FCC TEST REPORT

for

PART 15, SUBPART B CLASS B

EQUIPMENT : PC Camera

MODEL NO. : PT-6005

F C C I D : H52PT-6005

FILING TYPE : ORIGINAL GRANT

APPLICANT : **PURETEK INDUSTRIAL CO., LTD.**
4F, No. 12, LANE 235, PAO-CHIAO RD., HSINTIEN CITY, TAIPEI, TAIWAN, R.O.C.

- The test result refers exclusively to the test presented test model / sample.
- Without the written authorization of the test lab., the Test Report may not be copied.

SPORTON INTERNATIONAL INC.

6F, No. 106, Hsin Tai Wu Rd., Sec. 1, Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

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CERTIFICATE NO. : F8N0205

CERTIFICATE OF COMPLIANCE

for

FCC PART 15, SUBPART B CLASS B

EQUIPMENT : PC Camera

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4F, No. 12, LANE 235, PAO-CHIAO RD., HSINTIEN CITY,
TAIPEI, TAIWAN, R.O.C.

I **HEREBY** CERTIFY THAT :

The measurement shown in this report were made in accordance with the procedures given in **ANSI C63.4 -1992** and the energy emitted by this equipment was ***passed*** both radiated and conducted emissions **Class B** limits. Testing was carried out on **Nov. 10, 1998** at **SPORTON International Inc.** LAB.

Lenore Nov. 19, 1998

Lenore Chang
President

SPORTON INTERNATIONAL INC.

6F, No. 106, Hsin Tai Wu Rd., Sec. 1, Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

1. GENERAL DESCRIPTION OF EQUIPMENT UNDER TEST

1.1. APPLICANT

Puretek Industrial Co., LTD.

4F, No. 12, LANE 235, PAO-CHIAO RD.,

HSINTIEN CITY, TAIPEI, TAIWAN, R.O.C.

1.2. MANUFACTURER :

Same as 1.1.

1.3. BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

EQUIPMENT : PC Camera

MODEL NO. : PT-6005

FCC ID : H52PT-6005

TRADE NAME : PURETEK

DATA CABLE : Non-shielded, 1.75m

POWER SUPPLY TYPE : Switching

POWER CORD : Non-shielded

1.4. FEATURE OF EQUIPMENT UNDER TEST

Standard NTSC (PAL Optional) Signal Output		
RCA Connector Output Direct to TV or VCR		
Sensor Array Size	:	NTSC 510×492 pixels PAL 628×582 pixels
Max Still Resolution	:	NTSC 250K pixels PAL 360K pixels
Color Support	:	16M (True Color) Motion Video Or Still Images
AGC	:	AutomaticGain Control (±18dBmax)
AWB	:	Automatic White Balance
S/N Ratio	:	42dB

2. TEST CONFIGURATION OF EQUIPMENT UNDER TEST

2.1. TEST MANNER

a. The EUT has been associated with personal computer and peripherals pursuant to ANSI C63.4-1992 and configuration operated in a manner which tended to maximize its emission characteristics in a typical application.

b. The DELL keyboard, SONY monitor, PRIMAX PS/2 mouse, HP printer, ACEEX modem and EUT were connected to the DELL P.C. for EMI test.

c. Frequency range investigated: Conduction 450 KHz to 30 MHz, Radiation 30 MHz to 1000 MHz.

2.2. DESCRIPTION OF TEST SYSTEM

Support Device 1. --- MONITOR (SONY)

FCC ID	: AK8GDM17SE2T
Model No.	: GDM-17SE2T
Serial No.	: SP1009
Data Cable	: Shielded, 360 degree via metal backshells, 1.7m
Power Supply Type	: Switching
Power Cord	: Non-shielded

Support Device 2. --- KEYBOARD (DELL)

FCC ID	: GYUM92SK
Model No.	: AT101 (DE8M)
Serial No.	: SP1009
Data Cable	: Shielded, 360 degree via metal backshells, 1.9m

Support Device 3. -- PS/2 MOUSE (PRIMAX)

FCC ID	: EMJMUSJQ
Model No.	: MUS9J
Serial No.	: SP1012
Data Cable	: Shielded, 1.7m

Support Device 4. --- PRINTER (HP)

FCC ID	: DSI6XU2225
Model No.	: 2225C
Serial No.	: SP1041
Data Cable	: Shielded, 360 degree via metal backshells, 1.35m
Power Supply Type	: Linear, AC Adapter
Power Cord	: Non-shielded

Support Device 5. -- MODEM (ACEEX)

