

## ENGINEERING STATEMENT OF JOEL T. SAXBERG

This engineering study was prepared for KSRM, Inc, licensee of FM station KFSE, CH 295C3, Kasilof, AK, by Joel T. Saxberg of Arcadia, California. KFSE proposes to install a Jampro JMPC-6 non-directional antenna with an ERP of 8 kW.

**RADIOFREQUENCY ELECTROMAGNETIC FIELDS -** Radiofrequency Electromagnetic Field calculations were made using the manufacturers vertical plane pattern and the maximum ERP of 8000 watts. Maximum power density levels occurs around eight meters from the tower base over a flat plane 2 meters above ground level. The maximum value is 0.0493 mW/cm<sup>2</sup>, which is 25% of the Maximum Permissible Exposure limit for the general public. The licensee will reduce power or terminate transmissions as necessary, in order to protect tower workers from radiofrequency electromagnetic fields in excess of FCC guidelines.

### CALCULATIONS OF POWER DENSITY

Dist. M	Slant Dist. m	Relative Field	Power Density mW/cm <sup>2</sup>
0	25	0.100	0.0086
2	25.1	0.140	0.0167
4	25.3	0.169	0.0238
6	25.7	0.218	0.0384
8	26.2	0.252	0.0493
10	26.9	0.245	0.0443
15	29.2	0.077	0.0037
20	32.0	0.131	0.0089
25	35.4	0.094	0.0038
30	39.1	0.057	0.0011
40	47.2	0.072	0.0012
50	55.9	0.136	0.0032
60	65.0	0.139	0.0024
70	74.3	0.028	0.0001
80	83.8	0.136	0.0014
90	93.4	0.213	0.0028
100	103.1	0.227	0.0026
120	122.6	0.185	0.0012
140	142.2	0.041	0.0000
160	161.9	0.066	0.0001
180	181.7	0.192	0.0006
200	201.6	0.329	0.0014
250	251.2	0.611	0.0032
300	301.0	0.739	0.0032

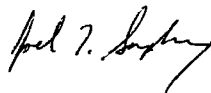
## ENGINEERING CERTIFICATION

JOEL T. SAXBERG deposes and says:

1. That he is President of Broadcast Engineering and Equipment Maintenance Company, "BEEM CO.", radio engineering consultants. BEEM CO. maintains offices at: 2322 S. Second Avenue, Arcadia, CA 91006. Telephone (626) 446-3468
2. That he was graduated from California State University at Los Angeles, February 1966, with a Bachelor of Science degree in Electronic Engineering. He received a MS degree in Electronic Engineering Technology in August 1996.
3. That he has submitted many applications to the Federal Communications Commission for broadcast and auxiliary broadcast construction permits and licenses.
4. That his experience in broadcast engineering is a matter of record and he has spent over forty years working in the field of radio engineering.
5. That the attached report was prepared by him or under his direction and supervision. That he believes the facts stated therein to be both true and accurate. Statements that are based on information supplied by others are also believed to be true and accurate.
6. That he has performed field work on AM and FM broadcast transmitting systems throughout this country and continues to provide technical consulting services on a daily basis to broadcasters.
7. That he declares under penalty of perjury the foregoing is true and correct.

