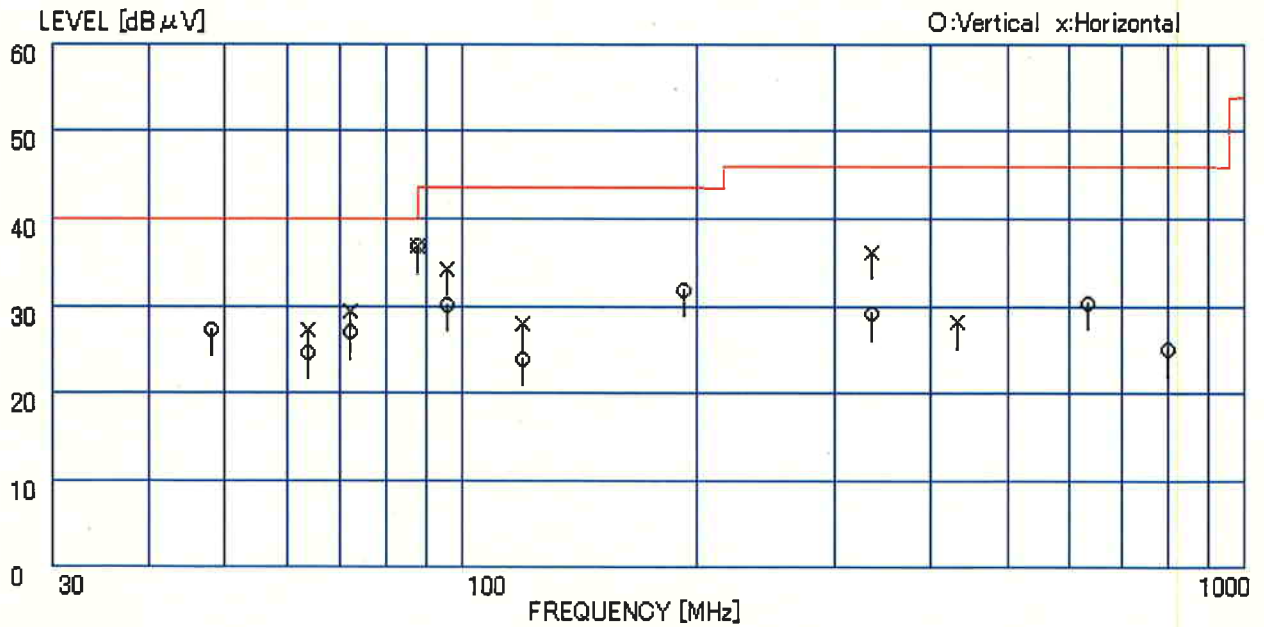


<0.09MHz to 30MHz>



<30MHz to 1000MHz>

Figure 6.2-13 RFI Field Strength Measurement Results

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15/Dec./2005



Kazunori Maeshima, Engineer

Table 6.2-14a RFI Field Strength Measurement Results (Q-Peak Measurement)
<0.009MHz to 30MHz>

Model Name: PTZ-1231W + ZC-210
 Operating mode: Device detection state
 Test procedure: ANSI C63.4-2003
 Test condition: Power input 1phase AC120V
 DC5V
 Test distance: 3 meters*
 Date of measurement: October 26, 2005
 Temperature: 20 degree C
 Humidity: 52 %

Frequency (MHz)	Level (dBμV)		Cable Loss (dB)	Amp. Gain (dB)	Ant. Factor (dB/m)	Result (dBμV/m)		30 Meter Limit (dBμV/m)	Margin (dB)	
	Ver.	Hor.				Ver.	Hor.		Ver.	Hor.
0.67	3.0		0.3	0.0	19.2	22.5	13.34	31.1	8.7	

Limit

Frequency (MHz)	dBμV/m	μV/m	Distance(m)
0.009 ~ 0.490	48.5 ~ 13.8	2400/F(kHz)	300
0.490 ~ 1.705	33.8 ~ 23.0	24000/F(kHz)	30
1.705 ~ 30	29.5	30	30

* The test result obtained at 3meters from the EUT is complied with the limit of 300meters and 30meters from FCC requirement.
 Therefore, the EUT had complied with FCC Part 15 Sub.part C requirement.