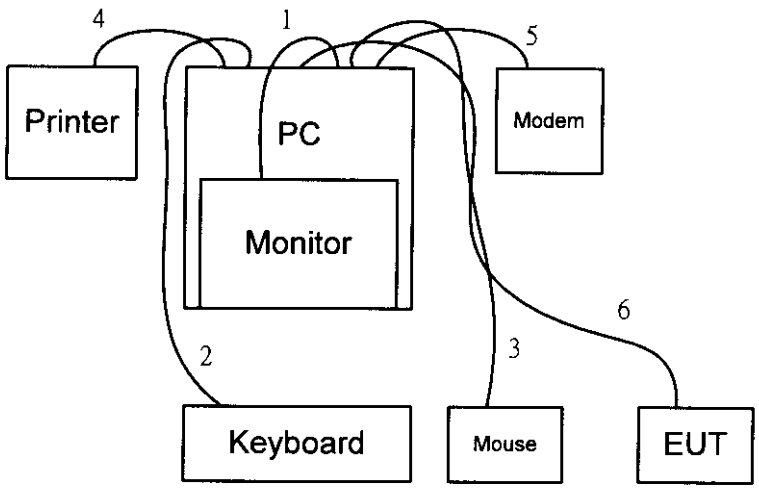
FCC ID	: IFAXDM1414
Model No.	: DM1414
Power Supply Type	: Linear, AC Adapter
Power Cord	: Non-shielded
Serial No.	: SP1019
Data Cable	: Shielded, 360 degree via metal backshells, 1.15m

Support Device 6. --- P.C. (DELL)

FCC ID	: N/A
Model No.	: DCS
Serial No.	: SP1007
Data Cable	: Shielded
Power Cord	: Non-shielded
Power Supply Type	: Switching

(Remark : This support device was tested to comply with FCC standards and authorized under a declaration of conformity.)

2.3. CONNECTION DIAGRAM OF TEST SYSTEM



1. The I/O cable is connected to the support device 1.
2. The I/O cable is connected to the support device 2.
3. The I/O cable is connected to the support device 3.
4. The I/O cable is connected to the support device 4.
5. The I/O cable is connected to the support device 5.
6. The I/O cable is connected from the EUT to the support device 6.

3. TEST SOFTWARE

An executive program, EMITEST.EXE under WIN 98, which generate a complete line of continuously repeating " H " pattern were used as the test software.

a. Turn on the power of all equipment.
b. The PC transmits the " H " character to the EUT.
c. The monitor then displaying the " H " characters on the screen contimously and repeatly.
d. The PC sends " H " messages to the printer, then the printer prints it on the paper.
e. The PC sends " H " messages to the modem.
f. The PC sends " H " messages to the internal Hard Disk, then the hard disk reads and writes the message.
g. Repeat the steps from b to f.

At the same time, another program, Microsoft Net Meeting, was executed.

4. GENERAL INFORMATION OF TEST

4.1. TEST FACILITY

This test was carried out by SPORTON INTERNATIONAL INC.

Test Site Location : No. 30-1, Lin 6, Diing-Fwu Tsuen, Lin-Kou-Hsiang, Taipei Hsien, Taiwan, R.O.C.

TEL : 886-2-2601-1640, FAX : 886-2-2601-1695

4.2. STANDARD FOR METHODS OF MEASUREMENT

ANSI C63.4-1992

4.3 .TEST IN COMPLIANCE WITH

FCC PART 15, SUBPART B CLASS B

4.4. FREQUENCY RANGE INVESTIGATED

a. Conduction : from 450 KHz to 30 MHz

b. Radiation : from 30 MHz to 1000 MHz.

4.5. TEST DISTANCE

The test distance of radiated emission from antenna to EUT is 3M.

5. TEST OF CONDUCTED POWERLINE

Conducted Emissions were measured from 450 KHz to 30 MHz with a bandwidth of 9 KHz on the 115 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-1992 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in Figure 5-3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

5.1. MAJOR MEASURING INSTRUMENTS

- Test Receiver (HP 8591EM)

Attenuation	0 dB
Start Frequency	0.45 MHz
Stop Frequency	30 MHz
Step MHz	0.007 MHz
IF Bandwidth	9 KHz

5.2. TEST PROCEDURES

a. The EUT was placed 0.4 meter from the conducting wall of the shielding room and was kept at least 80 centimeters from any other grounded conducting surface.

b. Connect EUT to the power mains through a line impedance stabilization network (LISN).

c. All the support units are connect to the other LISN.

d. The LISN provides 50 ohm coupling impedance for the measuring instrument.

e. The FCC states that a 50 ohm , 50 microhenry LISN should be used.

