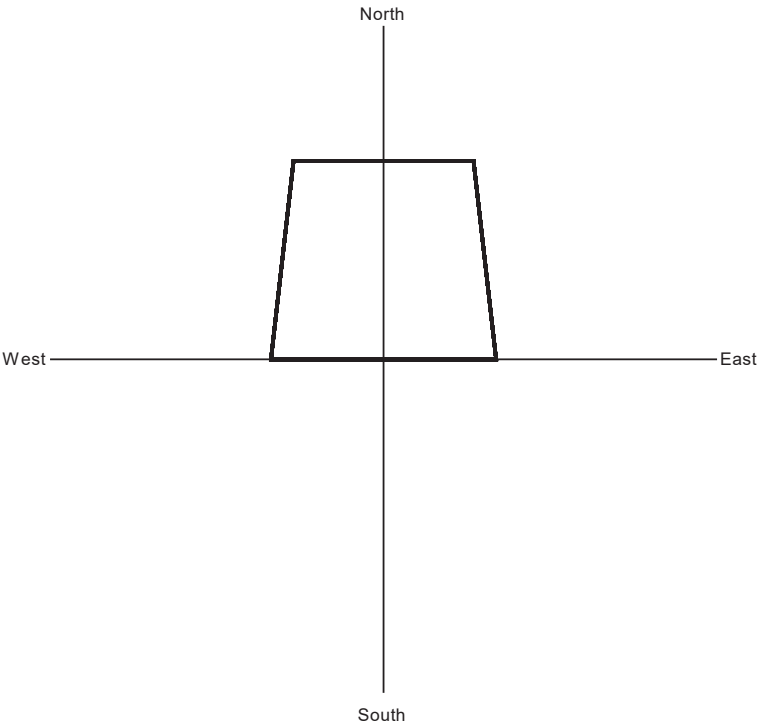
Side of antenna system

Az. 0.0°

1
2
3
4
5
6
7
8
9
10

Antennas arrays data

Note: calculation of single antennas arrays data (without taking into account mutual effects)

A. Antennas array azimuth (°/N)   0
B. Number of antennas   10
C. Nominal power supply (W)   1.00
D. Losses (addit. + cables) (dB)   0.0
E. Effective power supply (W)   1.00
F. Theor. maximum gain (dBd)   6.60
G. Distribution losses (dB)   0.00
H. Nominal max gain F - G (dBd)   6.60
I. Compensation losses (dB)   0.01
J. Effec. max gain H - I (dBd)   6.59
K. Effec. max gain (times)   4.56
L. Effec. max power E * K (KW)   0.0046
M. Max power depr. angle (°)   0.0
N. Max power az. angle (°)   66

Diagram in dBK calculated at horizon

Az. (°/N)	dBK	Az. (°/N)	dBK	Az. (°/N)	dBK	Az. (°/N)	dBK
0	-25.0	90	-24.0	180	-28.8	270	-24.0
10	-24.9	100	-24.7	190	-28.7	280	-23.6
20	-24.6	110	-25.6	200	-28.6	290	-23.5
30	-24.3	120	-26.5	210	-28.3	300	-23.5
40	-24.0	130	-27.2	220	-27.8	310	-23.8
50	-23.7	140	-27.9	230	-27.1	320	-24.1
60	-23.5	150	-28.4	240	-26.4	330	-24.4
70	-23.4	160	-28.7	250	-25.6	340	-24.7
80	-23.6	170	-28.8	260	-24.7	350	-24.9

Diagram in dBK calculated at horizon
(without -20dB\'s lower limit vs maximum power)

Az. (°/N)	dBK	Az. (°/N)	dBK	Az. (°/N)	dBK	Az. (°/N)	dBK
0	-25.0	90	-24.0	180	-28.8	270	-24.0
10	-24.9	100	-24.7	190	-28.7	280	-23.6
20	-24.6	110	-25.6	200	-28.6	290	-23.5
30	-24.3	120	-26.5	210	-28.3	300	-23.5
40	-24.0	130	-27.2	220	-27.8	310	-23.8
50	-23.7	140	-27.9	230	-27.1	320	-24.1
60	-23.5	150	-28.4	240	-26.4	330	-24.4
70	-23.4	160	-28.7	250	-25.6	340	-24.7
80	-23.6	170	-28.8	260	-24.7	350	-24.9

