

FCC CLASS B COMPLIANCE REPORT

for

Electromagnetic Emissions

of

VIDEO CAMERA

Trade Name : PRETEC
Model Number : DC-600
FCC ID : NJBPRT114
Serial Number : Pre-production
Report Number : 980038-F
Date : May 14, 1998

Prepared for :

PRETEC CORPORATION
6F NO.10, LI-SHIN RD.
SCIENCE-BASED INDUSTRIAL PARK
HSINCHU, TAIWAN, R.O.C.

Prepared by :

C & C Laboratory Co., Ltd.
1st Fl., No. 344, Fu Ching Street
Taipei, Taiwan, R.O.C.
TEL: (02)27468584
FAX: (02)27632154

**This report shall not be reproduced, except in full, without the written approval of
C&C Laboratory Co., Ltd.**

TABLE OF CONTENTS

DESCRIPTION	PAGE
VERIFICATION OF COMPLIANCE	3
SYSTEM DESCRIPTION	4
PRODUCT INFORMATION	5
SUPPORT EQUIPMENT	6
MEASUREMENT PROCEDURE & LIMIT (LINE CONDUCTED EMISSION TEST)	7
MEASUREMENT PROCEDURE & LIMIT (RADIATED EMISSION TEST)	9
SUMMARY DATA	12
APPENDIX 1 LETTER OF AGENT AUTHORIZATION	17
APPENDIX 2 LETTER OF MODIFICATION	19
APPENDIX 3 FCC ID LABEL & LOCATION	21
APPENDIX 4 BLOCK DIAGRAM/SCHEMATICS OF EUT	23
APPENDIX 5 USER'S MANUAL OF EUT	25
APPENDIX 6 TEST FACILITY	26
APPENDIX 7 TEST EQUIPMENT	28
APPENDIX 8 BLOCK DIAGRAM OF TEST SETUP	32
APPENDIX 9 PHOTOGRAPHS (TEST SETUP OF LINE CONDUCTED EMISSION TEST)	34
APPENDIX 10 PHOTOGRAPHS (TEST SETUP OF RADIATED EMISSION TEST)	37
APPENDIX 11 PHOTOGRAPHS (EUT)	41

VERIFICATION OF COMPLIANCE

Equipment Under Test: Video Camera
Trade Name: PRETEC
Model Number: DC-600
Serial Number: Pre-production
FCC ID: NJBPRT114
Applicant: PRETEC CORPORATION
6F NO.10, LI-SHIN RD,
SCIENCE-BASED INDUSTRIAL PARK
HSINCHU, TAIWAN, R.O.C.
Manufacturer: PRETEC CORPORATION
6F, NO. 10, LI-SHIN RD.
SCIENCE-BASED INDUSTRIAL PARK
HSINCHU, TAIWAN, R.O.C.
Type of Test: FCC Class B
Measurement Procedure: ANSI C63.4: 1992
File Number: 980038-F
Date of test: April 1/3, 1998
Tested by: Garry Hsieh / James Yang
Deviation: None
Condition of Test Sample: Normal

The above equipment was tested by C&C Laboratory Co., Ltd. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, Subpart B and the measurement procedure according to ANSI C63.4, 1992. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.



Charles Wang / Director

SYSTEM DESCRIPTION

EUT Test Program:

1. Turn on the power of EUT.
2. The EUT send image on display to LCD (internal of EUT) and TV.
3. Capture program was loaded on the Host PC and executed.
4. The EUT have taking picture per 30 sec automatically and store it.
5. Repeat item 2 to 4 throughout the test.

