WQED MULTIMEDIA, INC.
WQED, FACILITY ID 41315
PITTSBURGH, PA 15213

REVISED JAMPRO CP CH 4 ANTENNA PATTERN TABULATIONS AND PLOTS.

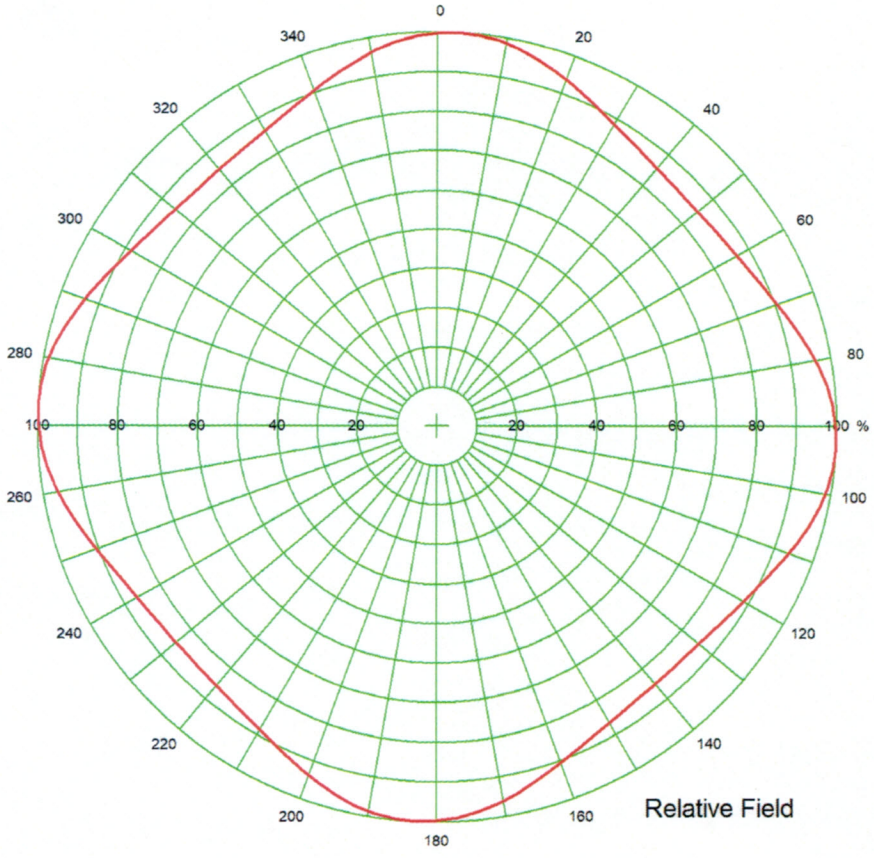
HORIZONTAL PLOT AND TABULATION: 2 PAGES

VERTICAL PLOTS AND TABULATION: 3 PAGES

4.)Horizontal Radiation Patterns

HORIZONTAL RADIATION PATTERN

Station	***WQED***
Frequency	***69 MHz***
Type	***Lambda Antenna Channel 4***



Engineer ***Chris R*** Date ***28 Jun 2018***

Pat. No. 578228068 Chris Randall v8.1.1

JAMPRO ANTENNAS, INC.

Ang	Amp	dB
0	99.66	-0.03
2	99.94	-0.01
4	99.98	-0
6	99.73	-0.02
8	99.31	-0.06
10	98.71	-0.11
12	97.95	-0.18
14	97.05	-0.26
16	96.02	-0.35
18	94.94	-0.45
20	93.79	-0.56
22	92.66	-0.66
24	91.52	-0.77
26	90.44	-0.87
28	89.44	-0.97
30	88.55	-1.06
32	87.72	-1.14
34	87.03	-1.21
36	86.46	-1.26
38	85.96	-1.31
40	85.6	-1.35
42	85.32	-1.38
44	85.15	-1.4
46	85.03	-1.41
48	85	-1.41
50	85.05	-1.41
52	85.16	-1.4
54	85.35	-1.38
56	85.66	-1.34
58	86.05	-1.3
60	86.56	-1.25
62	87.14	-1.2
64	87.87	-1.12
66	88.7	-1.04
68	89.62	-0.95
70	90.65	-0.85
72	91.74	-0.75
74	92.85	-0.64
76	94.01	-0.54
78	95.14	-0.43
80	96.24	-0.33
82	97.22	-0.24
84	98.09	-0.17
86	98.85	-0.1
88	99.38	-0.05
90	99.68	-0.03