Horizontal diagram at 0.0° tilt (Total Antenna)

Er	0.9	0.7	0.5	0.3	0.1	-20	-10.5	-6	-3.1	-0.9	dB
West										East

North

South
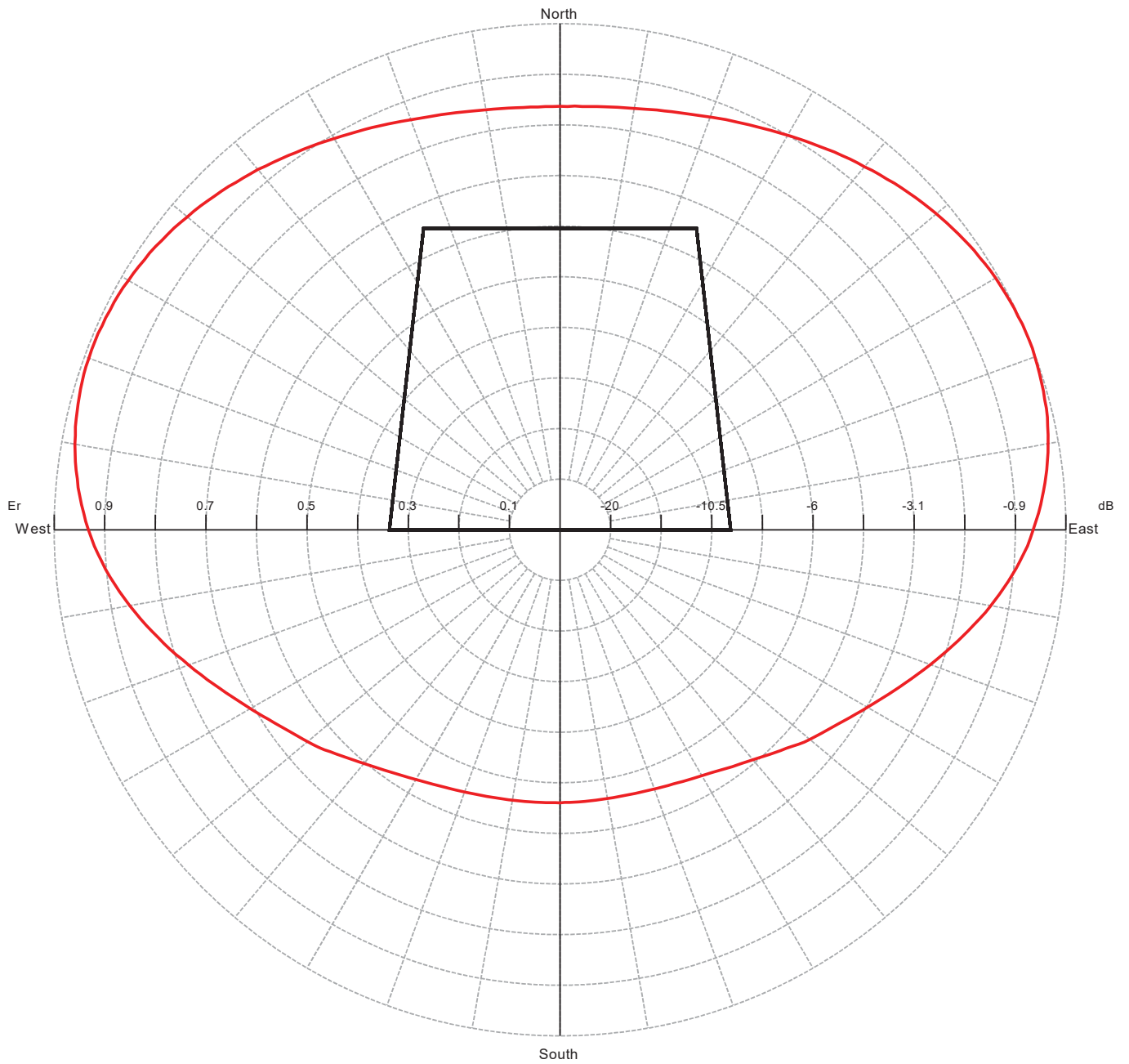
0.0° tilt (Total Antenna),   Gain (dBd): 6.59

ERP T.Max(KW): 0.005   ERP E.Max(KW): 0.005

Horizontal diagram at 0.0° tilt (Total Antenna)

Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)
0.0	83.7	3.2	60.0	99.4	4.5	120.0	70.2	2.2
1.0	83.7	3.2	61.0	99.5	4.5	121.0	69.5	2.2
2.0	83.8	3.2	62.0	99.7	4.5	122.0	68.8	2.2
3.0	83.8	3.2	63.0	99.8	4.5	123.0	68.2	2.1
4.0	83.8	3.2	64.0	99.9	4.5	124.0	67.6	2.1
5.0	83.9	3.2	65.0	99.9	4.5	125.0	67.0	2.0
6.0	84.0	3.2	66.0	100.0	4.6	126.0	66.5	2.0
7.0	84.1	3.2	67.0	100.0	4.6	127.0	66.0	2.0
8.0	84.2	3.2	68.0	100.0	4.6	128.0	65.4	2.0
9.0	84.4	3.3	69.0	100.0	4.6	129.0	64.9	1.9
10.0	84.5	3.3	70.0	99.9	4.5	130.0	64.5	1.9
11.0	84.7	3.3	71.0	99.8	4.5	131.0	63.9	1.9
12.0	84.9	3.3	72.0	99.7	4.5	132.0	63.3	1.8
13.0	85.1	3.3	73.0	99.5	4.5	133.0	62.8	1.8
14.0	85.3	3.3	74.0	99.4	4.5	134.0	62.2	1.8
15.0	85.5	3.3	75.0	99.2	4.5	135.0	61.7	1.7
16.0	85.7	3.3	76.0	99.1	4.5	136.0	61.2	1.7
17.0	86.0	3.4	77.0	98.9	4.5	137.0	60.7	1.7
18.0	86.2	3.4	78.0	98.5	4.4	138.0	60.2	1.7
19.0	86.5	3.4	79.0	98.3	4.4	139.0	59.7	1.6
20.0	86.8	3.4	80.0	97.9	4.4	140.0	59.3	1.6
21.0	87.1	3.5	81.0	97.6	4.3	141.0	58.9	1.6
22.0	87.4	3.5	82.0	97.3	4.3	142.0	58.5	1.6
23.0	87.7	3.5	83.0	96.9	4.3	143.0	58.2	1.5
24.0	88.0	3.5	84.0	96.5	4.2	144.0	57.9	1.5
25.0	88.3	3.6	85.0	96.1	4.2	145.0	57.5	1.5
26.0	88.6	3.6	86.0	95.6	4.2	146.0	57.2	1.5
27.0	88.9	3.6	87.0	95.2	4.1	147.0	56.9	1.5
28.0	89.3	3.6	88.0	94.6	4.1	148.0	56.6	1.5
29.0	89.6	3.7	89.0	94.1	4.0	149.0	56.3	1.4
30.0	90.1	3.7	90.0	93.5	4.0	150.0	56.1	1.4
31.0	90.4	3.7	91.0	93.0	3.9	151.0	55.9	1.4
32.0	90.7	3.7	92.0	92.4	3.9	152.0	55.7	1.4
33.0	91.1	3.8	93.0	91.8	3.8	153.0	55.5	1.4
34.0	91.4	3.8	94.0	91.1	3.8	154.0	55.3	1.4
35.0	91.8	3.8	95.0	90.4	3.7	155.0	55.1	1.4
36.0	92.3	3.9	96.0	89.6	3.7	156.0	55.0	1.4
37.0	92.6	3.9	97.0	88.9	3.6	157.0	54.9	1.4
38.0	93.0	3.9	98.0	88.1	3.5	158.0	54.8	1.4
39.0	93.3	4.0	99.0	87.3	3.5	159.0	54.6	1.4
40.0	93.6	4.0	100.0	86.4	3.4	160.0	54.5	1.4
41.0	94.1	4.0	101.0	85.6	3.3	161.0	54.4	1.4
42.0	94.4	4.1	102.0	84.8	3.3	162.0	54.3	1.3
43.0	94.7	4.1	103.0	83.9	3.2	163.0	54.3	1.3
44.0	95.2	4.1	104.0	83.0	3.1	164.0	54.2	1.3
45.0	95.5	4.2	105.0	82.2	3.1	165.0	54.1	1.3
46.0	95.8	4.2	106.0	81.3	3.0	166.0	54.1	1.3
47.0	96.2	4.2	107.0	80.5	3.0	167.0	54.0	1.3
48.0	96.5	4.2	108.0	79.6	2.9	168.0	54.0	1.3
49.0	96.8	4.3	109.0	78.8	2.8	169.0	53.9	1.3
50.0	97.2	4.3	110.0	77.9	2.8	170.0	53.9	1.3
51.0	97.4	4.3	111.0	77.0	2.7	171.0	53.9	1.3
52.0	97.7	4.4	112.0	76.2	2.6	172.0	53.9	1.3
53.0	97.9	4.4	113.0	75.4	2.6	173.0	53.9	1.3
54.0	98.2	4.4	114.0	74.6	2.5	174.0	53.9	1.3
55.0	98.5	4.4	115.0	73.8	2.5	175.0	53.9	1.3
56.0	98.7	4.4	116.0	73.1	2.4	176.0	53.9	1.3
57.0	98.9	4.5	117.0	72.3	2.4	177.0	53.9	1.3
58.0	99.1	4.5	118.0	71.5	2.3	178.0	53.9	1.3
59.0	99.3	4.5	119.0	70.8	2.3	179.0	53.9	1.3