PRODUCT INFORMATION

Housing Type: Plastic
EUT Power Rating: 100-250VAC, 50/60Hz
AC power during Test: 115VAC/60Hz
Power Supply Manufacturer: Potrans
Power Supply Model Number: UP01411060
Power Supply Manufacturer: Kentex
Power Supply Model Number: MA15-060
AC Power Cord Type: Shielded, 1.8m
DC Power Cable Type: Shielded, 2.5m with a ferrite core
OSC/Clock Frequencies : 25.5454MHz, 9.216MHz, 32.768kHz
Memory Capacity: 2MB **Installed:** 512k
Series cable: Shielded, 1.8m with a ferrite core
TV cable: Shielded, 1.8m with a ferrite core

I/O PORT TYPES	Q'TY	TESTED WITH
1) SIO.	1	1
2) VIDEO	1	1

SUPPORT EQUIPMENT

Equipment	Model #	Serial #	FCC ID	Manufacturer	Data Cable	Power Cord
Host PC	VL SERIES 5 5/16L	SG74903048	DoC	Hewlett Packard Co.	Shielded, 1.8m	Unshielded, 1.8m
Monitor	GDM-17SE2T	7145529	N/A	SONY	Shielded, 1.83m	Unshielded, 1.8m
Modem	2400SE	94-364-176268	DK467GSM24	Computer Peripheral	Shielded, 1.8m	Unshielded, 1.9m
Printer	DS-400	MY8261C964	B94C2642X	Hewlett Packard Co.	Shielded, 1.8m	Unshielded, 2m
TV	21B4ST	62233362	N/A	TOSHIBA	Shielded, 1.8m with a core	Unshielded, 1.75m
Keyboard	6511-T	K6568070068P	JVP6511-T	Acer Peripherals	Shielded, 1.2m	None
Mouse	M-S34	N/A	DZL210472	COMPAQ	Shielded, 1.5m	None

All the above equipment and cables were placed in worse case positions to maximize emission signals.

Grounding: Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

MEASUREMENT PROCEDURE

(PRELIMINARY LINE CONDUCTED EMISSION TEST)

- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4: 1992 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, was placed as per ANSI C63.4: 1992.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4: 1992.
- 4) The EUT received AC power through a Line Impedance Stabilization Network (LISN) which supplied power source of 115VAC/60Hz and was grounded to the ground plane.
- 5) All support equipment received power from a second LISN supplying power of 110VAC/60Hz.
- 6) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum analyzer connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to analyzer and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the analyzer.
- 7) Analyzer scanned from 150kHz to 30MHz for emissions in each of the test modes. Analyzer settings were stated on the Measuring Instrument Settings page.
- 8) During the above scans, the emissions were maximized by cable manipulation.
- 9) The Preliminary scan modes as the following:

Modes:

1. EUT + Power (POTRANS)
2. EUT + Power (KENTEX)

- 9) After the preliminary scan, we found the following test mode(s) producing the highest emission level.

Modes: All modes

Then, the EUT configuration and cables configuration of the above highest emission level were recorded for reference of final testing.

MEASUREMENT PROCEDURE (FINAL LINE CONDUCTED EMISSION TEST)

- 1) EUT and support equipment was set up on the test bench as per step 10 of the preliminary test.
- 2) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in peak mode, then the emission signal was re-checked using a Quasi-Peak/A.V. detector.
- 3) The test data of the worst case condition(s) was reported on the Summary Data page.

Data Sample:

Freq. MHz	Peak Raw dBuV	Q.P. Raw dBuV	Average Raw DBuV	Q.P. Limit DbuV	Average Limit dBuV	Q.P. Margin dB	Average Margin dB	Note
X.XX	43.95	---	---	56	46	-12.05	-2.05	L1

Freq.	= Emission frequency in MHz
Raw dBuV	= Uncorrected Analyzer/Receiver reading
Limit dBuV	= Limit stated in standard
Margin dB	= Reading in reference to limit
Note	= Current carrying line of reading
“---“	= The emission level was complied with the Average limits at least 2dB margin, so no further re-check.