Ang	Amp	dB
92	99.95	-0
94	99.98	-0
96	99.73	-0.02
98	99.32	-0.06
100	98.72	-0.11
102	97.96	-0.18
104	97.06	-0.26
106	96.04	-0.35
108	94.95	-0.45
110	93.79	-0.56
112	92.66	-0.66
114	91.53	-0.77
116	90.45	-0.87
118	89.45	-0.97
120	88.55	-1.06
122	87.72	-1.14
124	87.03	-1.21
126	86.47	-1.26
128	85.96	-1.31
130	85.6	-1.35
132	85.33	-1.38
134	85.16	-1.4
136	85.03	-1.41
138	85	-1.41
140	85.05	-1.41
142	85.16	-1.4
144	85.36	-1.37
146	85.66	-1.34
148	86.05	-1.3
150	86.56	-1.25
152	87.14	-1.2
154	87.86	-1.12
156	88.7	-1.04
158	89.63	-0.95
160	90.65	-0.85
162	91.73	-0.75
164	92.85	-0.64
166	94.01	-0.54
168	95.14	-0.43
170	96.23	-0.33
172	97.21	-0.25
174	98.09	-0.17
176	98.85	-0.1
178	99.38	-0.05
180	99.68	-0.03
182	99.95	-0

Ang	Amp	dB
184	99.98	-0
186	99.73	-0.02
188	99.32	-0.06
190	98.72	-0.11
192	97.96	-0.18
194	97.05	-0.26
196	96.03	-0.35
198	94.95	-0.45
200	93.79	-0.56
202	92.66	-0.66
204	91.53	-0.77
206	90.44	-0.87
208	89.44	-0.97
210	88.55	-1.06
212	87.72	-1.14
214	87.03	-1.21
216	86.47	-1.26
218	85.96	-1.31
220	85.6	-1.35
222	85.32	-1.38
224	85.15	-1.4
226	85.03	-1.41
228	85	-1.41
230	85.05	-1.41
232	85.16	-1.4
234	85.36	-1.37
236	85.65	-1.35
238	86.04	-1.31
240	86.55	-1.25
242	87.13	-1.2
244	87.86	-1.12
246	88.69	-1.04
248	89.62	-0.95
250	90.64	-0.85
252	91.73	-0.75
254	92.85	-0.64
256	94.01	-0.54
258	95.13	-0.43
260	96.21	-0.34
262	97.21	-0.25
264	98.08	-0.17
266	98.85	-0.1
268	99.36	-0.06
270	99.66	-0.03
272	99.94	-0.01
274	99.98	-0

Ang	Amp	dB
276	99.71	-0.03
278	99.31	-0.06
280	98.71	-0.11
282	97.95	-0.18
284	97.06	-0.26
286	96.03	-0.35
288	94.94	-0.45
290	93.79	-0.56
292	92.66	-0.66
294	91.51	-0.77
296	90.44	-0.87
298	89.43	-0.97
300	88.55	-1.06
302	87.71	-1.14
304	87.02	-1.21
306	86.46	-1.26
308	85.96	-1.31
310	85.6	-1.35
312	85.32	-1.38
314	85.15	-1.4
316	85.02	-1.41
318	84.99	-1.41
320	85.04	-1.41
322	85.16	-1.4
324	85.35	-1.38
326	85.65	-1.35
328	86.04	-1.31
330	86.55	-1.25
332	87.14	-1.2
334	87.85	-1.13
336	88.68	-1.04
338	89.62	-0.95
340	90.65	-0.85
342	91.73	-0.75
344	92.84	-0.65
346	94	-0.54
348	95.14	-0.43
350	96.22	-0.33
352	97.22	-0.24
354	98.08	-0.17
356	98.85	-0.1
358	99.37	-0.05
360	99.66	-0.03

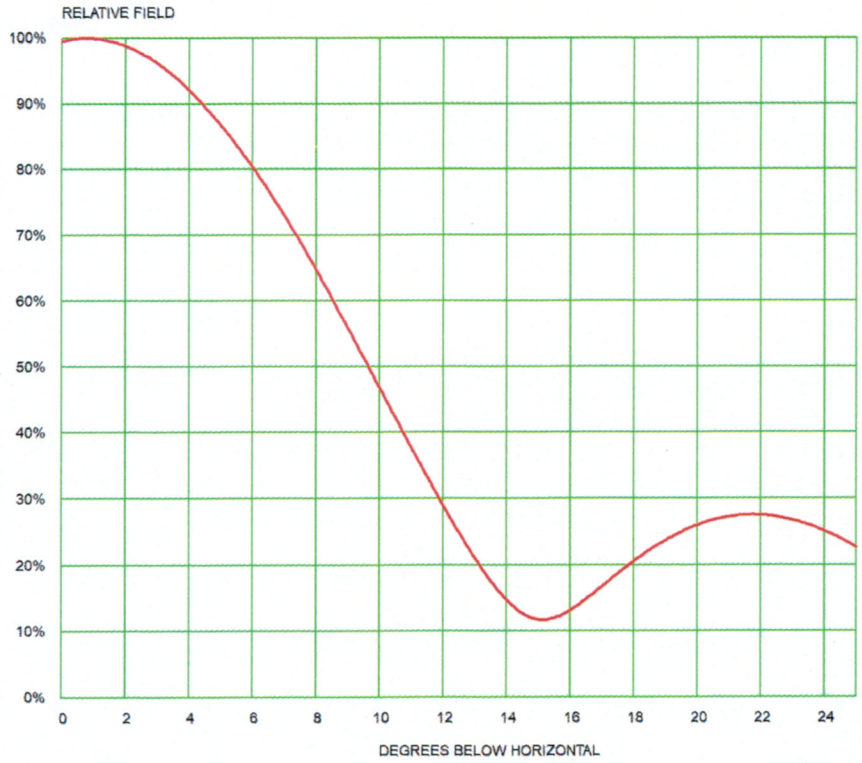
5.)Vertical Radiation Patterns Full Antenna