Horizontal diagram at 0.0° tilt (Total Antenna)

Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)	Az (°)	Er (%)	ERP (W)
180.0	54.0	1.3	240.0	70.7	2.3	300.0	98.5	4.4
181.0	54.0	1.3	241.0	71.3	2.3	301.0	98.4	4.4
182.0	54.0	1.3	242.0	72.0	2.4	302.0	98.2	4.4
183.0	54.0	1.3	243.0	72.7	2.4	303.0	97.9	4.4
184.0	54.0	1.3	244.0	73.5	2.5	304.0	97.8	4.4
185.0	54.1	1.3	245.0	74.2	2.5	305.0	97.6	4.3
186.0	54.1	1.3	246.0	75.0	2.6	306.0	97.3	4.3
187.0	54.1	1.3	247.0	75.8	2.6	307.0	97.1	4.3
188.0	54.1	1.3	248.0	76.5	2.7	308.0	96.8	4.3
189.0	54.2	1.3	249.0	77.4	2.7	309.0	96.5	4.2
190.0	54.3	1.3	250.0	78.1	2.8	310.0	96.2	4.2
191.0	54.3	1.3	251.0	78.9	2.8	311.0	95.9	4.2
192.0	54.4	1.3	252.0	79.8	2.9	312.0	95.6	4.2
193.0	54.4	1.4	253.0	80.6	3.0	313.0	95.3	4.1
194.0	54.5	1.4	254.0	81.5	3.0	314.0	95.0	4.1
195.0	54.6	1.4	255.0	82.2	3.1	315.0	94.6	4.1
196.0	54.7	1.4	256.0	83.1	3.1	316.0	94.3	4.1
197.0	54.8	1.4	257.0	84.0	3.2	317.0	93.9	4.0
198.0	54.9	1.4	258.0	84.8	3.3	318.0	93.5	4.0
199.0	55.0	1.4	259.0	85.6	3.3	319.0	93.2	4.0
200.0	55.1	1.4	260.0	86.4	3.4	320.0	92.9	3.9
201.0	55.3	1.4	261.0	87.2	3.5	321.0	92.5	3.9
202.0	55.5	1.4	262.0	88.0	3.5	322.0	92.2	3.9
203.0	55.6	1.4	263.0	88.7	3.6	323.0	91.7	3.8
204.0	55.7	1.4	264.0	89.4	3.6	324.0	91.4	3.8
205.0	55.9	1.4	265.0	90.2	3.7	325.0	91.0	3.8
206.0	56.1	1.4	266.0	90.8	3.8	326.0	90.7	3.7
207.0	56.3	1.4	267.0	91.4	3.8	327.0	90.4	3.7
208.0	56.5	1.5	268.0	92.1	3.9	328.0	89.9	3.7
