

Statement of Engineer

The antenna was installed on the tower according to the manufacturers specification. All brackets and hangers were prefabricated at the factory to insure proper alignment of the panels.

I have have served as Chief Operator for several stations in the Jacksonville, Fl. area for the past 20 years. At present, I am Director of engineering for the OmniAmerica stations in Jacksonville, Fl.


Richard A. Jones
PG-7-8056

August 7, 1996

**EXHIBIT B
COORDINATE CORRECTION/
APPLICATION FOR STATION LICENSE
CARON BROADCASTING, INC.
WBGB (FM) RADIO STATION
CH 293A - 106.5 MHZ - 6.0 KW
PONTE VEDRA BEACH, FLORIDA
August 2003**



DURDEN
Surveying and Mapping, Inc.
8150 Lonestar Rd.
Jacksonville, FL 32211
(904) 724-5588

August 14, 1996

Tricia Dahlin
Intermart Broadcasting
4810 Deltona Drive
Punta Gorda, Florida 33950

RE: Tower located at Hogan Road, Jax., FL

Dear Mrs. Dahlin:

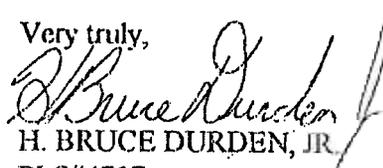
This is to certify that I rendered professional services to prepare a specific purpose survey to determine the bearings of the Centers of four Harris Cavity Backed Radiators (FM Antennas). The antennas and their bearing as determined by field measurements are as follows:

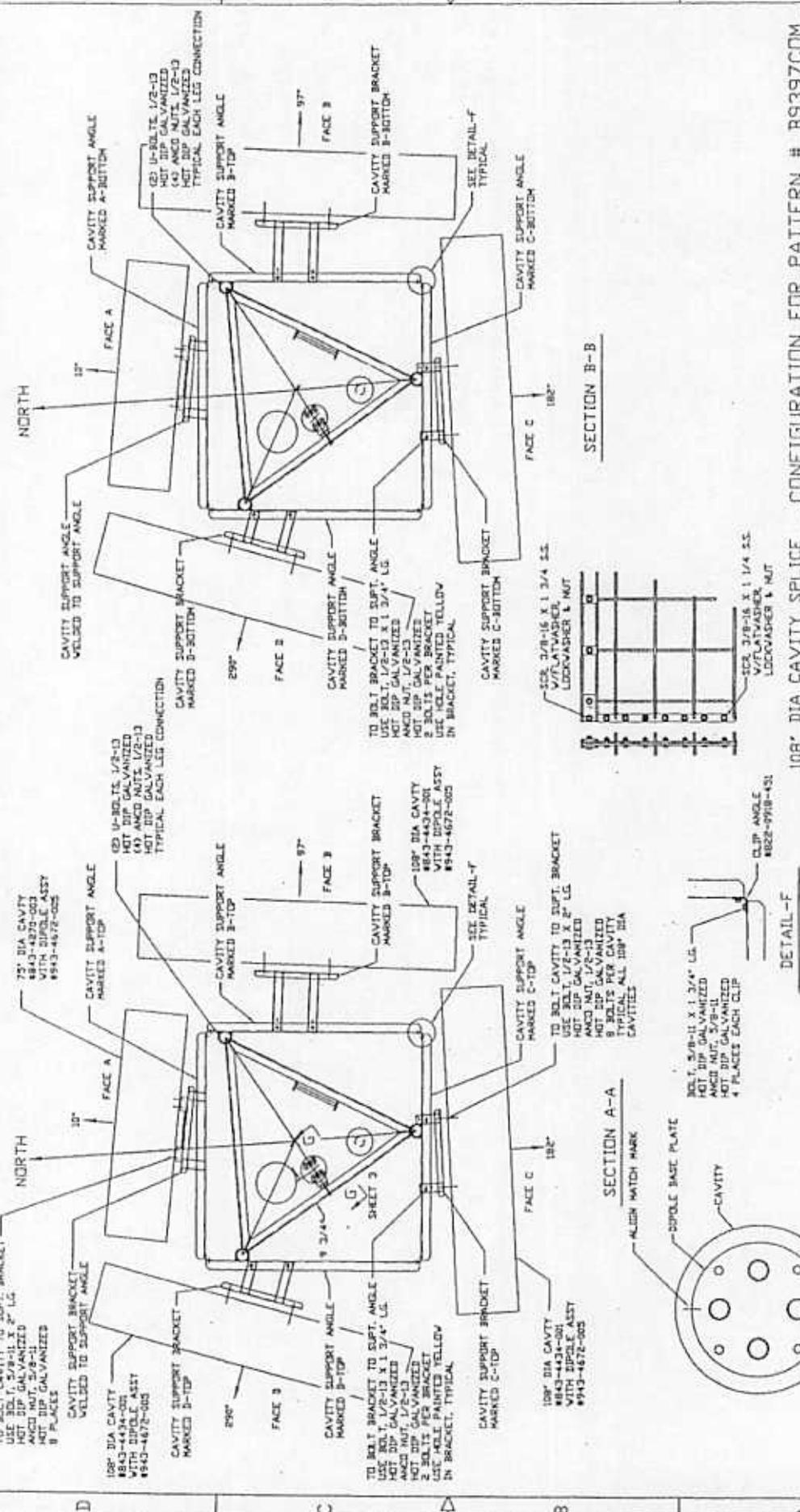
- 1) Antenna "A" (the 76") - North 10 degrees East or 10 degrees Azimuth;
- 2) Antenna "B" (the 108") - South 83 degrees East or 97 degrees Azimuth;
- 3) Antenna "C" (the 108") - South 2 degrees West or 182 degrees Azimuth;
- 4) Antenna "D" (the 108") - North 70 degrees West or 290 degrees Azimuth.

