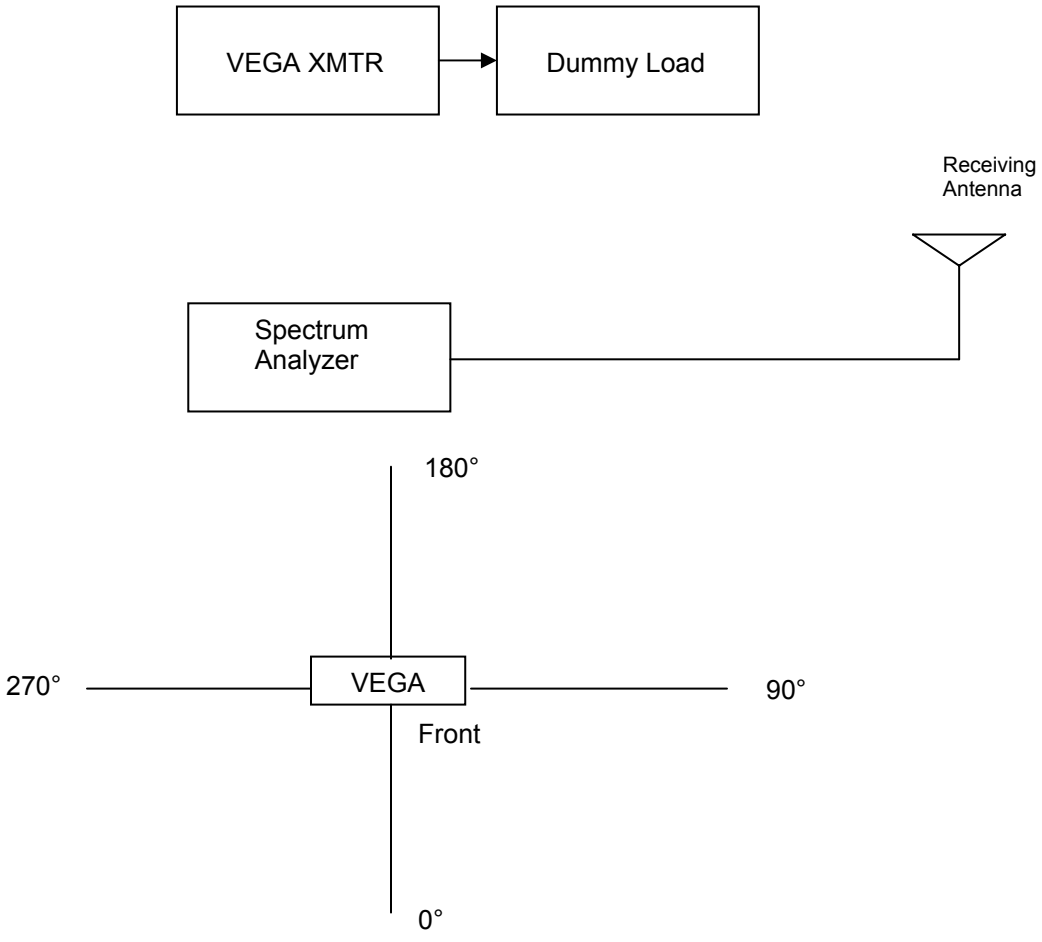
CABINET RADIATION

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 one view of the physical set-up of the test equipment and equipment under test. The transmitter was operated at 15 watts peak sync power with a 10 dB visual/aural ratio with the video input signal being a Modulated Stairstep signal. The free space path 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 with 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 antenna and Unit Under Test is shown in the photograph. The transmitter was rotated 90 degrees for each of the measurement orientations.

As indicated in the spreadsheet data on the following page, the worst case measurement was 62 dB at the second harmonic. (This photo on the next page shows this particular measurement). The measurement tables for the all views of the transmitter at each frequency are shown below. The results indicate that all radiated harmonics meet the FCC requirement of 60 dB as outlined in FCC rule 2.1053 and 2.1057.

CABINET RADIATION DATA

Cabinet Radiation for VEGA

Frequency MHZ	Measured FS dBuV/m	FS (Voltage) V/m	Equivalent Radiated Power watts	Power dBm	Relative to P_{out} of 15 watts dB
597.25	80	0.01	72.7E-6	-11.4	-53
ALL others	<25	0.000112	2.35E-10	-66	-108

Note: 25 dBµV was the noise floor of the spectrum analyzer used for the measurements.

VOLTAGES AND CURRENTS TO FINAL AMPLIFIERS

Final amplifier DC voltage and current measurements were made with the transmitter operating at 15 Watts power output and at 3.7 watts power output. A video input signal of sync and 0 IRE “setup” level was used. The aural carrier was energized and adjusted for the proper 10 dB Visual to Aural power ratio. Voltage and current measurements were made at the transmitter.

Peak Output Power = 15 Watts
Voltage = 26.5 volts
Total DC Current = 4.6 amps
Final amplifier DC power input = 26.5 x 4.6 = 122 watts

Peak Output Power = 3.7 Watts
Voltage = 26.5 volts
Total DC Current = 4.5 amps
Final amplifier DC power input = 26.5 x 4.5 = 119 watts

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 equipment was within the calibration period.

Type	Manufacturer	Model	Date of Calibration	Calibration Expired
Spectrum Analyzer	Advantest	R3132	11/11/03	11/11/04
Signal Generator Platform	Tektronix	TG2000	15/05/04	15/05/05
Video Measurement Set	Tektronix	VM700A	09/01/04	09/01/05
TV Test Receiver	Rohde&Schwarz	EFA	15/05/04	15/05/05
Selective Modulation Analyzer	Rohde&Schwarz	FMAS	02/04/04	02/04/05
Wattmeter	BIRD	4391	02/04/04	02/04/05
Thermal detector	CAREL	IR32c	15/05/01	15/05/05
Humidity detector	CAREL	S90HP	15/05/01	15/05/05
Thermal Chamber	COTER	N/A		
Attenuator	Elettronika	N/A		
Dummy Load 100W	Elettronika	N/A		