209.0	56.7	1.5	269.0	92.7	3.9	329.0	89.6	3.7
210.0	57.0	1.5	270.0	93.2	4.0	330.0	89.3	3.6
211.0	57.3	1.5	271.0	93.8	4.0	331.0	88.9	3.6
212.0	57.5	1.5	272.0	94.2	4.0	332.0	88.6	3.6
213.0	57.8	1.5	273.0	94.7	4.1	333.0	88.3	3.6
214.0	58.1	1.5	274.0	95.2	4.1	334.0	88.0	3.5
215.0	58.5	1.6	275.0	95.6	4.2	335.0	87.7	3.5
216.0	58.8	1.6	276.0	95.9	4.2	336.0	87.4	3.5
217.0	59.1	1.6	277.0	96.4	4.2	337.0	87.1	3.5
218.0	59.5	1.6	278.0	96.7	4.3	338.0	86.8	3.4
219.0	59.9	1.6	279.0	97.1	4.3	339.0	86.5	3.4
220.0	60.3	1.7	280.0	97.4	4.3	340.0	86.2	3.4
221.0	60.7	1.7	281.0	97.6	4.3	341.0	86.0	3.4
222.0	61.2	1.7	282.0	97.9	4.4	342.0	85.7	3.3
223.0	61.6	1.7	283.0	98.2	4.4	343.0	85.5	3.3
224.0	62.1	1.8	284.0	98.3	4.4	344.0	85.3	3.3
225.0	62.6	1.8	285.0	98.5	4.4	345.0	85.1	3.3
226.0	63.1	1.8	286.0	98.7	4.4	346.0	84.9	3.3
227.0	63.7	1.9	287.0	98.9	4.5	347.0	84.7	3.3
228.0	64.2	1.9	288.0	99.0	4.5	348.0	84.5	3.3
229.0	64.7	1.9	289.0	99.1	4.5	349.0	84.4	3.3
230.0	65.1	1.9	290.0	99.1	4.5	350.0	84.2	3.2
231.0	65.6	2.0	291.0	99.2	4.5	351.0	84.1	3.2
232.0	66.1	2.0	292.0	99.2	4.5	352.0	84.0	3.2
233.0	66.5	2.0	293.0	99.2	4.5	353.0	83.9	3.2
234.0	67.1	2.1	294.0	99.1	4.5	354.0	83.8	3.2
235.0	67.6	2.1	295.0	99.1	4.5	355.0	83.8	3.2
236.0	68.2	2.1	296.0	99.0	4.5	356.0	83.8	3.2
237.0	68.8	2.2	297.0	99.0	4.5	357.0	83.7	3.2
238.0	69.4	2.2	298.0	98.9	4.5	358.0	83.7	3.2
239.0	70.0	2.2	299.0	98.7	4.4	359.0	83.7	3.2