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Table 6.2-14b RFI Field Strength Measurement Results (Q-Peak Measurement)
<30MHz to 1000MHz>

Model Name: PTZ-1231W + ZC-210
 Operating mode: Device detection state
 Test procedure: ANSI C63.4-2003
 Test condition: Power input 1phase AC120V DC5V

Date of measurement: October 26, 2005
 Temperature: 20 degree C
 Humidity: 52 %

Frequency (MHz)	Level		Cable Loss (dB)	Amp. Gain (dB)	Ant. Factor (dB/m)	Result		Result Hor. (µV/m)	3 Meter Limit (µV/m)	Margin		
	Ver. (dBµV)	Hor.				Ver.	Hor.			Ver.	Hor.	
48.00	42.0		1.6	-27.0	10.7	27.3		23.17	100	12.7		
64.00	43.0	44.0	1.8	-27.0	6.9	24.7	25.7	17.18	19.28	100	15.3	14.3
72.00	45.0	41.5	2.0	-27.0	6.9	26.9	23.4	22.13	14.79	100	13.1	16.6
88.00	51.0	44.0	2.1	-26.8	8.5	34.8	27.8	54.95	24.55	100	5.2	12.2
96.00	45.0	43.0	2.4	-27.0	9.9	30.2	28.2	32.36	25.70	150	13.3	15.3
120.00	38.0	38.0	2.6	-26.8	13.1	26.9	26.9	22.13	22.13	150	16.6	16.6
192.00	39.0		3.4	-26.2	16.6	32.8		43.65		150	10.7	
336.00	35.0	42.0	4.5	-26.8	16.4	29.1	36.1	28.51	63.83	200	16.9	9.9
432.00		32.0	5.3	-27.6	18.5		28.1		25.41	200		17.9
631.97	32.5		6.6	-28.2	19.5	30.4		33.11		200	15.6	
800.00	23.5		7.4	-27.8	21.9	25.0		17.78		200	21.0	

Class B limit

Radiated Emission – 3 meter distance

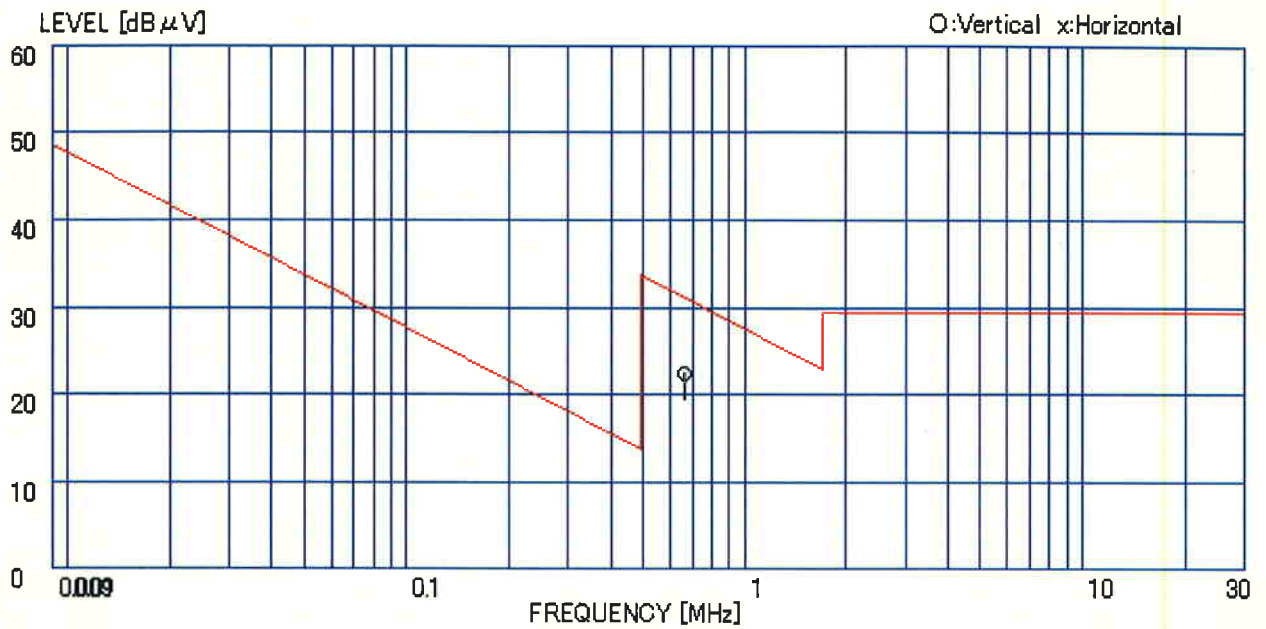
Frequency (MHz)	dBµV/m	µV/m
30 - 88	40.0	100
88 - 216	43.5	150
216 - 960	46.0	200
> 960	54.0	500