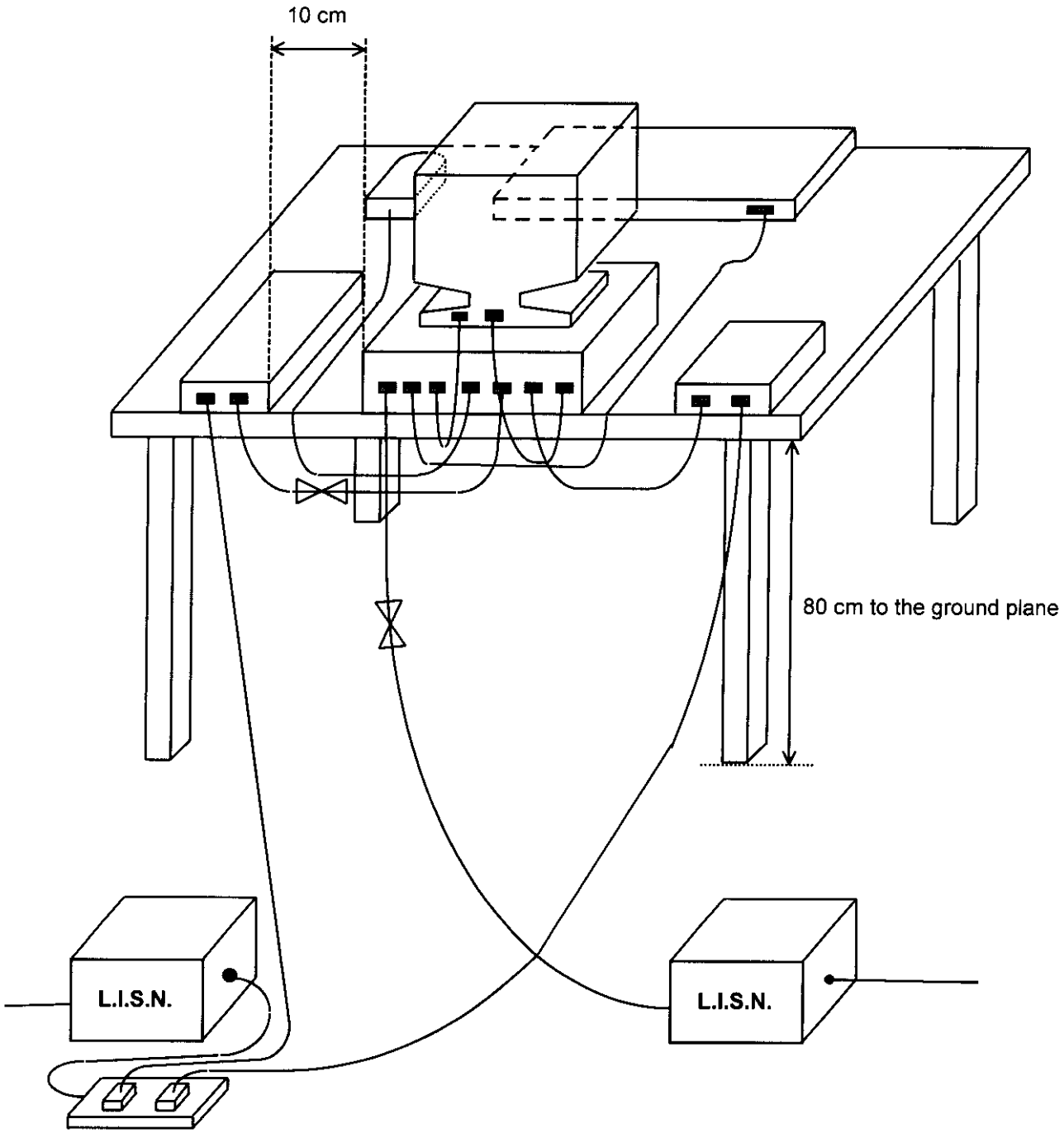
f. Both sides of AC line were checked for maximum conducted interference.

g. The frequency range from 450 KHz to 30 MHz was searched.

h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

i. If the emission level of the EUT in peak mode was 6 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported otherwise the emissions which do not have 6 dB margin will be retested on by one using the quasi-peak method and reported.