LINE CONDUCTED EMISSION LIMIT

Frequency	Maximum RF Line Voltage	
	Q.P.	AVERAGE
150kHz-500kHz	66-56dBuV	56-46dBuV
500kHz-5MHz	56dBuV	46dBuV
5MHz-30MHz	60dBuV	50dBuV

MEASUREMENT PROCEDURE (PRELIMINARY RADIATED EMISSION TEST)

- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4: 1992 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, was placed as per ANSI C63.4: 1992.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4: 1992.
- 4) The EUT received 115VAC/60Hz power source from the outlet socket under the turntable. All support equipment received 110VAC/60Hz power from another socket under the turntable.
- 5) The antenna was placed at 10 meters distance away from the EUT as stated in ANSI C63.4: 1992. The antenna connected to the analyzer via a cable and at times a pre-amplifier would be used.
- 6) The analyzer quickly scanned from 30MHz to 2000MHz. Analyzer settings were stated on the Measuring Instrument Settings page. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- 7) The EUT was scanned in the following preliminary modes:

Modes:

1. EUT + Battery
2. EUT + Power (POTRANS)
3. EUT + Power (KENTEX)

- 8) After the preliminary scan, we found the following test mode(s) producing the highest emission level.

Modes: All modes

Then, the EUT and cables configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for reference of final testing.

MEASUREMENT PROCEDURE (FINAL RAIDATED EMISSION TEST)

- 1) EUT and support equipment were set up on the turntable as per step 8 of the preliminary test.
- 2) The analyzer scanned from 30MHz to 1000MHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- 3) Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the limit in peak mode, then the emission signal was re-checked using a Quasi-Peak detector, and only Q.P. reading will record in this report.
- 4) The test data of the worst case condition(s) was reported on the Summary Data page.

Data Sample:

Freq. MHz	Raw dBuV	Site CF dB	Corr'd DBuV/m	Limit dBuV/m	Margin dB	Antenna Height (cm)	Table Pos. (deg)	Detector	Note
XX.XX	14.0	7.2	21.2	30	-8.8	102	17.0	Peak	Vert

Freq.	= Emission frequency in MHz
Raw dBuV	= Uncorrected Analyzer/Receiver reading
Site CF	= Correction factors of antenna factor and cable loss.
Corr'd dBuV/m	= Raw reading converted to dBuV and CF added
Limit dBuV/m	= Limit stated in standard
Margin dB	= Reading in reference to limit
Antenna Height	= Antenna height above ground plane
Table Position	= EUT placement in reference to antenna
Detector	= Detector function (Peak, Q.P. or Average)
Note	= Antenna polarization

RADIATED EMISSION LIMIT

Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (Dbu V/m)		
		Q.P.	AVERAGE	PEAK
30-230	10	30	/	/
230-1000	10	37	/	/
Above 1000	10	/	43.5	63.5

****Note:** The lower limit shall apply at the transition frequency.

SUMMARY DATA (LINE CONDUCTED TEST)

Model Number: DC-600

Location: Site #1

Tested by: James Yang

Test Mode: EUT + Power (POTRANS)

Test Results: Passed

Temperature: 30°C

Humidity: 65%RH

(The chart below shows the highest readings taken from the final data)