Bearings were based on the Southwesterly Right-Of-Way of Hogan Road as being South 46 degrees 36 minutes 46 seconds East as showing on a survey by Ray Durden & Snyder dated April 7, 1980.

This specific purpose survey to determine the bearings of the Centers of four Harris Cavity Backed Radiators (FM Antennas) was performed under my supervision and meets the Minimum Technical Standards for Specific Purpose Surveys in accordance with Chapter 61G17-6, Florida Administrative Code (pursuant to Chapter 472.027, Florida Statutes).

Very truly,


H. BRUCE DURDEN, JR.
PLS#4707



108" DIA CAVITY SPLICE CONFIGURATION FOR PATTERN # B9397CDM

REV	DATE	BY	CHK	DESCRIPTION
1	4/8/96	D. REES		INSTALLATION
2				TAC-1H-4/4
3				VPJ-FH JACKSONVILLE, FL
4				
5				
6				
7				
8				

REV	DATE	BY	CHK	DESCRIPTION
1	4/8/96	D. REES		INSTALLATION
2				TAC-1H-4/4
3				VPJ-FH JACKSONVILLE, FL
4				
5				
6				
7				
8				

REV	DATE	BY	CHK	DESCRIPTION
1	4/8/96	D. REES		INSTALLATION
2				TAC-1H-4/4
3				VPJ-FH JACKSONVILLE, FL
4				
5				
6				
7				
8				

REV	DATE	BY	CHK	DESCRIPTION
1	4/8/96	D. REES		INSTALLATION
2				TAC-1H-4/4
3				VPJ-FH JACKSONVILLE, FL
4				
5				
6				
7				
8				

REV	DATE	BY	CHK	DESCRIPTION
1	4/8/96	D. REES		INSTALLATION
2				TAC-1H-4/4
3				VPJ-FH JACKSONVILLE, FL
4				
5				
6				
7				
8				

DIPOLE TO CAVITY MOUNTING

March 15, 1996

**Circular Polarized Directional Antenna System
Proposed for Radio Station WPVJ-TV
Located in Ponte Vedra Beach, Florida**

Description of Antenna

The antenna designed for WPVJ-FM is a circularly polarized TAC-1M-4/4 DA and is designed to operate at 106.5 MHz. The antenna consists of 4 Harris CBR (cavity backed radiator) elements and associated feed harness. The antenna is supplied with custom mounting brackets which allow orientation of the elements toward 10°, 97°, 182° and 290° true. The diameter, orientation, amplitude and phase of each element determine the azimuthal radiation pattern.