VERTICAL RADIATION PATTERN

Station ***WQED***

Frequency ***69 MHz***

Type ***Lambda Antenna Channel 4***



Beam Tilt ***.8 deg***

Engineer ***Chris R*** Date ***28 Jun 2018***

Pat. No. 574628068 Chris Randall v8.1.1

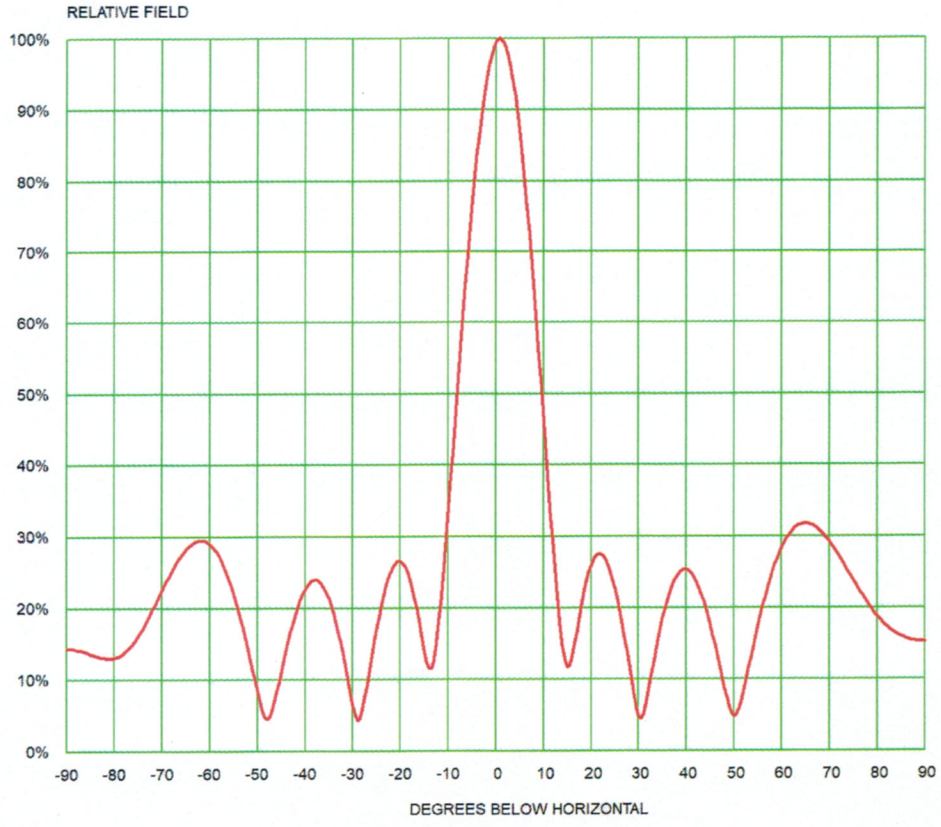
JAMPRO ANTENNAS, INC.

VERTICAL RADIATION PATTERN

Station ***WQED***

Frequency ***69 MHz***

Type ***Lambda Antenna Channel 4***



Beam Tilt ***.8 deg***

Engineer ***Chris R*** Date ***28 Jun 2018***

Pat. No. 575128068 Chris Randall v8.1.1

JAMPRO ANTENNAS, INC.