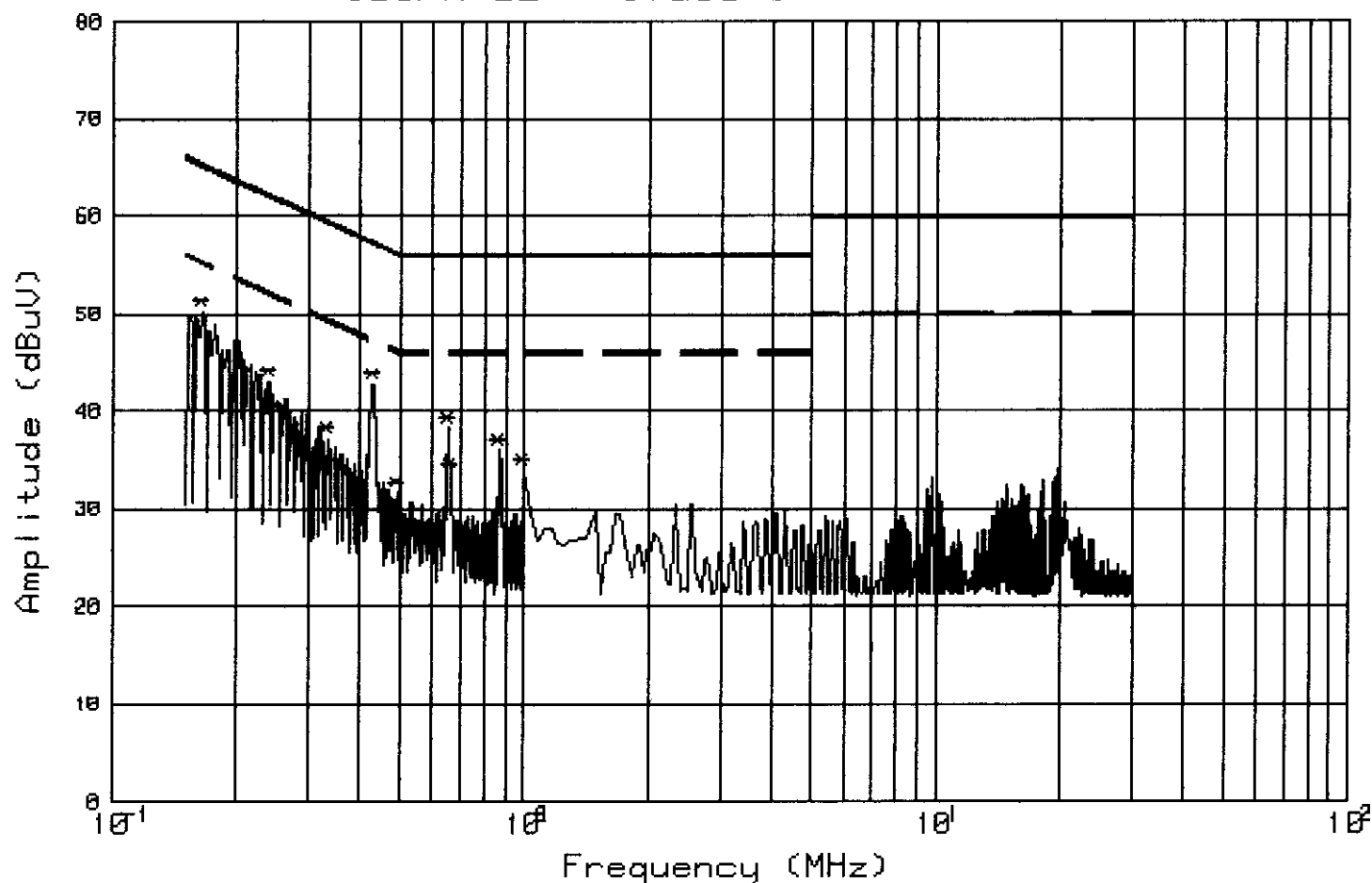
FREQ MHz	PEAK RAW dBuV	Q.P. RAW dBuV	AVG RAW dBuV	Q.P. Limit dBuV	AVG Limit dBuV	Q.P. Margin dB	AVG Margin dB	NOTE
0.165	50.2	---	---	65.2	55.2	-15.0	-5.0	L1
0.240	43.0	---	---	62.1	52.1	-19.1	-9.1	L1
0.429	42.8	---	---	57.3	47.3	-14.5	-4.5	L1
0.661	33.6	---	---	56.0	46.0	-22.4	-12.4	L1
0.874	36.0	---	---	56.0	46.0	-20.0	-10.0	L1
1.000	34.0	---	---	56.0	46.0	-22.0	-12.0	L1
0.150	50.8	---	---	66.0	56.0	-15.2	-5.2	L2
0.236	44.0	---	---	62.2	52.2	-18.2	-8.2	L2
0.424	43.2	---	---	57.4	47.4	-14.2	-4.2	L2
0.654	36.0	---	---	56.0	46.0	-20.0	-10.0	L2
2.533	31.0	---	---	56.0	46.0	-25.0	-15.0	L2
19.601	36.0	---	---	60.0	50.0	-24.0	-14.0	L2

L1 = Line One (Hot side) / L2 = Line Two (Neutral side)

****NOTE:** "----" denotes the emission level was complied with the Average limits at least 2dB margin, so no re-check anymore.