Description of Pattern Measurements

The antenna will be mounted on a triangular tower section that has a face width of 6'. The antenna was tested on a full size tower section which is electrically and mechanically equivalent to the existing tower section. Tower members, ladder, feedlines and conduits running through the existing tower section were included in the full scale model tower section.

Azimuthal patterns were measured for horizontal and vertical polarizations on the full scale antenna and tower section. These patterns were measured on the Harris Corporation Broadcast Division far field range. The measured h and polarization patterns were used to produce composite Harris pattern no. B9397COM. The H and V polarization patterns do not exceed the levels represented on the composite pattern.

Description of Antenna Test Range

Pattern measurements were performed on the TAC-1M-4/4 DA antenna at the Harris Corporation Antenna Test Range located near Palmyra, Missouri. The antenna pattern measurement range at this facility is a ground-reflection far field range which utilizes the wide flat flood plain area along the Mississippi River. The transmitting antenna illumination source is located on a tower near the river and is directed over the flood plain toward the receiving site located on a steep bluff about 240 ft. above the flood plain. The path length is 15,830 ft.

This type of test range is discussed in Chapter 14 of "Microwave Antenna Measurements" published by Scientific Atlanta, Inc., Atlanta, Georgia, July 1970.

March 15, 1996

**Circular Polarized Directional Antenna System
Proposed for Radio Station WPVJ-TV
Located in Ponte Vedra Beach, Florida**

Description of Antenna Test Range (Continued)

Flam & Russell pattern recording equipment with an HP-8753C network analyzer will be utilized. All testing equipment is frequently calibrated and maintained at the Harris Corporation Calibration Lab located in Quincy Illinois.

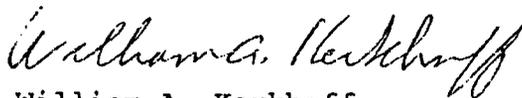
Antenna Mounting

The TAC-1M-4/4 DA Antenna is designed to be mounted to the side of an existing triangular tower section that has a face width of 6'. No parasitic elements are used. The Antenna is to be configured and oriented as described in the Harris TAC-1M-4/4 DA installation drawing. The installation drawing will be included in the Harris Technical Manual supplied with the antenna. The custom mounting brackets will be supplied with the antenna and were utilized during the full scale pattern testing. Each bracket is clearly marked to allow accurate reassembly.

No other antennas shall be mounted closer than 20 ft. above or below the aperture of the TAC-1M-4/4 DA. No obstruction of any type shall be located within 100' horizontally from the TAC-1M-4/4 DA system.

Complete electrical and mechanical specifications are provided with the antenna Technical manual.

The antenna gain is .97 (-.14 dB) relative to a halfwave dipole and will produce 6 kW (7.78 dBK) ERP per polarization with 6.19 kW (7.92 dBK) applied to the antenna input port.



