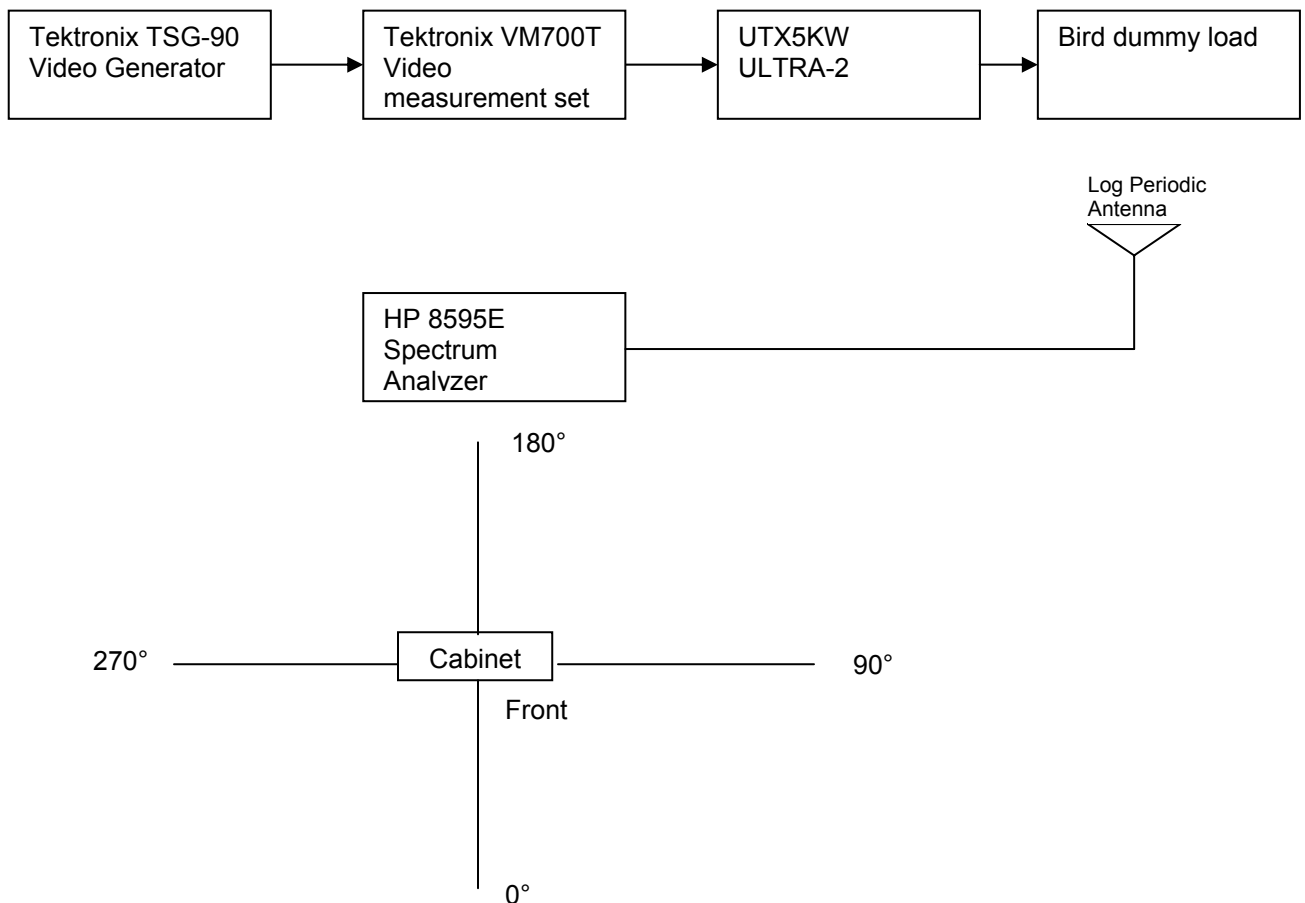


CABINET RADIATION

The transmitter and test equipment were configured as shown below including the angles of measurement with respect to the transmitter cabinet. The photo on the subsequent page also shows the physical set-up of the test equipment and equipment under test. The transmitter was operated at 5.0 kW peak sync power with a 13 dB visual/aural ratio with the video input signal being a sync signal and 50 IRE “set-up” level. The free space path loss, cable loss, and antenna gain characteristics were obtained at the fundamental frequency and at each of the harmonics of the visual carrier frequency in order to accurately assess the level of the signal radiated from the cabinet. Radiation from the cabinet was measured at a distance of 30 feet in 4 different physical rotation angles: 0, 90, 180, and 270 degrees (0 degrees being the front of the cabinet). All spectral components above -80 dB referenced to peak sync power radiated from the cabinet were recorded. The values are tabulated in the table on the next page following the photos.

TEST EQUIPMENT CONFIGURATION



PHYSICAL CABINET RADIATION TEST CONFIGURATION

This photograph shows the actual laboratory environment in which the cabinet radiation tests were conducted. The log periodic antenna, cable and spectrum analyzer is shown in the foreground and the UTX5KW is shown in the background. The transmitter was rotated 90 degrees for each of the measurement orientations.



As calculated from the spreadsheet data on the following page, the worst case measurement was 67.8 dB at the second harmonic. (This photo above shows this particular measurement). The measurement tables for the remaining views of the transmitter are shown below.