Vertical diagram at an azimuth of 66.9°

66.9° Az. (Total Antenna),   Gain (dBd): 6.59   ERP T.Max(KW): 0.005   ERP E.Max(KW): 0.005
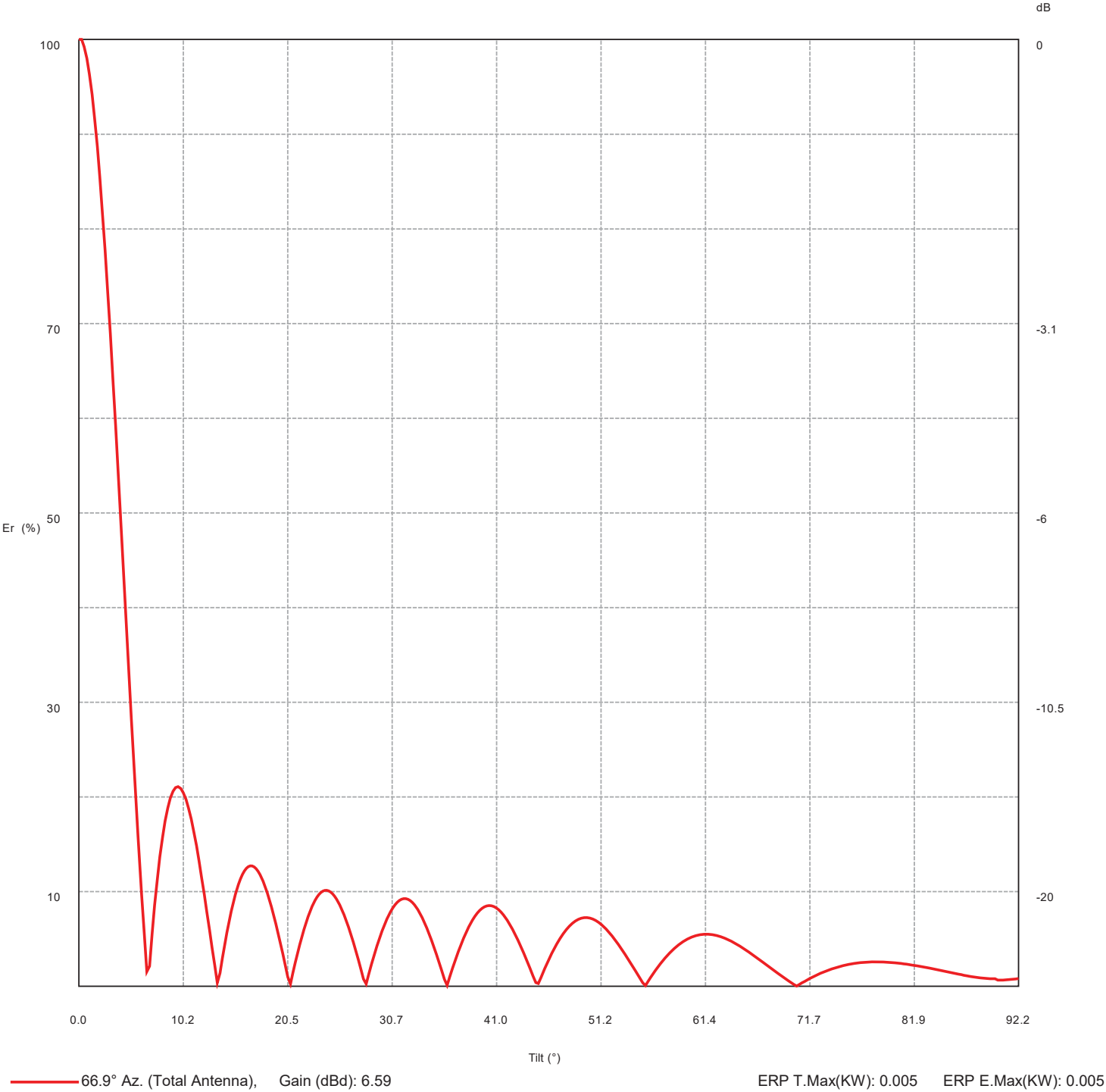
Vertical diagram at an azimuth of 66.9°