William A. Kerkhoff
Lead Engineer
Harris Corporation - Broadcast Division

m:\tac\bin\wpvjcer4.w60

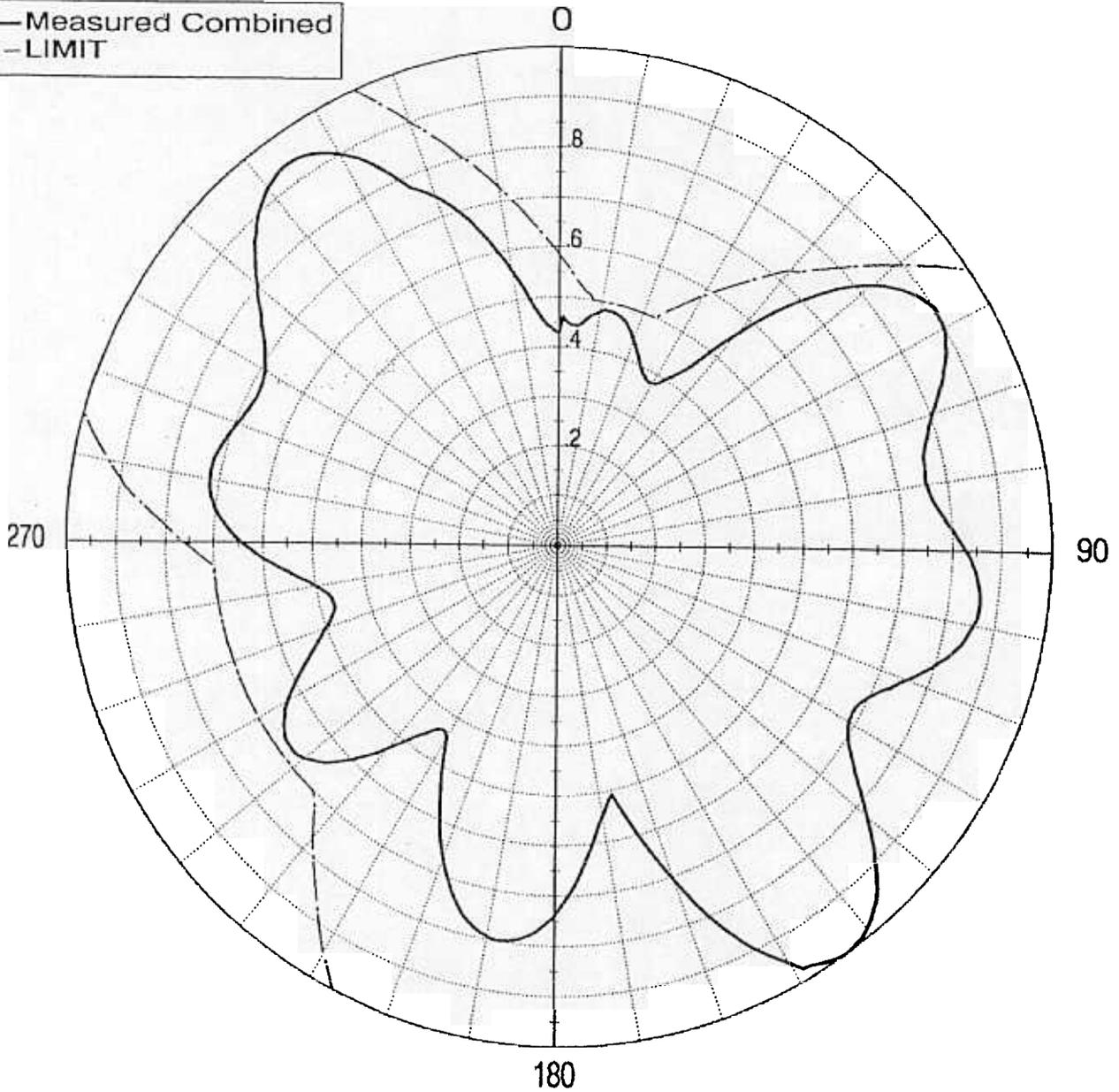
Harris Broadcast Antenna Summary			
Date:	February 28, 1996		Channel: FM 293
Proposal:	D20773	Rev: D	Configuration: 1-1-1-1
Customer:	Intermark Broadcasting		Model: TAC-1M-4/4 DA
Location	Ponte Vedra Beach, Fl.		Band Mhz. 106.5 MHz
No. Bays:	1		Polarization: CP
Electrical BeamTilt in° :	N/A		1st Null Fill (%): N/A
Power Rating:	10 kW Avg. Power @ 50°C.		

Gain Summary	Ratio	dB	Remarks
Elevation Power Gain, at main lobe:	.49	-3.11	Each polarization.
Elevation Power Gain, at horizontal:	.49	-3.11	Each polarization.
Azimuthal Gain:	1.98	2.97	Combined Pattern RMS=.711
Maximum Overall Gain:	.97	-.14	Each polarization. Relative to dipole.
Horizontal Plane Maximum Gain:	.97	-.14	
Horizontal Plane Minimum Gain:	.138	-8.59	
Circularity:	+/- N/A		DA
Azimuthal Pattern No.:	B9397COM Measured combined pattern.		
Elevation Pattern No:	4304E08K Face A 4304E09K Faces B-D		

