



Antenna Specifications

JOB NUMBER:	J308MP-679	DATE:	8/12/2008
CUSTOMER:	Channel Communications	ANTENNA TYPE:	PSIUSMD80M-27
CALL LETTERS:	WHLV-LD	CHANNEL:	27
LOCATION:	State College, PA	REVISION:	0.

Electrical Specifications

RMS GAIN MAIN LOBE	9.3	9.68	dB
RMS GAIN AT HORIZONTAL	8.4	9.23	dB
AZIMUTH DIRECTIVITY	1.0	0.0	dB
PEAK DIRECTIONAL GAIN	9.3	9.68	dB
ELEVATION PATTERN	Elevation		
AZIMUTH PATTERN	Omni		
BEAM TILT	1.25 Degree		
INPUT POWER	15 kW		
INPUT SIZE	3-1/8" EIA end fed		
INPUT IMPEDANCE	50 Ohm		

Mechanical Specifications

HEIGHT WITH LIGHTNING PROTECTION	NA	Ft	NA	M
ANTENNA LENGTH	15.87	Ft	4.8	M
CENTER OF RADIATION	7.94	Ft	2.4	M
WIND AREA (CaAa) No Ice	15.02	Sq. Ft	1.47	Sq. M
OVERTURN MOMENT	NA	Ft LB	NA	Kg M
WEIGHT	350	LB	159	Kg

PROPAGATION SYSTEMS INC.
Relative Field Tabulation
Azimuth Pattern
Antenna Model: PSIUSMD80M-27
Gain: 9.3 (9.68 dBd)

Angle	Relative Field	Power Gain	Gain dB
0	1.000	9.30	9.68
10	1.000	9.30	9.68
20	1.000	9.30	9.68
30	1.000	9.30	9.68
40	1.000	9.30	9.68
50	1.000	9.30	9.68
60	1.000	9.30	9.68
70	1.000	9.30	9.68
80	1.000	9.30	9.68
90	1.000	9.30	9.68
100	1.000	9.30	9.68
110	1.000	9.30	9.68
120	1.000	9.30	9.68
130	1.000	9.30	9.68
140	1.000	9.30	9.68
150	1.000	9.30	9.68
160	1.000	9.30	9.68
170	1.000	9.30	9.68
180	1.000	9.30	9.68
190	1.000	9.30	9.68
200	1.000	9.30	9.68
210	1.000	9.30	9.68
220	1.000	9.30	9.68
230	1.000	9.30	9.68
240	1.000	9.30	9.68
250	1.000	9.30	9.68
260	1.000	9.30	9.68
270	1.000	9.30	9.68
280	1.000	9.30	9.68
290	1.000	9.30	9.68
300	1.000	9.30	9.68
310	1.000	9.30	9.68
320	1.000	9.30	9.68
330	1.000	9.30	9.68
340	1.000	9.30	9.68
350	1.000	9.30	9.68

PROPAGATION SYSTEMS INC.