Executed  
on

October 29, 2007



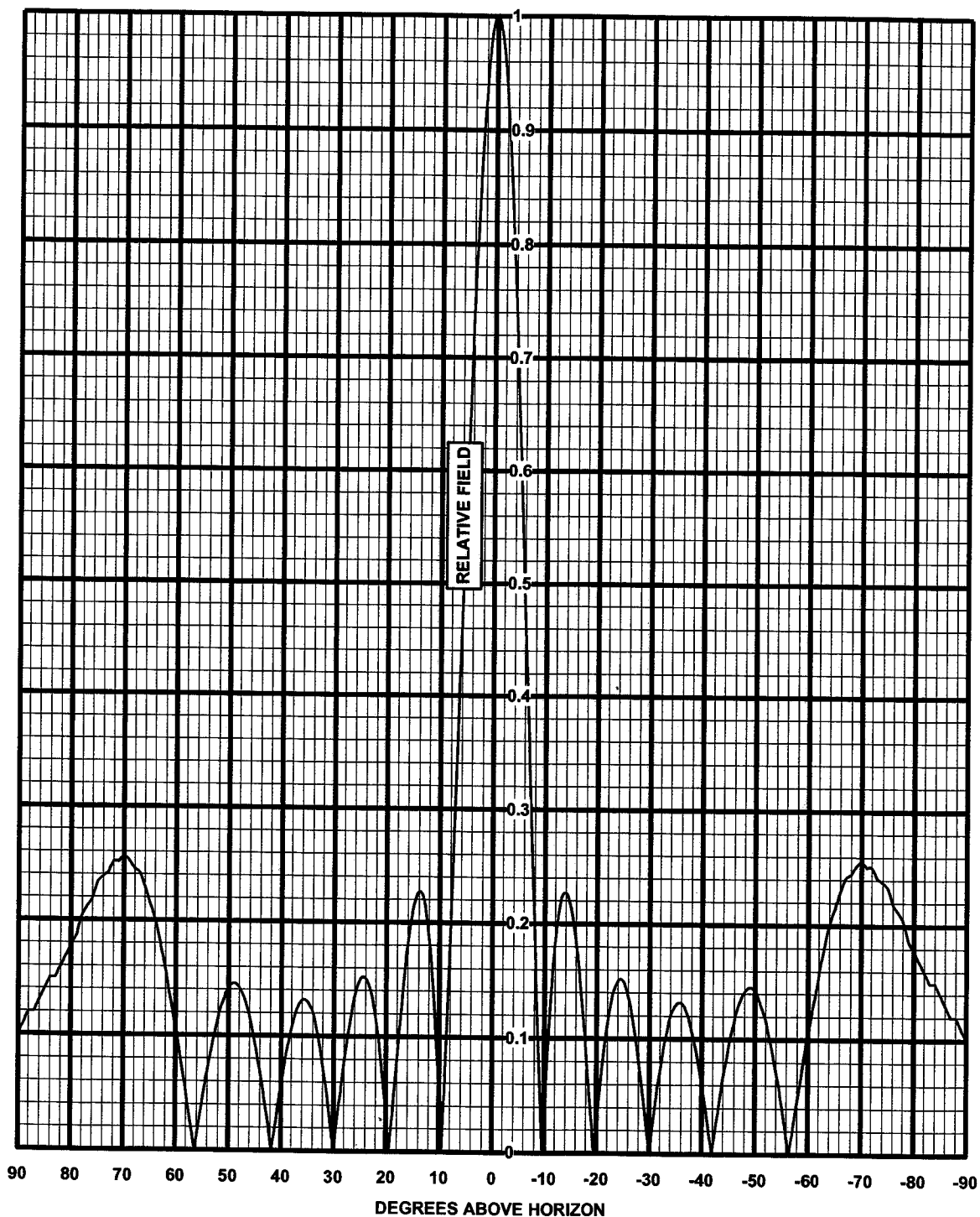
Joel T. Saxberg



6340 Sky Creek Drive  
Sacramento, California 95828 USA

Telephone (916) 383-1177  
Fax (916) 383-1182

COMPUTED ELEVATION PATTERN



Customer: KFSE-FM  
Frequency: 106.9 MHz

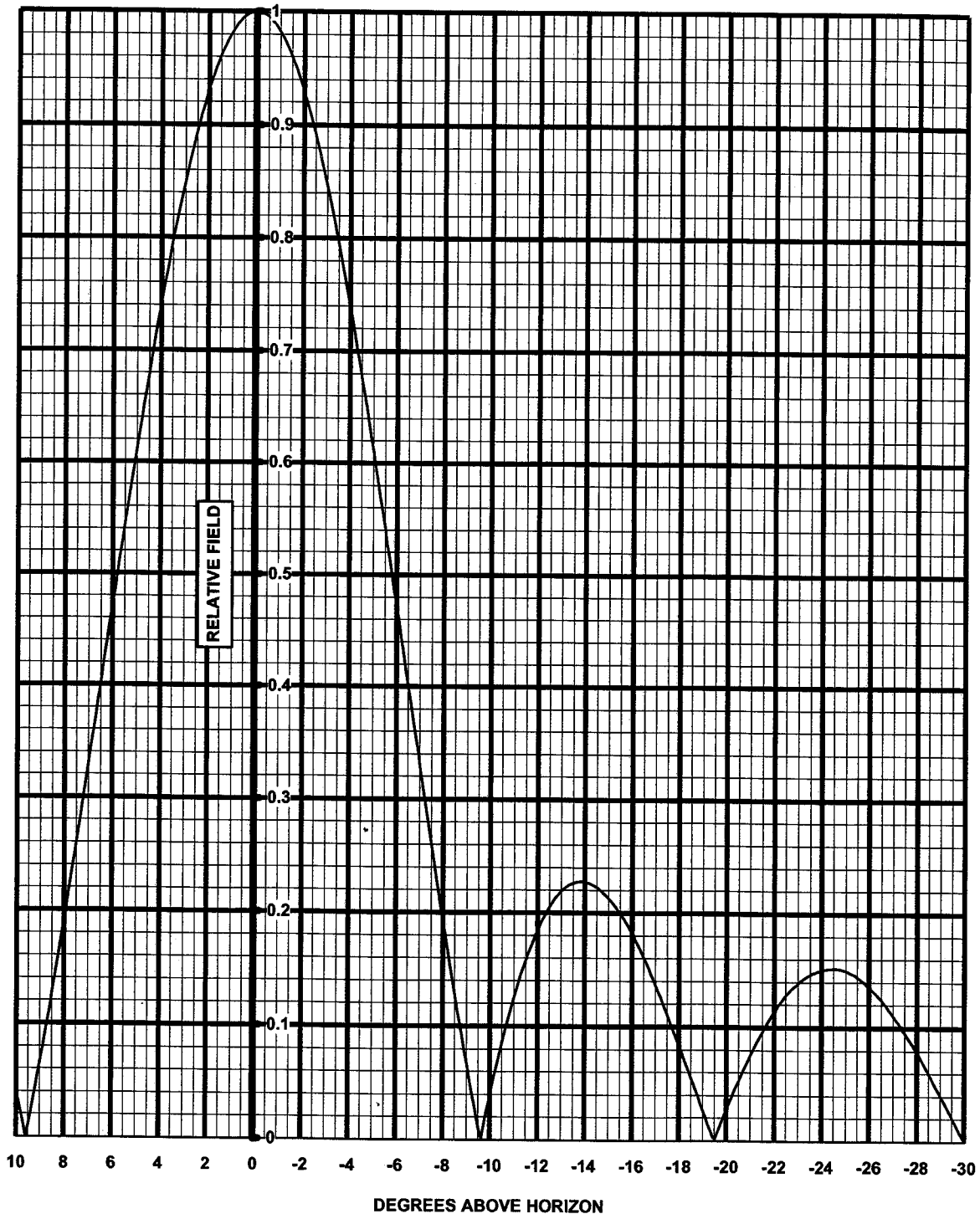
Model: JMPC-6  
Description: FM Sidemount Antenna  
-0° Beam Tilt, 0% Null Fill



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## Elevation Pattern Tabulation

### ELEVATION PATTERN TABULATION

#### RELATIVE FIELD VS ELEVATION ANGLE

<u>ELEVATION ANGLE</u>	<u>RELATIVE FIELD</u>	<u>ELEVATION ANGLE</u>	<u>RELATIVE FIELD</u>	<u>ELEVATION ANGLE</u>	<u>RELATIVE FIELD</u>
10	0.041	-26	0.136	-61	0.131
9	0.066	-27	0.110	-62	0.157
8	0.192	-28	0.078	-63	0.180
7	0.329	-29	0.040	-64	0.201
6	0.472	-30	0.000	-65	0.214
5	0.611	-31	0.039	-66	0.229