C&C Lab. (Taiwan) Cond. Test Site #1

CISPR 22 - Class B QP/AV Limit



Model: DC-600

No. 1

Test Date: 3 Apr 1998 15:32:24

Remark: UP01411060 (FCC)

Auto-Marking; RBW=VBW=10 KHz; SWEEP TIME AUTO

LISN= L1

Tested by: James Yang

Detector= Peak

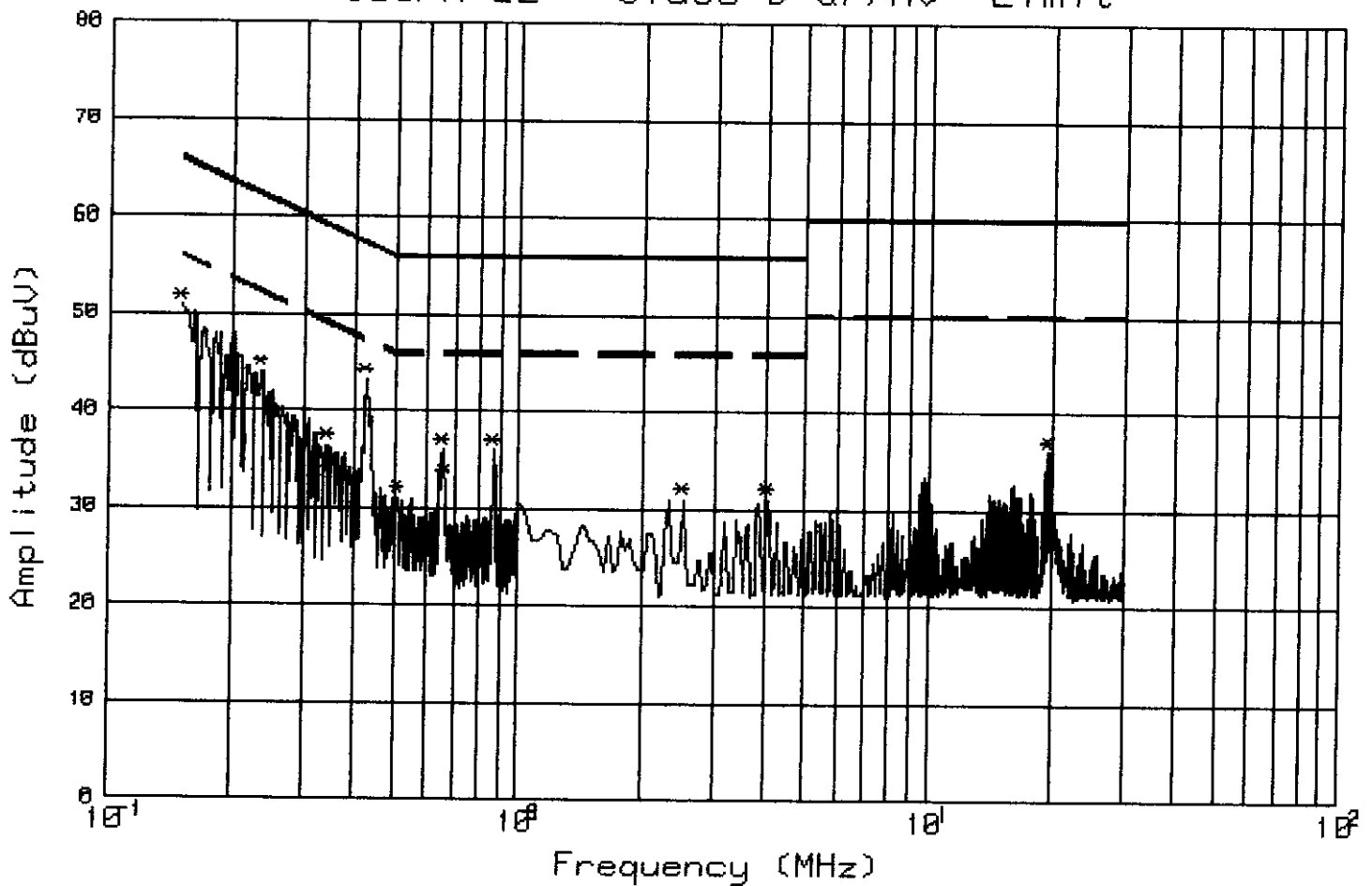
No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Total (dBuV)	AV.Lmt (dBuV)	Margin (dB)	Warning Mark
1	.165	50.2	-	50.2	55.2	-5.0	
2	.240	43.0	-	43.0	52.1	-9.1	
3	.335	37.2	-	37.2	49.3	-12.1	
4	.429	42.8	-	42.8	47.3	-4.5	
5	.491	31.6	-	31.6	46.1	-14.5	
6	.655	38.2	-	38.2	46.0	-7.8	
7	.661	33.6	-	33.6	46.0	-12.4	
8	.874	36.0	-	36.0	46.0	-10.0	
9	1.000	34.0	-	34.0	46.0	-12.0	
10	1.000	34.0	-	34.0	46.0	-12.0	