Ang	Amp	dB
-90	14.4	-16.8
-89	14.37	-16.9
-88	14.27	-16.9
-87	14.11	-17
-86	13.91	-17.1
-85	13.68	-17.3
-84	13.45	-17.4
-83	13.24	-17.6
-82	13.08	-17.7
-81	13.02	-17.7
-80	13.09	-17.7
-79	13.33	-17.5
-78	13.75	-17.2
-77	14.36	-16.9
-76	15.17	-16.4
-75	16.15	-15.8
-74	17.27	-15.3
-73	18.51	-14.7
-72	19.83	-14.1
-71	21.19	-13.5
-70	22.56	-12.9
-69	23.89	-12.4
-68	25.16	-12
-67	26.33	-11.6
-66	27.37	-11.3
-65	28.24	-11
-64	28.91	-10.8
-63	29.35	-10.6
-62	29.54	-10.6
-61	29.45	-10.6
-60	29.06	-10.7
-59	28.35	-10.9
-58	27.32	-11.3
-57	25.96	-11.7
-56	24.26	-12.3
-55	22.25	-13.1
-54	19.93	-14
-53	17.35	-15.2
-52	14.53	-16.8
-51	11.57	-18.7
-50	8.59	-21.3
-49	5.92	-24.6
-48	4.53	-26.9
-47	5.59	-25.1
-46	8.15	-21.8
-45	11.1	-19.1

Ang	Amp	dB
-44	14.03	-17.1
-43	16.75	-15.5
-42	19.16	-14.4
-41	21.15	-13.5
-40	22.66	-12.9
-39	23.63	-12.5
-38	24.01	-12.4
-37	23.78	-12.5
-36	22.9	-12.8
-35	21.4	-13.4
-34	19.29	-14.3
-33	16.63	-15.6
-32	13.49	-17.4
-31	10.03	-20
-30	6.58	-23.6
-29	4.33	-27.3
-28	5.69	-24.9
-27	9.22	-20.7
-26	13.13	-17.6
-25	16.89	-15.4
-24	20.25	-13.9
-23	23.03	-12.8
-22	25.1	-12
-21	26.32	-11.6
-20	26.6	-11.5
-19	25.87	-11.7
-18	24.13	-12.3
-17	21.42	-13.4
-16	17.95	-14.9
-15	14.21	-16.9
-14	11.61	-18.7
-13	12.63	-18
-12	17.69	-15
-11	25.01	-12
-10	33.43	-9.52
-9	42.36	-7.46
-8	51.44	-5.77
-7	60.37	-4.38
-6	68.88	-3.24
-5	76.74	-2.3
-4	83.73	-1.54
-3	89.65	-0.95
-2	94.34	-0.51
-1	97.68	-0.2
0	99.57	-0.04
1	99.95	-0

Ang	Amp	dB
2	98.83	-0.1
3	96.21	-0.34
4	92.19	-0.71
5	86.86	-1.22
6	80.38	-1.9
7	72.92	-2.74
8	64.68	-3.78
9	55.91	-5.05
10	46.84	-6.59
11	37.76	-8.46
12	29.01	-10.7
13	21.05	-13.5
14	14.74	-16.6
15	11.77	-18.6
16	13.11	-17.6
17	16.69	-15.6
18	20.5	-13.8
19	23.7	-12.5
20	26	-11.7
21	27.29	-11.3
22	27.54	-11.2
23	26.8	-11.4
24	25.15	-12
25	22.69	-12.9
26	19.55	-14.2
27	15.91	-16
28	11.94	-18.5
29	7.99	-21.9
30	4.92	-26.2
31	5.13	-25.8
32	8.21	-21.7
33	11.86	-18.5
34	15.36	-16.3
35	18.47	-14.7
36	21.08	-13.5
37	23.11	-12.7
38	24.51	-12.2
39	25.28	-11.9
40	25.41	-11.9
41	24.92	-12.1
42	23.84	-12.5
43	22.22	-13.1
44	20.13	-13.9
45	17.64	-15.1
46	14.84	-16.6
47	11.83	-18.5

Ang	Amp	dB
48	8.81	-21.1
49	6.13	-24.3
50	4.82	-26.3
51	5.95	-24.5
52	8.55	-21.4
53	11.57	-18.7
54	14.61	-16.7
55	17.54	-15.1
56	20.26	-13.9
57	22.73	-12.9
58	24.93	-12.1
59	26.82	-11.4
60	28.41	-10.9
61	29.68	-10.6
62	30.65	-10.3
63	31.32	-10.1
64	31.7	-9.98
65	31.82	-9.95
66	31.7	-9.98
67	31.35	-10.1
68	30.81	-10.2
69	30.11	-10.4
70	29.26	-10.7
71	28.3	-11
72	27.25	-11.3
73	26.15	-11.7
74	25.02	-12
75	23.89	-12.4
76	22.77	-12.9
77	21.69	-13.3
78	20.67	-13.7
79	19.73	-14.1
80	18.87	-14.5
81	18.1	-14.8
82	17.44	-15.2
83	16.87	-15.5
84	16.4	-15.7
85	16.03	-15.9
86	15.74	-16.1
87	15.52	-16.2
88	15.37	-16.3
89	15.29	-16.3
90	15.26	-16.3