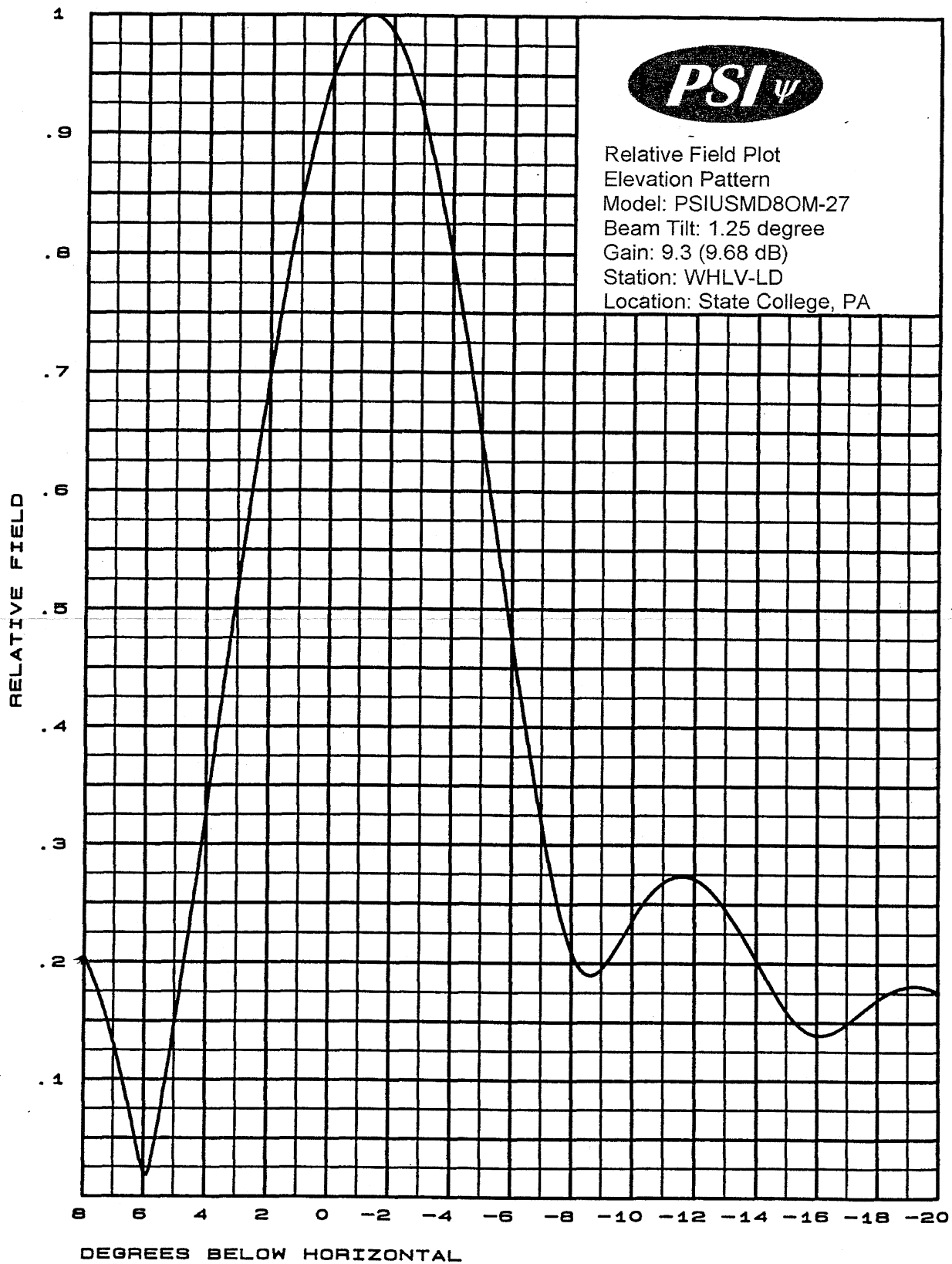
Relative Field Tabulation

Elevation Pattern

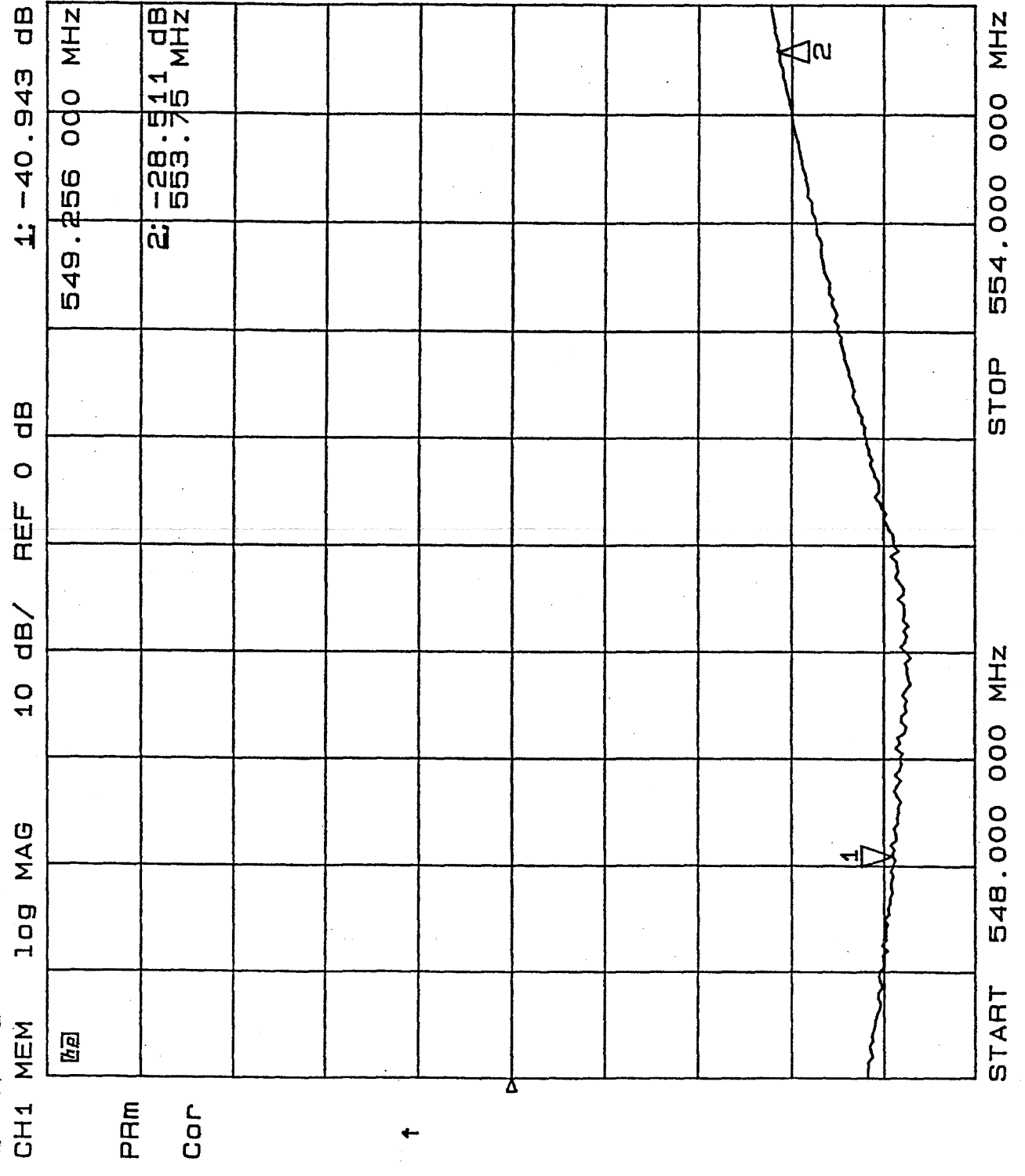
Antenna: PSIUSMD8OM-27

WHLV-LD State College, PA

Angle	Relative Field	Angle	Relative Field	Angle	Relative Field
-90	0.001	-50	0.058	-10	0.236
-89	0.002	-49	0.080	-9	0.195
-88	0.005	-48	0.097	-8	0.209
-87	0.010	-47	0.107	-7	0.316
-86	0.015	-46	0.110	-6	0.474
-85	0.020	-45	0.105	-5	0.642
-84	0.026	-44	0.092	-4	0.796
-83	0.032	-43	0.071	-3	0.915
-82	0.038	-42	0.045	-2	0.985
-81	0.044	-41	0.022	-1	0.997
-80	0.050	-40	0.033	0	0.949
-79	0.055	-39	0.060	1	0.845
-78	0.060	-38	0.085	2	0.697
-77	0.063	-37	0.102	3	0.519
-76	0.066	-36	0.110	4	0.331
-75	0.067	-35	0.105	5	0.150
-74	0.067	-34	0.090	6	0.019
-73	0.065	-33	0.066	7	0.130
-72	0.062	-32	0.036	8	0.205
-71	0.056	-31	0.014	9	0.235
-70	0.050	-30	0.035	10	0.222
-69	0.041	-29	0.058	11	0.176
-68	0.033	-28	0.072	12	0.108
-67	0.025	-27	0.071	13	0.032
-66	0.023	-26	0.057	14	0.041
-65	0.030	-25	0.034	15	0.099
-64	0.041	-24	0.035	16	0.135
-63	0.053	-23	0.074	17	0.147
-62	0.065	-22	0.117	18	0.134
-61	0.076	-21	0.153	19	0.102
-60	0.083	-20	0.176	20	0.060
-59	0.088	-19	0.181	21	0.035
-58	0.088	-18	0.170	22	0.065
-57	0.083	-17	0.149	23	0.102
-56	0.074	-16	0.139	24	0.128
-55	0.060	-15	0.159	25	0.138
-54	0.042	-14	0.203	26	0.132
-53	0.023	-13	0.246	27	0.111