Mechanical Specifications	Value	Remarks
Overall Length of Antenna:	9 ft	Side mounted on existing 6 ft. face triangular tower section. Lightning rods not included..
Radiation Center Height Above Antenna Base:	4.5 ft	
Input Connection:	50 ohm	Single 3-1/8" EIA Flanged.
Moment M:	N/A	Sidemounted
Effective Area C _A :	144 ft ²	Per EIA-222-E. No Ice. Antenna and brackets.
Weight W:	2,500 lbs	Estimated. Actual may vary. Antenna and brackets.
Prepared by:	WAK	File: m:\tac\----tac1m.026

RELATIVE FIELD AZIMUTH PATTERN

— Measured Combined
-- LIMIT



HARRIS PATTERN NO.: B9397COM
MODEL: TAC-1M-4/4 DA
F = 106.5 MHZ
RMS = .711

 PATTERN LISTING

DATE: 2-28-1996
 TIME: 10:27 AM

B9397CDM MEASURED COMBINED RELATIVE FIELD AT 106.5 MHz

PLOT FILENAME = B9397CDM.PLT

AZIMUTH	REL. FIELD	AZIMUTH	REL. FIELD
-----	-----	-----	-----
.0	.428	175.0	.647
1.0	.460	180.0	.738
5.0	.445	185.0	.789
10.0	.478	189.0	.798
13.0	.484	190.0	.794
15.0	.479	195.0	.752
20.0	.443	200.0	.668
25.0	.395	205.0	.557
29.0	.378	210.0	.445
30.0	.380	212.0	.436
35.0	.429	215.0	.461
40.0	.560	220.0	.536
45.0	.713	225.0	.617
50.0	.828	230.0	.670
55.0	.888	232.0	.677
58.0	.901	235.0	.674
60.0	.899	240.0	.632
65.0	.859	245.0	.562
70.0	.804	250.0	.501
75.0	.767	255.0	.471
79.0	.757	256.0	.471
80.0	.757	260.0	.499
85.0	.785	265.0	.569
90.0	.827	270.0	.645
95.0	.858	275.0	.697
97.0	.864	280.0	.719
100.0	.858	281.0	.720
105.0	.821	285.0	.714
110.0	.756	290.0	.694
115.0	.699	295.0	.680
118.0	.684	296.0	.680
120.0	.686	300.0	.690
125.0	.737	305.0	.735
130.0	.827	310.0	.802
135.0	.922	315.0	.874
140.0	.986	320.0	.926
144.0	1.000	324.0	.939
145.0	.997	325.0	.938
150.0	.954	330.0	.900
155.0	.849	335.0	.817
160.0	.708	340.0	.742
165.0	.560	345.0	.660

PATTERN LISTING (cont)