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.3	4.6	15.4	9.8	0.0	30.7	8.2	0.0
0.3	100.0	4.5	15.6	10.7	0.1	31.0	8.6	0.0
0.5	99.2	4.5	15.9	11.4	0.1	31.2	8.9	0.0
0.8	98.0	4.4	16.1	12.0	0.1	31.5	9.1	0.0
1.0	96.3	4.2	16.4	12.4	0.1	31.7	9.2	0.0
1.3	94.2	4.0	16.6	12.6	0.1	32.0	9.2	0.0
1.5	91.7	3.8	16.9	12.7	0.1	32.3	9.2	0.0
1.8	88.7	3.6	17.2	12.6	0.1	32.5	9.0	0.0
2.0	85.4	3.3	17.4	12.4	0.1	32.8	8.8	0.0
2.3	81.7	3.0	17.7	12.0	0.1	33.0	8.4	0.0
2.6	77.7	2.7	17.9	11.4	0.1	33.3	8.0	0.0
2.8	73.4	2.4	18.2	10.8	0.1	33.5	7.5	0.0
3.1	68.9	2.2	18.4	10.0	0.0	33.8	6.9	0.0
3.3	64.2	1.9	18.7	9.1	0.0	34.0	6.3	0.0
3.6	59.3	1.6	18.9	8.1	0.0	34.3	5.6	0.0
3.8	54.2	1.3	19.2	7.0	0.0	34.6	4.9	0.0
4.1	49.1	1.1	19.5	5.9	0.0	34.8	4.1	0.0
4.4	43.9	0.9	19.7	4.7	0.0	35.1	3.3	0.0
4.6	38.8	0.7	20.0	3.5	0.0	35.3	2.5	0.0
4.9	33.6	0.5	20.2	2.2	0.0	35.6	1.6	0.0
5.1	28.6	0.4	20.5	1.0	0.0	35.8	0.8	0.0
5.4	23.6	0.3	20.7	0.2	0.0	36.1	0.1	0.0
5.6	18.8	0.2	21.0	1.5	0.0	36.4	1.0	0.0
5.9	14.1	0.1	21.2	2.6	0.0	36.6	1.8	0.0
6.1	9.7	0.0	21.5	3.8	0.0	36.9	2.6	0.0
6.4	5.5	0.0	21.8	4.8	0.0	37.1	3.4	0.0
6.7	1.5	0.0	22.0	5.8	0.0	37.4	4.1	0.0
6.9	2.1	0.0	22.3	6.7	0.0	37.6	4.8	0.0
7.2	5.5	0.0	22.5	7.5	0.0	37.9	5.5	0.0
7.4	8.5	0.0	22.8	8.2	0.0	38.1	6.1	0.0
7.7	11.3	0.1	23.0	8.8	0.0	38.4	6.6	0.0
7.9	13.7	0.1	23.3	9.3	0.0	38.7	7.1	0.0
8.2	15.7	0.1	23.6	9.7	0.0	38.9	7.5	0.0
8.4	17.5	0.1	23.8	10.0	0.0	39.2	7.9	0.0
8.7	18.8	0.2	24.1	10.1	0.0	39.4	8.1	0.0
9.0	19.9	0.2	24.3	10.1	0.0	39.7	8.3	0.0
9.2	20.6	0.2	24.6	10.0	0.0	39.9	8.5	0.0
9.5	21.0	0.2	24.8	9.8	0.0	40.2	8.5	0.0
9.7	21.1	0.2	25.1	9.5	0.0	40.4	8.5	0.0
10.0	20.9	0.2	25.3	9.1	0.0	40.7	8.4	0.0
10.2	20.4	0.2	25.6	8.5	0.0	41.0	8.3	0.0
10.5	19.7	0.2	25.9	7.9	0.0	41.2	8.0	0.0
10.8	18.8	0.2	26.1	7.2	0.0	41.5	7.7	0.0
11.0	17.6	0.1	26.4	6.4	0.0	41.7	7.4	0.0
11.3	16.3	0.1	26.6	5.6	0.0	42.0	7.0	0.0
11.5	14.8	0.1	26.9	4.7	0.0	42.2	6.6	0.0
11.8	13.2	0.1	27.1	3.7	0.0	42.5	6.1	0.0
12.0	11.5	0.1	27.4	2.8	0.0	42.8	5.5	0.0
12.3	9.7	0.0	27.6	1.8	0.0	43.0	5.0	0.0
12.5	7.8	0.0	27.9	0.8	0.0	43.3	4.4	0.0
12.8	6.0	0.0	28.2	0.3	0.0	43.5	3.7	0.0
13.1	4.1	0.0	28.4	1.3	0.0	43.8	3.1	0.0
13.3	2.2	0.0	28.7	2.2	0.0	44.0	2.4	0.0
13.6	0.4	0.0	28.9	3.2	0.0	44.3	1.7	0.0
13.8	1.4	0.0	29.2	4.1	0.0	44.5	1.1	0.0
14.1	3.1	0.0	29.4	4.9	0.0	44.8	0.4	0.0
14.3	4.7	0.0	29.7	5.7	0.0	45.1	0.3	0.0
14.6	6.2	0.0	30.0	6.5	0.0	45.3	0.9	0.0
14.8	7.5	0.0	30.2	7.1	0.0	45.6	1.6	0.0
15.1	8.7	0.0	30.5	7.7	0.0	45.8	2.2	0.0