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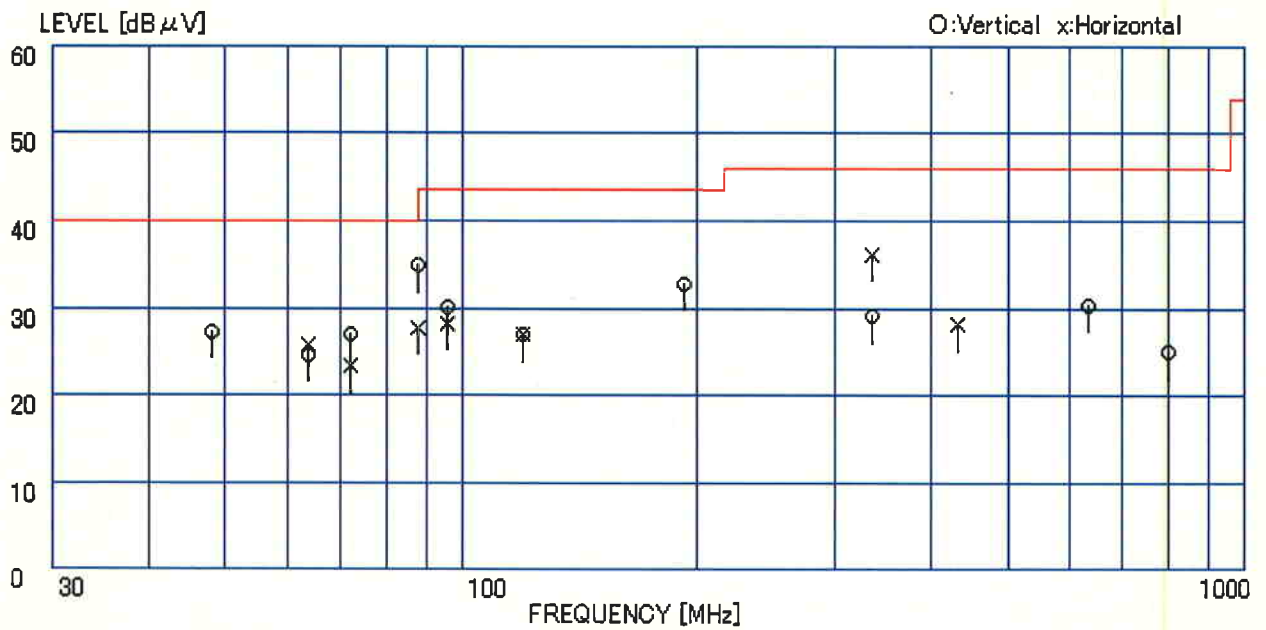

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<0.09MHz to 30MHz>



<30MHz to 1000MHz>

Figure 6.2-14 RFI Field Strength Measurement Results

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Kazunori Maeshima, Engineer

6.3 Minimum Margin

Table 6.3-1 Minimum Margin

<u>Conducted emission</u>			
<i>Device detection state</i>	operation mode	<i>16.669</i> MHz,	<i>1.3</i> dB
<i>PTZ 1230+ZC 210</i>			
<u>Radiated emission</u>			
<i>Device detection state</i>	operation mode	<i>88.00</i> MHz,	<i>4.2</i> dB
<i>PTZ 1231W+ZP 400E</i>			

6.4 Sample Calculation

Table 6.4-1 Sample Calculation

The maximum radiating emission can be obtained at the frequency of *88.00* MHz, *Horizontal* polarization on *Device detection state* operation mode.