4	0.739	-32	0.072	-67	0.242
3	0.847	-33	0.100	-68	0.245
2	0.930	-34	0.120	-69	0.252
1	0.982	-35	0.130	-70	0.257
0	1.000	-36	0.131	-71	0.251
-1	0.982	-37	0.124	-72	0.252
-2	0.930	-38	0.107	-73	0.241
-3	0.847	-39	0.085	-74	0.238
-4	0.739	-40	0.057	-75	0.234
-5	0.611	-41	0.026	-76	0.218
-6	0.472	-42	0.006	-77	0.212
-7	0.329	-43	0.038	-78	0.204
-8	0.192	-44	0.068	-79	0.186
-9	0.066	-45	0.094	-80	0.178
-10	0.041	-46	0.116	-81	0.169
-11	0.126	-47	0.132	-82	0.159
-12	0.185	-48	0.142	-83	0.150
-13	0.219	-49	0.145	-84	0.150
-14	0.227	-50	0.142	-85	0.140
-15	0.213	-51	0.131	-86	0.130
-16	0.182	-52	0.116	-87	0.120
-17	0.136	-53	0.094	-88	0.120
-18	0.083	-54	0.071	-89	0.110
-19	0.026	-55	0.043	-90	0.100
-20	0.028	-56	0.013		
-21	0.076	-57	0.017		
-22	0.114	-58	0.048		
-23	0.139	-59	0.077		
-24	0.151	-60	0.106		
-25	0.150				

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