Vertical diagram at an azimuth of 66.9°

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
46.1	2.8	0.0	61.4	5.5	0.0	76.8	2.5	0.0
46.3	3.4	0.0	61.7	5.5	0.0	77.1	2.5	0.0
46.6	3.9	0.0	62.0	5.5	0.0	77.3	2.5	0.0
46.8	4.4	0.0	62.2	5.4	0.0	77.6	2.6	0.0
47.1	4.9	0.0	62.5	5.4	0.0	77.8	2.6	0.0
47.4	5.3	0.0	62.7	5.3	0.0	78.1	2.6	0.0
47.6	5.7	0.0	63.0	5.2	0.0	78.3	2.6	0.0
47.9	6.1	0.0	63.2	5.1	0.0	78.6	2.6	0.0
48.1	6.4	0.0	63.5	5.0	0.0	78.8	2.6	0.0
48.4	6.6	0.0	63.7	4.9	0.0	79.1	2.5	0.0
48.6	6.9	0.0	64.0	4.7	0.0	79.4	2.5	0.0
48.9	7.0	0.0	64.3	4.6	0.0	79.6	2.5	0.0
49.2	7.1	0.0	64.5	4.4	0.0	79.9	2.5	0.0
49.4	7.2	0.0	64.8	4.3	0.0	80.1	2.5	0.0
49.7	7.2	0.0	65.0	4.1	0.0	80.4	2.4	0.0
49.9	7.2	0.0	65.3	3.9	0.0	80.6	2.4	0.0
50.2	7.2	0.0	65.5	3.7	0.0	80.9	2.4	0.0
50.4	7.1	0.0	65.8	3.5	0.0	81.2	2.3	0.0
50.7	6.9	0.0	66.0	3.3	0.0	81.4	2.3	0.0
50.9	6.8	0.0	66.3	3.1	0.0	81.7	2.2	0.0
51.2	6.5	0.0	66.6	2.9	0.0	81.9	2.2	0.0
51.5	6.3	0.0	66.8	2.7	0.0	82.2	2.2	0.0
51.7	6.0	0.0	67.1	2.5	0.0	82.4	2.1	0.0
52.0	5.7	0.0	67.3	2.3	0.0	82.7	2.1	0.0
52.2	5.4	0.0	67.6	2.1	0.0	82.9	2.0	0.0
52.5	5.0	0.0	67.8	1.9	0.0	83.2	2.0	0.0
52.7	4.7	0.0	68.1	1.7	0.0	83.5	1.9	0.0
53.0	4.3	0.0	68.4	1.5	0.0	83.7	1.9	0.0
53.2	3.9	0.0	68.6	1.3	0.0	84.0	1.8	0.0
53.5	3.4	0.0	68.9	1.1	0.0	84.2	1.7	0.0
53.8	3.0	0.0	69.1	0.9	0.0	84.5	1.7	0.0
54.0	2.6	0.0	69.4	0.7	0.0	84.7	1.6	0.0
54.3	2.1	0.0	69.6	0.5	0.0	85.0	1.6	0.0
54.5	1.7	0.0	69.9	0.3	0.0	85.2	1.5	0.0
54.8	1.2	0.0	70.1	0.2	0.0	85.5	1.5	0.0
55.0	0.8	0.0	70.4	0.0	0.0	85.8	1.4	0.0
55.3	0.4	0.0	70.7	0.2	0.0	86.0	1.3	0.0
55.6	0.1	0.0	70.9	0.4	0.0	86.3	1.3	0.0
55.8	0.5	0.0	71.2	0.5	0.0	86.5	1.2	0.0
56.1	0.9	0.0	71.4	0.7	0.0	86.8	1.2	0.0
56.3	1.3	0.0	71.7	0.8	0.0	87.0	1.1	0.0
56.6	1.7	0.0	71.9	1.0	0.0	87.3	1.1	0.0
56.8	2.1	0.0	72.2	1.1	0.0	87.6	1.0	0.0
57.1	2.4	0.0	72.4	1.2	0.0	87.8	1.0	0.0
57.3	2.8	0.0	72.7	1.4	0.0	88.1	0.9	0.0
57.6	3.1	0.0	73.0	1.5	0.0	88.3	0.9	0.0
57.9	3.4	0.0	73.2	1.6	0.0	88.6	0.9	0.0
58.1	3.7	0.0	73.5	1.7	0.0	88.8	0.8	0.0
58.4	4.0	0.0	73.7	1.8	0.0	89.1	0.8	0.0
58.6	4.2	0.0	74.0	1.9	0.0	89.3	0.8	0.0
58.9	4.4	0.0	74.2	2.0	0.0	89.6	0.8	0.0
59.1	4.6	0.0	74.5	2.0	0.0	89.9	0.8	0.0
59.4	4.8	0.0	74.8	2.1	0.0	90.1	0.6	0.0
59.6	5.0	0.0	75.0	2.2	0.0	90.4	0.7	0.0
59.9	5.1	0.0	75.3	2.3	0.0	90.6	0.7	0.0
60.2	5.2	0.0	75.5	2.3	0.0	90.9	0.7	0.0
60.4	5.3	0.0	75.8	2.4	0.0	91.1	0.7	0.0
60.7	5.4	0.0	76.0	2.4	0.0	91.4	0.7	0.0
60.9	5.4	0.0	76.3	2.4	0.0	91.6	0.7	0.0
61.2	5.5	0.0	76.5	2.5	0.0	91.9	0.8	0.0