Each value at frequency is as follows;

R :	Field strength meter reading	=	<i>52.0</i>	(dBμV)
A :	Antenna factor	=	<i>8.5</i>	(dB/m)
C :	Cable loss	=	<i>2.1</i>	(dB)
G :	Amplifier gain	=	<i>26.8</i>	(dB)

Then radiated emission E(dBμV/m) is ;

$$E = R + A + C - G$$

Therefore, the maximum radiated emission is ;

35.8
(dBμV/m)

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Kazunori Maeshima, Engineer

7 MEASUREMENT PHOTOS

Photo 7.1a Setup with the Maximized RFI Voltage Emission Level
(PTZ-1230 + ZC-210)

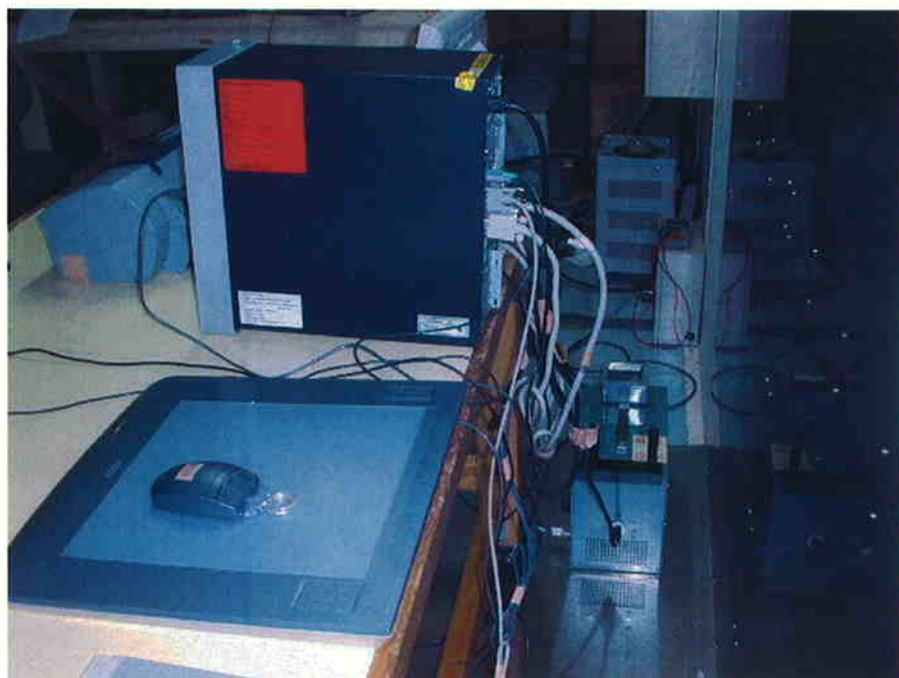


Photo 7.1b Setup with the Maximized RFI Voltage Emission Level
(PTZ-1231W + ZC-210)



Photo 7.1c Setup with the RFI Voltage Emission Level
(PTZ-1230 + ZP-130)

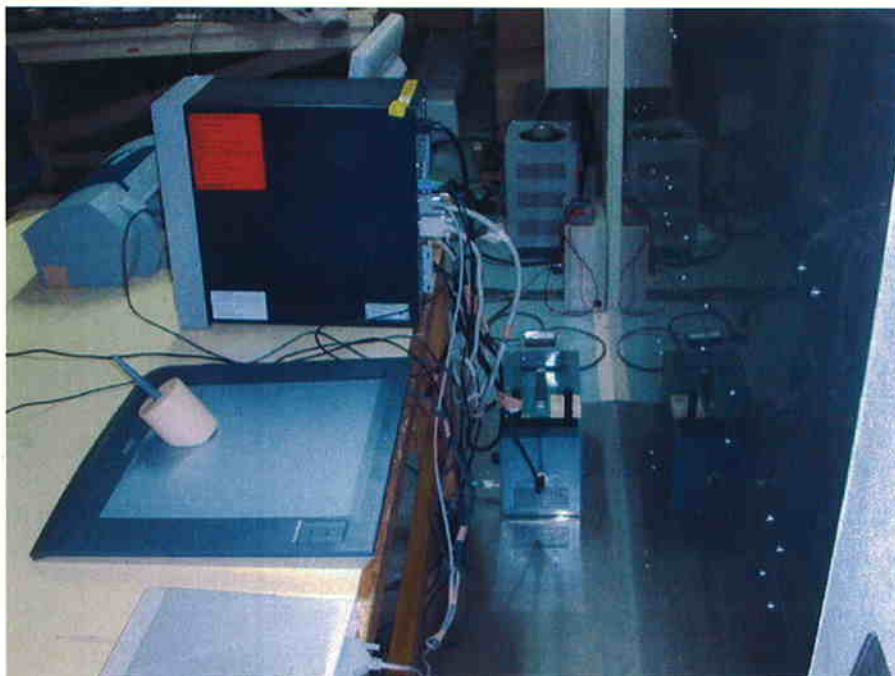


Photo 7.1d Setup with the RFI Voltage Emission Level
(PTZ-1230 + ZP-300E)