5.3. TYPICAL TEST SETUP LAYOUT OF CONDUCTED POWERLINE



5.4. TEST RESULT OF AC POWERLINE CONDUCTED EMISSION

- Frequency Range of Test : from 0.45 MHz to 30 MHz
- All emissions not reported here are more than 10 dB below the prescribed limit.
- Temperature : 25℃
- Relative Humidity : 60 % RH
- Test Date : Nov. 10, 1998

The Conducted Emission test was passed at Line 3.93 MHz/ 39.50 dBuV.

Frequency	Line / Neutral	Meter Reading		Limits		Margin
(MHz)		(dBuV)	(uV)	(dBuV)	(uV)	(dB)
3.93	L	39.50	94.41	48.00	251.19	-8.50
17.89	L	33.80	48.98	48.00	251.19	-14.20
25.06	L	32.80	43.65	48.00	251.19	-15.20
16.92	N	33.20	45.71	48.00	251.19	-14.80
17.99	N	33.00	44.67	48.00	251.19	-15.00
25.06	N	31.70	38.46	48.00	251.19	-16.30

Test Engineer: Alex Wu

Alex Wu

6. TEST OF RADIATED EMISSION

Radiated emissions from 30 MHz to 1000 MHz were measured with a bandwidth of 120 KHz according to the methods defines in ANSI C63.4-1992. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane, as shown in Figure 6-3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

6.1. MAJOR MEASURING INSTRUMENTS

- Amplifier (HP 8447D)

Attenuation	0 dB
RF Gain	20 dB
Signal Input	0.1 MHz to 1.3 GHz

- Spectrum Analyzer (HP 8560E)

Attenuation	0 dB
Start Frequency	30 MHz
Stop Frequency	1000 MHz
Resolution Bandwidth	1 MHz
Video Bandwidth	1 MHz
Signal Input	30 Hz to 2.9 GHz

- Test Receiver (R&S ESVP)

Resolution Bandwidth	120 KHz
Frequency Band	30 MHz to 1 GHz
Quasi-Peak Detector	ON for Quasi-Peak Mode
	OFF for Peak Mode

6.2. TEST PROCEDURES

a. The EUT was placed on a rotatable table top 0.8 meter above ground.

b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.

c. The table was rotated 360 degrees to determine the position of the highest radiation.

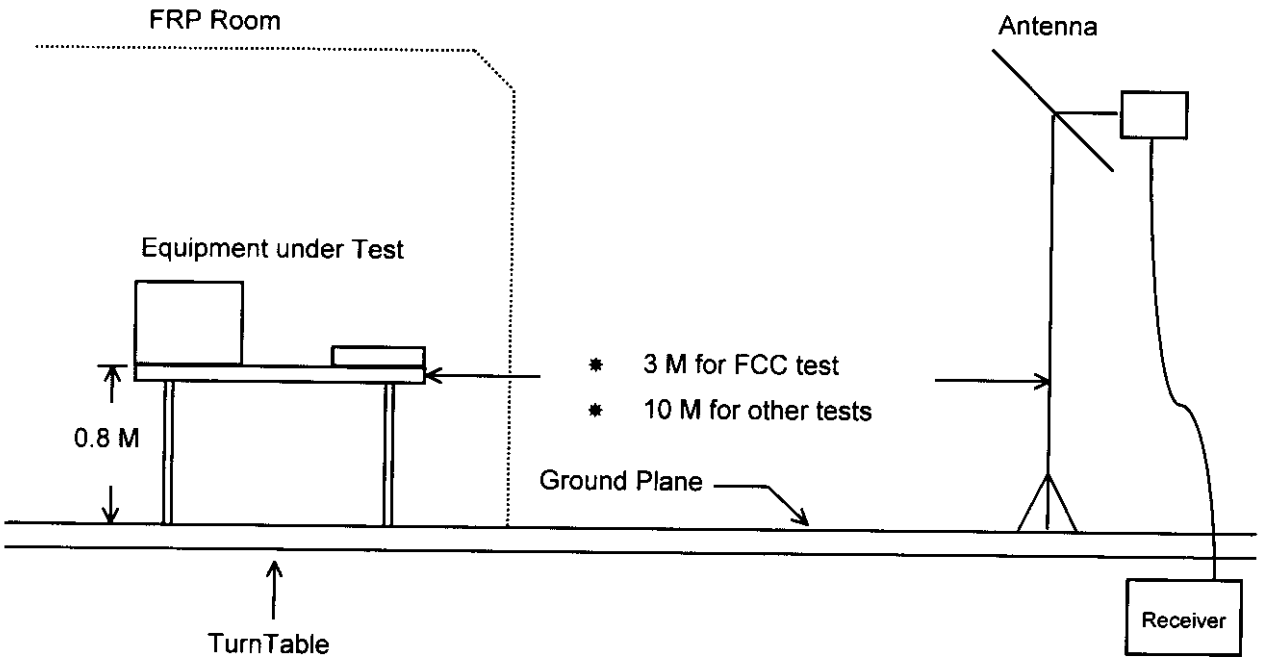
d. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.

e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.

f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 6 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported otherwise the emissions which do not have 6 dB margin will be repeated one by one using the quasi-peak method and reported.