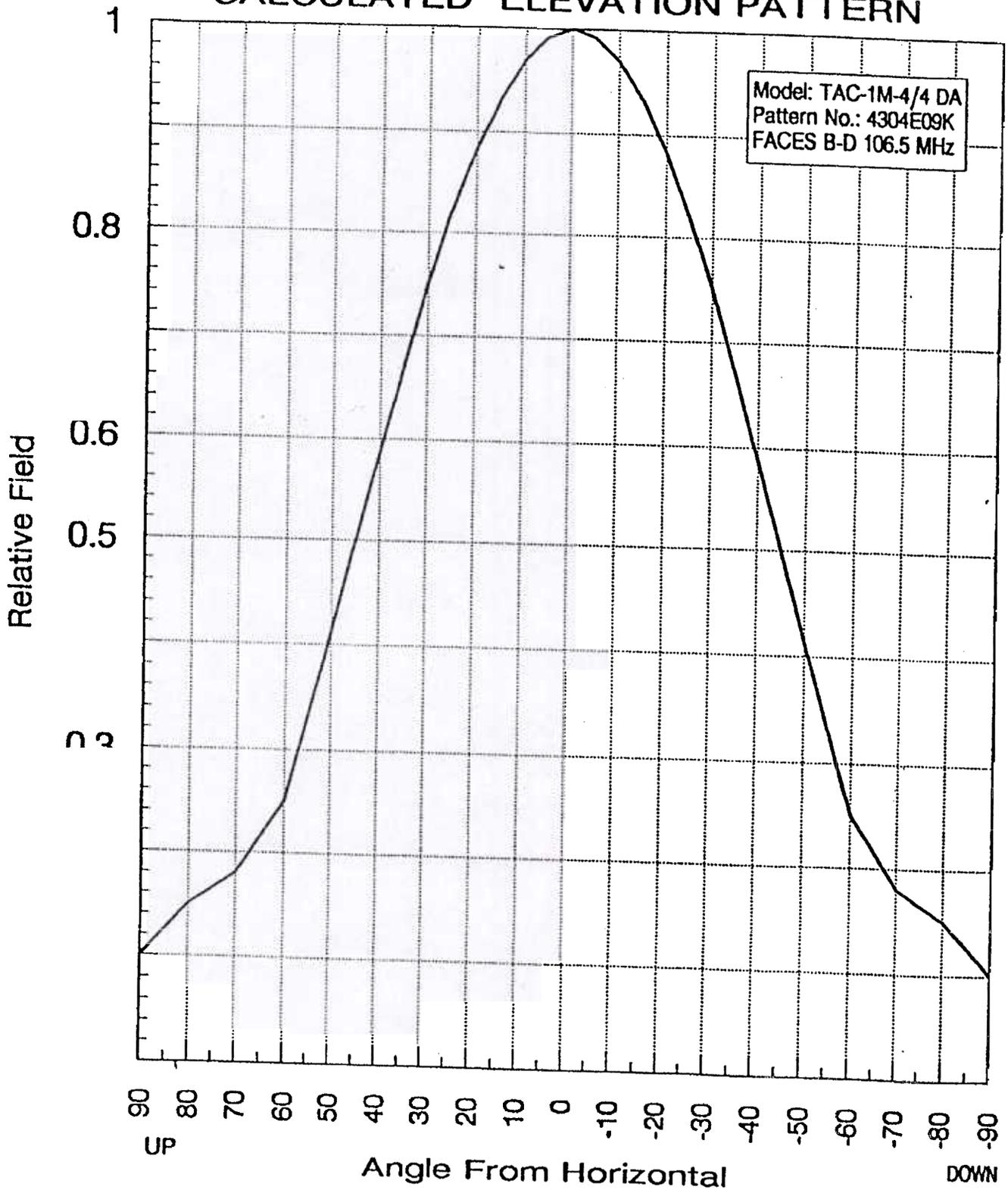
DATE: 2-28-1996
TIME: 10:27 AM

B9397COM MEASURED COMBINED RELATIVE FIELD AT 106.5 MHz

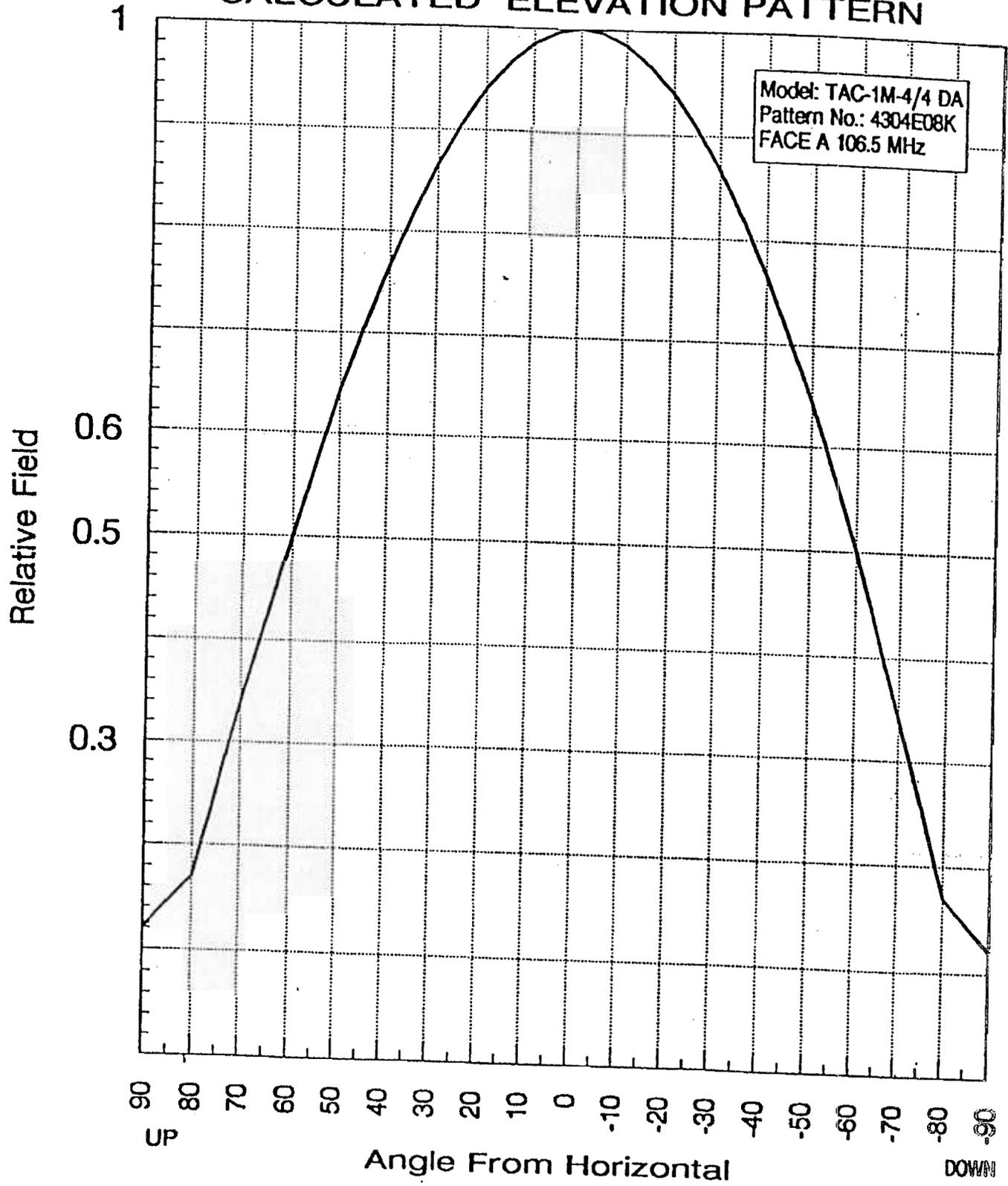
PLOT FILENAME = B9397COM.PLT

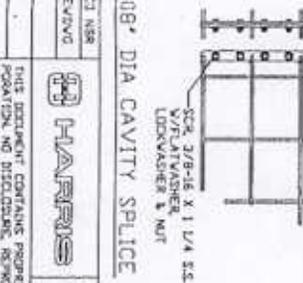
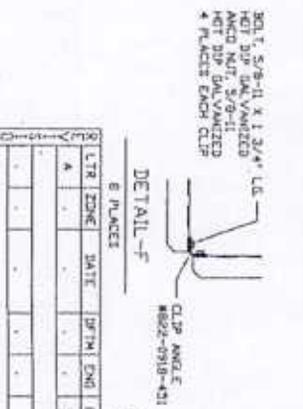
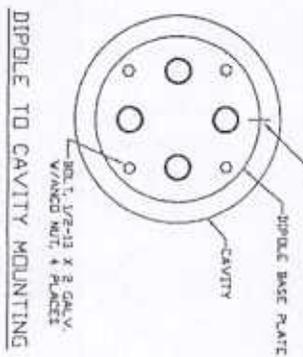