Photo 7.1e Setup with the RFI Voltage Emission Level
(PTZ-1230 + ZP-400E)

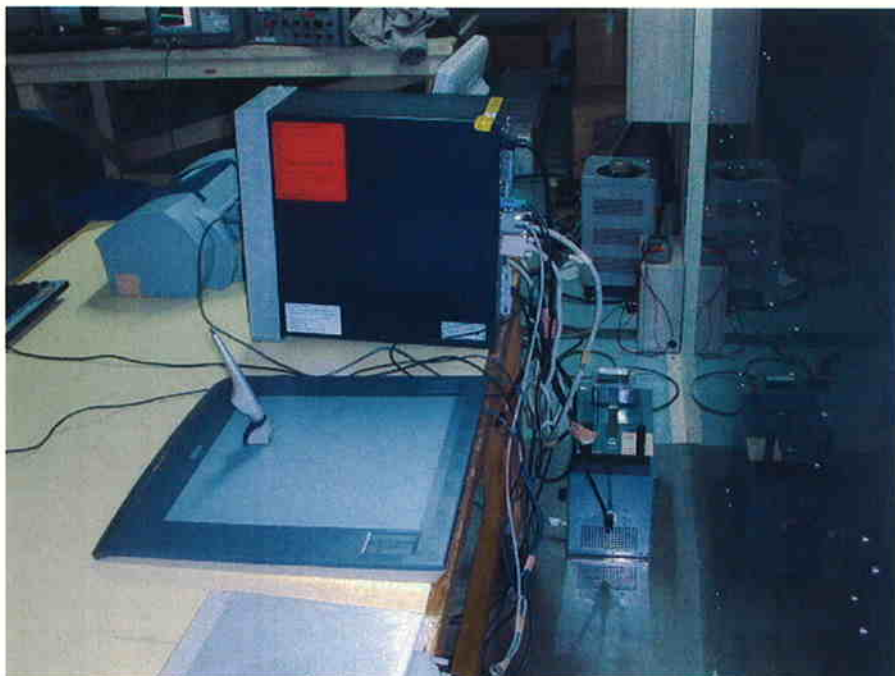


Photo 7.1f Setup with the RFI Voltage Emission Level
(PTZ-1230 + ZP-501E)



Photo 7.1g Setup with the RFI Voltage Emission Level
(PTZ-1230 + ZP-600)