-52	0.016	-12	0.272	28	0.080
-51	0.035	-11	0.268	29	0.044



J30807-679
 15110 8300 30
 Final



REFERENCE
J308MP-679-035
FOR ASSEMBLY
AT ANTENNA
TOP

FIBERGLASS
RADOME

177.09
[450cm]
190.54
[484cm]

REFERENCE
J308MP-679-007
FOR ASSEMBLY
AT ANTENNA
BASE

3 1/8" E.I.A. INPUT

SPECIFICATIONS

LENGTH: 15.87 Ft [4.84 m]

RATING: 15 kW

GAIN: 9.3 (9.68 dB)

WEIGHT: 350 Lbs

WINDAREA: 15.02 Sq. Ft.
TIA-222-F (NO ICE)

PROPAGATION SYSTEMS, INC.

Ebensburg, Pennsylvania USA 814-472-5540

ANTENNA ELEVATIONS AND SPECIFICATIONS

MODEL:	PSIUSMD80M-27	DRAWN BY:	D.G. Kellar	DATE:	5/14/08
CHANNEL/ FREQUENCY:	CHANNEL 27	APPROVED BY:		DATE:	
SCALE:	1:30	DRAWING NO.:	J308MP-679-001	REV.	

This drawing is loaned subject to the express understanding and agreement that the drawing and information therein contained are, and shall remain the property of PSI, and will not be otherwise utilized or disposed of, directly or indirectly, and will not be used in whole or in part or assist in making or finish any information for the making of drawings, prints or other reproductions hereof, or for the design or making of any item, parts, object, apparatus or parts thereof, except upon the written permissions of PSI first obtained. The acceptance of this drawing will be construed as an acceptance of the forgoing agreement.

SIZE

A

REV.	MADE BY CHECKED BY	DATE	CHANGE