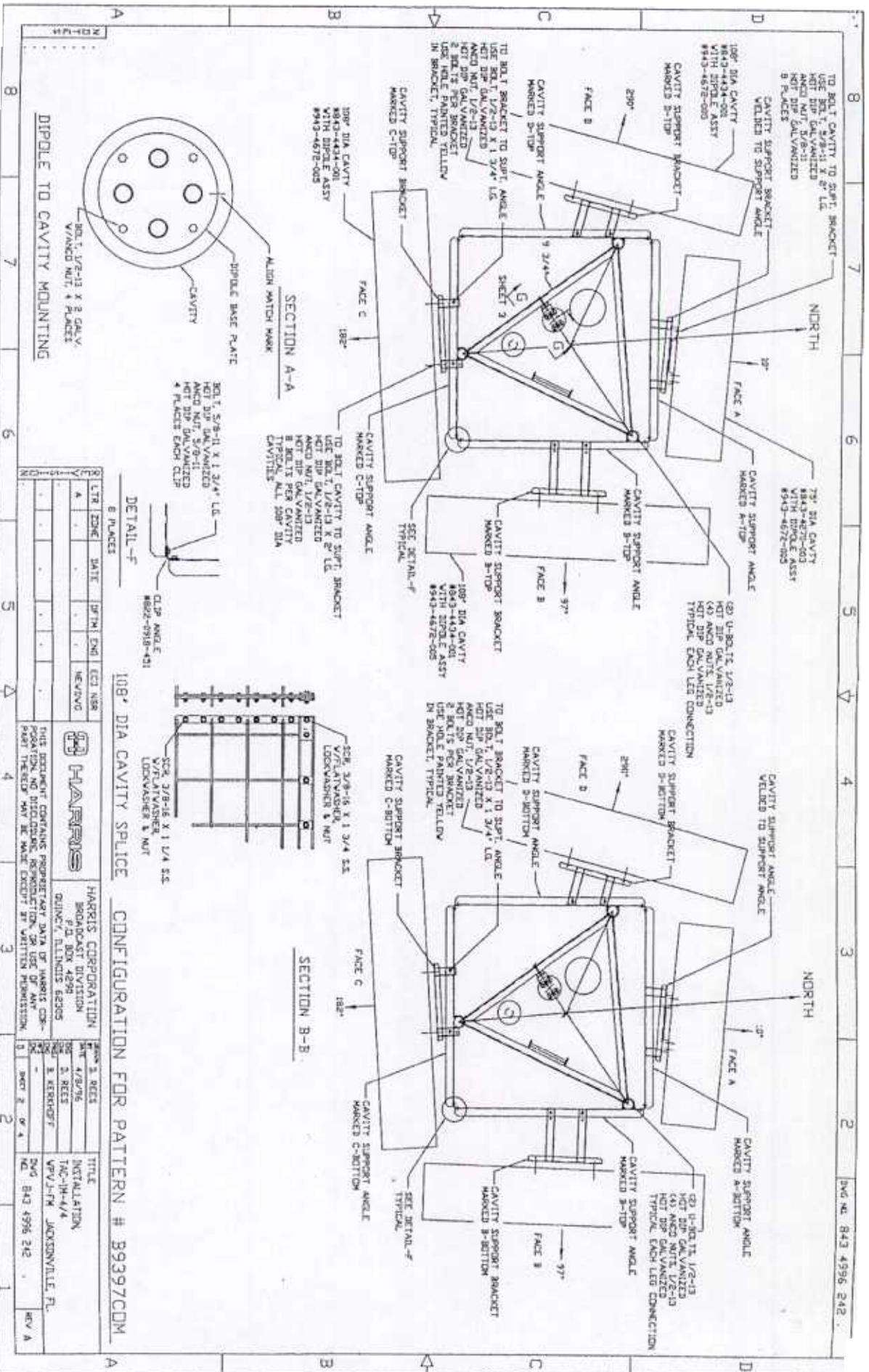
<u>AZIMUTH</u>	<u>REL. FIELD</u>	<u>AZIMUTH</u>	<u>REL. FIELD</u>
167.0	.509	350.0	.559
170.0	.549	355.0	.468

CALCULATED ELEVATION PATTERN



CALCULATED ELEVATION PATTERN





108° DIA CAVITY SPLICE CONFIGURATION FOR PATTERN # B9397CDM

REV	DATE	BY	CHKD	DESCRIPTION
0				
1				
2				
3				
4				
5				
6				
7				
8				

REV	DATE	BY	CHKD	DESCRIPTION
0				
1				
2				
3				
4				
5				
6				
7				
8				

REV	DATE	BY	CHKD	DESCRIPTION
0				
1				
2				
3				
4				
5				
6				
7				
8				

THIS DOCUMENT CONTAINS PROPRIETARY DATA OF HARRIS CORPORATION AND IS NOT TO BE DISSEMINATED OR USED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF HARRIS CORPORATION.