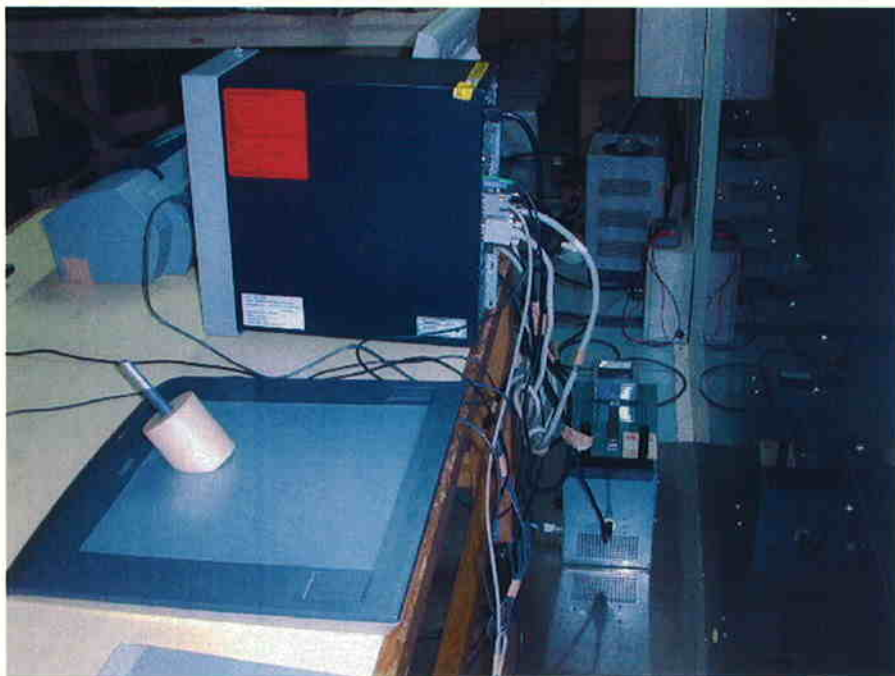
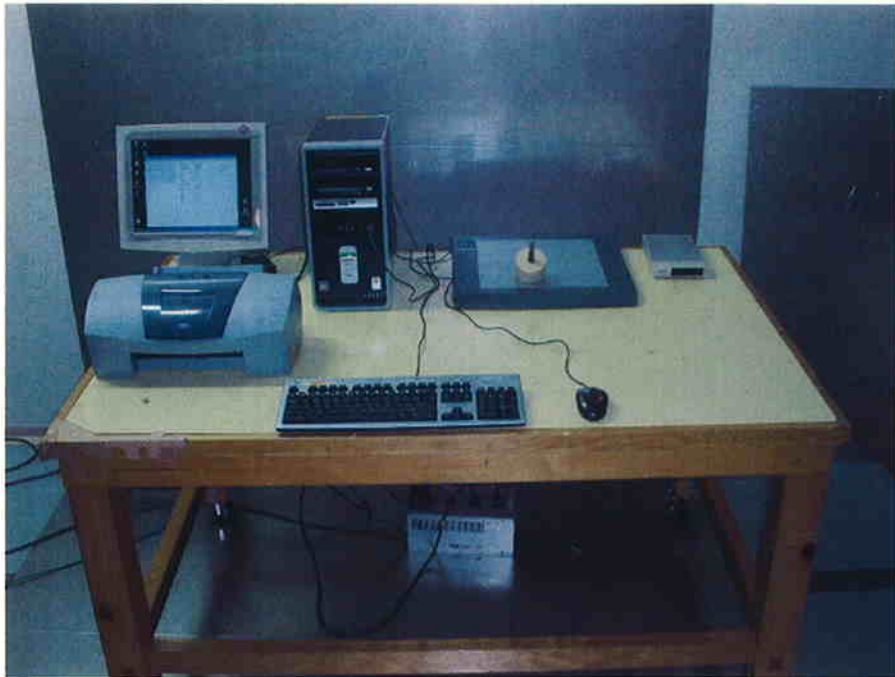


Photo 7.1h Setup with the RFI Voltage Emission Level
(PTZ-1230 + ZC-100)

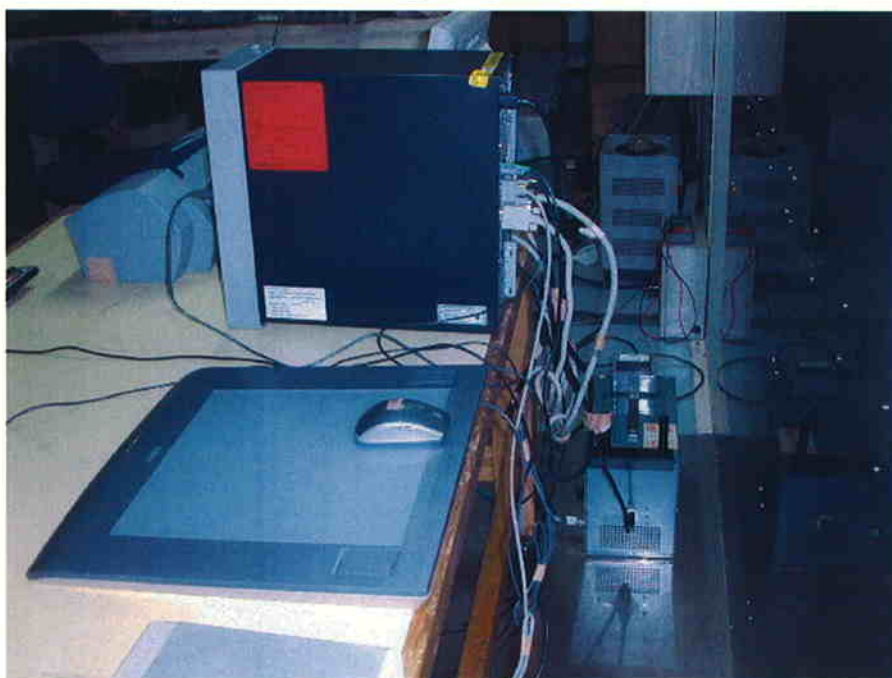


Photo 7.1i Setup with the RFI Voltage Emission Level
(PTZ-1231W + ZP-130)