6.3. TYPICAL TEST SETUP LAYOUT OF RADIATED EMISSION



6.4. TEST RESULT OF RADIATED EMISSION

- Equipment meets the technical specifications of 15.109
- Frequency Range of Test : from 30 MHz to 1000 MHz
- Test Distance : 3 M
- Temperature : 30 ℃
- Relative Humidity : 62 % RH
- Test Date : Nov. 04, 1998
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading : Antenna Factor + Cable Loss + Reading = Emission

The Radiated Emission test was passed at

Vertical 72.90 MHz / 36.12 dBuV

Antenna Height 2.0 Meter , Turntable Degree 270 °.

Frequency	Polarity	Antenna Factor	Cable Loss	Reading		Limits	Emission	Level	Margin
(MHz)		(dB)	(dB)	(dBuV)	(dBuV)	(uV)	(dBuV)	(uV)	(dB)
48.34	V	2.03	1.00	29.59	40.00	100	32.62	42.76	-7.38
72.90	V	5.89	1.26	28.97	40.00	100	36.12	63.97	-3.88
60.79	V	4.52	1.20	26.03	40.00	100	31.75	38.68	-8.25
229.30	H	14.68	2.45	22.79	46.00	200	39.92	99.08	-6.08
257.99	H	16.91	2.60	20.89	46.00	200	40.40	104.71	-5.60
833.43	H	27.37	5.83	7.29	46.00	200	40.50	105.93	-5.50

Test Engineer : Jack Deng

Jack Deng

7. ANTENNA FACTOR AND CABLE LOSS

Frequency (MHz)	Antenna Factor (dB)	Cable Loss (dB)
30	17.7	0.9
35	15.6	1.1
40	13.0	1.0
45	10.1	1.2
50	8.0	1.2
55	6.4	1.2
60	6.1	1.2
65	5.9	1.4
70	6.4	1.3
75	6.3	1.5
80	7.2	1.5
85	7.5	1.6
90	8.5	1.6
100	10.1	1.7
110	10.4	1.9
120	11.8	1.8
130	11.2	2.3
140	11.7	2.0
150	11.9	2.2
160	10.5	2.1
180	9.0	2.0
200	9.1	2.3
225	9.5	2.5
250	11.8	2.6
300	13.6	2.9
350	14.8	3.1
400	16.3	3.4
450	17.3	3.7
500	17.7	3.7
550	19.5	3.9
600	20.0	4.1
650	20.4	4.3
700	21.0	4.6
750	21.4	4.9
800	22.1	4.8
850	22.9	5.0
900	22.7	5.1
950	24.1	5.3
1000	24.9	5.5

8 LIST OF MEASURING EQUIPMENT USED

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver (site 2)	HP	8591EM	3710A01187	9 KHz - 18 GHz	Sep. 29, 1998	Conduction
LISN (EUT) (site 2)	Telemeter	NNB-2/16Z	98009	50 ohm / 50 uH	Jan. 29, 1998	Conduction
LISN (Support Unit) (site 2)	EMCO	3810/2NM	9703-1839	50 ohm / 50 uH	Jul. 06, 1998	Conduction
Spectrum Analyzer (Site 4)	HP	8560E	3728A03186	30Hz - 2.9GHz	Sep. 16, 1998	Radiation
Amplifier (Site 4)	HP	8447D	294409072	100K -1.3GHz	Sep. 04, 1998	Radiation
Test Receiver (Site 4)	R&S	ESVP	893610/003	20MHz - 1.3GHz	April 13, 1998	Radiation
Bilog Antenna (Site 4)	CHASE	CBL6112A	2288	30MHz -2GHz	Jul. 14, 1998	Radiation
Half-wave dipole antenna (Site 4)	EMCO	3121C	9705-1285	28 M - 1GHz	May 19, 1998	Radiation
Turn Table (site 4)	EMCO	2080	9711-1090	0 ~ 360 degree	N/A	Radiation
Antenna Mast (site 4)	EMCO	2075	9711-2114	1 m- 4 m	N/A	Radiation