CABINET RADIATION DATA

[illegible]

				<u>RIGHT</u>	<u>VIEW</u>					
Harmonic	Frequency	SIGNAL	MAX SIG	CABLE	ANTENNA	PATH	ADJ	MAXIMUM	STATUS	NOTES
		LEVEL	ANGLE	LOSS dB	GAIN dB	LOSS dB	LEVEL	LEVEL		
	GHz	dBm	DEGREES	dB	dB	dB	dBm	dBm		
Fc	0.69325	-34.5	90	0.6	5.7	49.3178	9.717798	NA	N/A	
Fc'2	1.3865	-68.3	90	1	5.7	55.3384	-17.6616	7	P	
Fc'3	2.07975	-77.3	90	1.3	5.6	59.86022	-22.7398	7	P	
Fc'4	2.773	-82	90	1.7	5.3	61.359	-24.241	7	P	
Fc'5	3.46625	-82	90	1.9	4.7	63.2972	-21.5028	7	P	
Fc'6	4.1595	-82	90	2	5	64.88082	-20.1192	7	P	
Fc'7	4.85275	-82	90	2.2	3.3	66.21976	-16.8802	7	P	
Fc'8	5.546	-82	90	2.1	3.1	67.3796	-15.6204	7	P	
Fc'9	6.23925	-82	90	2.9	2.6	68.40265	-13.2974	7	P	
Fc'10	6.9325	-82	90	3.5	3	69.3178	-12.1822	7	P	
				<u>REAR</u>	<u>VIEW</u>					
Harmonic	Frequency	SIGNAL	MAX SIG	CABLE	ANTENNA	PATH	ADJ	MAXIMUM	STATUS	NOTES
		LEVEL	ANGLE	LOSS dB	GAIN dB	LOSS dB	LEVEL	LEVEL		
	GHz	dBm	DEGREES	dB	dB	dB	dBm	dBm		
Fc	0.69325	-36.7	90	0.6	5.7	49.3178	7.517798	NA	N/A	
Fc'2	1.3865	-70.1	90	1	5.7	55.3384	-19.4616	7	P	
Fc'3	2.07975	-78.6	90	1.3	5.6	59.86022	-24.0398	7	P	
Fc'4	2.773	-82	90	1.7	5.3	61.359	-24.241	7	P	
Fc'5	3.46625	-82	90	1.9	4.7	63.2972	-21.5028	7	P	
Fc'6	4.1595	-82	90	2	5	64.88082	-20.1192	7	P	
Fc'7	4.85275	-82	90	2.2	3.3	66.21976	-16.8802	7	P	
Fc'8	5.546	-82	90	2.1	3.1	67.3796	-15.6204	7	P	
Fc'9	6.23925	-82	90	2.9	2.6	68.40265	-13.2974	7	P	
Fc'10	6.9325	-82	90	3.5	3	69.3178	-12.1822	7	P	
				<u>LEFT</u>	<u>VIEW</u>					
Harmonic	Frequency	SIGNAL	MAX SIG	CABLE	ANTENNA	PATH	ADJ	MAXIMUM	STATUS	NOTES
		LEVEL	ANGLE	LOSS dB	GAIN dB	LOSS dB	LEVEL	LEVEL		
	GHz	dBm	DEGREES	dB	dB	dB	dBm	dBm		
Fc	0.69325	-37	90	0.6	5.7	49.3178	7.217798	NA	N/A	
Fc'2	1.3865	-66.5	90	1	5.7	55.3384	-15.8616	7	P	
Fc'3	2.07975	-78.5	90	1.3	5.6	59.86022	-23.9398	7	P	
Fc'4	2.773	-82	90	1.7	5.3	61.359	-24.241	7	P	
Fc'5	3.46625	-82	90	1.9	4.7	63.2972	-21.5028	7	P	
Fc'6	4.1595	-82	90	2	5	64.88082	-20.1192	7	P	
Fc'7	4.85275	-82	90	2.2	3.3	66.21976	-16.8802	7	P	
Fc'8	5.546	-82	90	2.1	3.1	67.3796	-15.6204	7	P	
Fc'9	6.23925	-82	90	2.9	2.6	68.40265	-13.2974	7	P	
Fc'10	6.9325	-82	90	3.5	3	69.3178	-12.1822	7	P	

EQUIPMENT LIST

The following test equipment was used in the various test equipment configurations or to create calibration of equipment at various frequencies. All equipment was known to be in good working order and the supplier of the equipment stipulated the equipment was within the calibration period.

EQUIPMENT MODEL	SERIAL NUMBER
Tektronix 1410 Video generator	B020216
Modulation Sciences MSI320 demodulator	390128364
HP 8595E Spectrum Analyzer	3523A01399
VM-700T Video Analyzer	B010396
HP 3525A Signal Generator	2846A01312
HP 339A Distortion Analyzer	2520A08480
Tektronix TSG90 Video signal generator	B022622
Tektronix 1750 Waveform Monitor	B033351
ETS 3147 Log Periodic Antenna	9112-1053
Fluke 77 meter	54810424
Wavetek 8003 Scalar Analyzer	1813961
HP 54601 Oscilloscope	3134A02137
HP 8590B Spectrum Analyzer	3009A0840
Bird 8656-602A Dummy load	301
HP 8903B Modulation Monitor	2920A02167
HP 53181 Frequency Counter	3736A05957