Photo 7.1j Setup with the RFI Voltage Emission Level
(PTZ-1231W + ZP-300E)

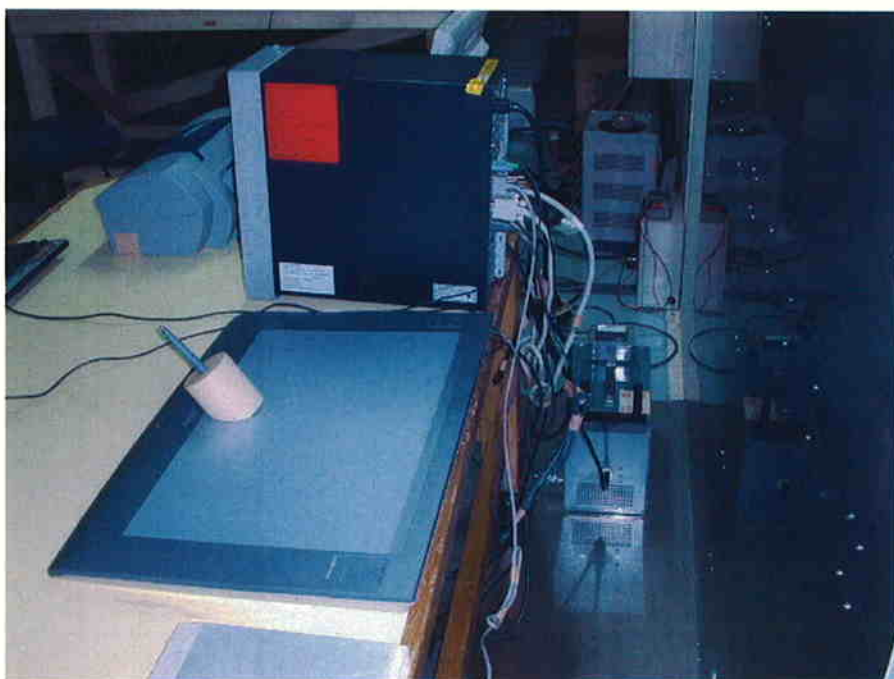


Photo 7.1k Setup with the RFI Voltage Emission Level
(PTZ-1231W + ZP-400E)



Photo 7.11 Setup with the RFI Voltage Emission Level
(PTZ-1231W + ZP-501E)



Photo 7.1m Setup with the RFI Voltage Emission Level
(PTZ-1231W + ZP-600)



Photo 7.1n Setup with the RFI Voltage Emission Level
(PTZ-1231W + ZC-100)



Photo 7.2a Setup with the Maximized RFI Field Strength Emission Level (PTZ-1230 + ZC-100)



Photo 7.2b Setup with the Maximized RFI Field Strength Emission Level (PTZ-1231W + ZC-100)



Photo 7.2c Setup with the RFI Field Strength Emission Level
(PTZ-1230 + ZP-130)



Photo 7.2d Setup with the RFI Field Strength Emission Level
(PTZ-1230 + ZP-300E)



Photo 7.2e Setup with the RFI Field Strength Emission Level
(PTZ-1230 + ZP-400E)



Photo 7.2f Setup with the RFI Field Strength Emission Level (PTZ-1230 + ZP-501E)



Photo 7.2g Setup with the RFI Field Strength Emission Level
(PTZ-1230 + ZP-600)



Photo 7.2h Setup with the RFI Field Strength Emission Level
(PTZ-1230 + ZC-210)



Photo 7.2i Setup with the RFI Field Strength Emission Level
(PTZ-1231W + ZP-130)



Photo 7.2j Setup with the RFI Field Strength Emission Level
(PTZ-1231W + ZP-300E)



Photo 7.2k Setup with the RFI Field Strength Emission Level
(PTZ-1231W + ZP-400E)