C&C Lab. Co.

File No: 780038-E

Page: 12 - 1

C&C Lab. (Taiwan) Cond. Test Site #1
CISPR 22 - Class B QP/AV Limit



Model:DC-600

No. 1 Test Date: 3 Apr 1998 15:31:24

Remark:UP01411060 (FCC)

Auto-Marking;RBW=VBW=10 KHz;SWEEP TIME AUTO

LISN= L2

Tested by:James Yang

Detector= Peak

No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Total (dBuV)	AV.Lmt (dBuV)	Margin (dB)	Warning Mark
1	.150	50.8	-	50.8	56.0	-5.2	
2	.236	44.0	-	44.0	52.2	-8.2	
3	.341	36.4	-	36.4	49.2	-12.8	
4	.424	43.2	-	43.2	47.4	-4.2	
5	.509	31.0	-	31.0	46.0	-15.0	
6	.654	36.0	-	36.0	46.0	-10.0	
7	.660	32.8	-	32.8	46.0	-13.2	
8	.873	36.0	-	36.0	46.0	-10.0	
9	2.533	31.0	-	31.0	46.0	-15.0	
10	4.066	31.0	-	31.0	46.0	-15.0	
11	19.601	36.0	-	36.0	50.0	-14.0	

C&C Lab. Co.

File No: 980018-E

SUMMARY DATA (LINE CONDUCTED TEST)

Model Number: DC-600

Location: Site #1

Tested by: James Yang

Test Mode: EUT + Power (KENTEX)

Test Results: Passed

Temperature: 30°C

Humidity: 65%RH

(The chart below shows the highest readings taken from the final data)