Photo 7.21 Setup with the RFI Field Strength Emission Level
(PTZ-1231W + ZP-501E)

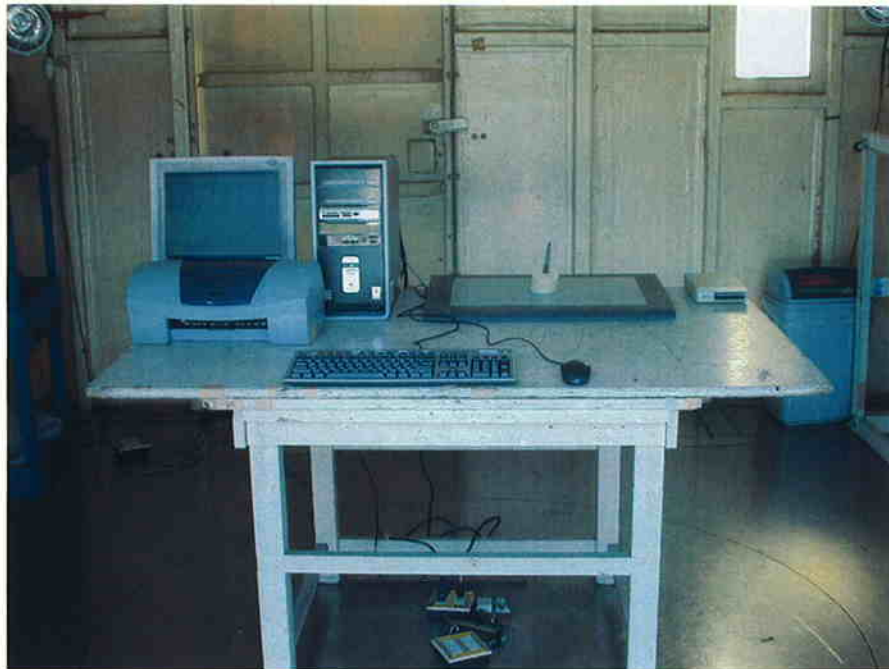


Photo 7.2m Setup with the RFI Field Strength Emission Level
(PTZ-1231W + ZP-600)

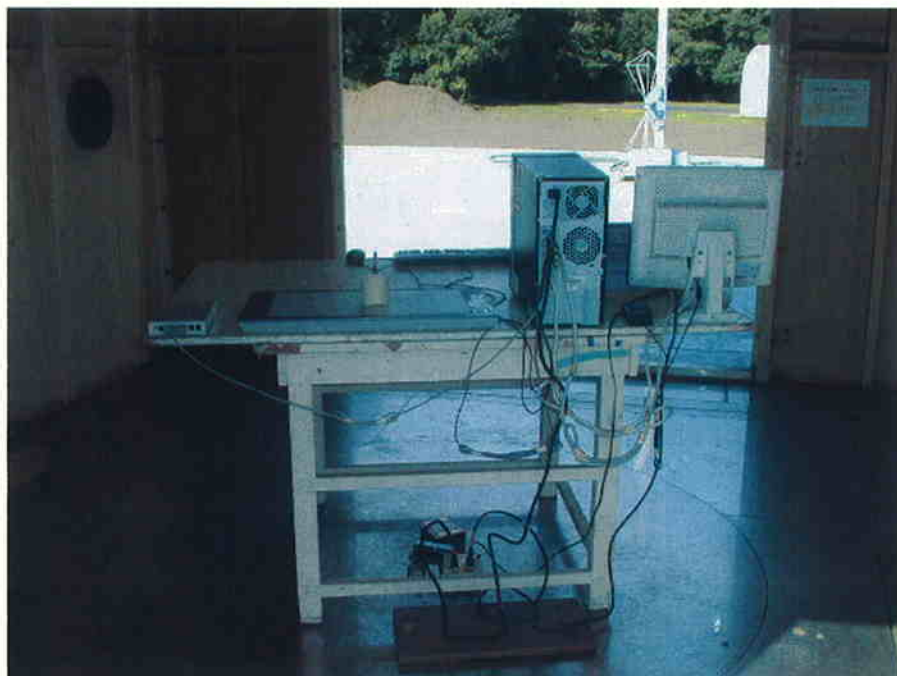


Photo 7.2n Setup with the RFI Field Strength Emission Level
(PTZ-1231W + ZC-210)