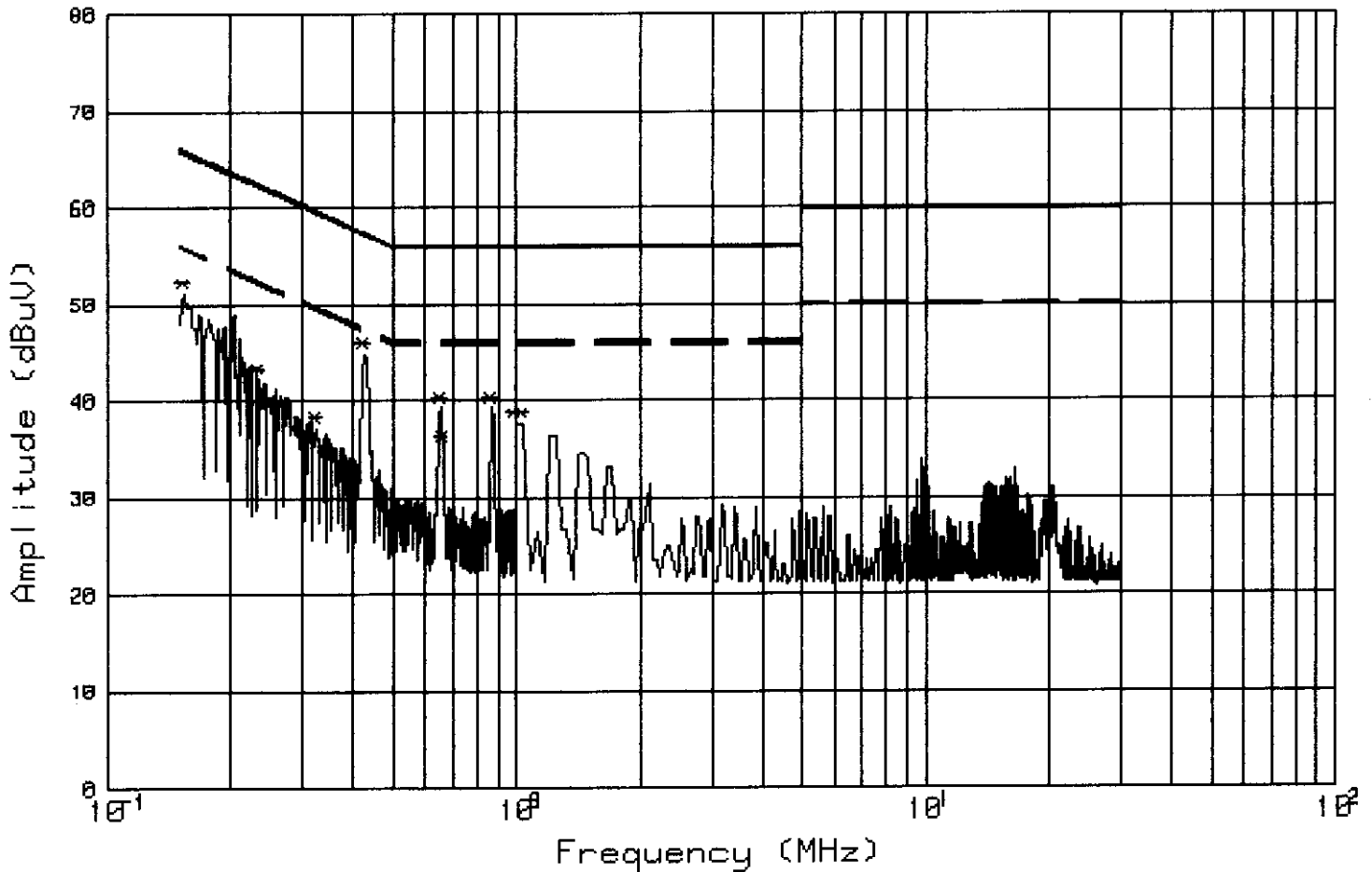
FREQ MHz	PEAK RAW dBuV	Q.P. RAW dBuV	AVG RAW dBuV	Q.P. Limit dBuV	AVG Limit dBuV	Q.P. Margin dB	AVG Margin dB	NOTE
0.155	51.2	---	---	65.7	55.7	-14.5	-4.5	L1
0.235	42.2	---	---	62.3	52.3	-20.1	-10.1	L1
0.424	44.8	---	---	57.4	47.4	-12.6	-2.6	L1
0.653	39.2	---	---	56.0	46.0	-16.8	-6.8	L1
0.873	39.2	---	---	56.0	46.0	-16.8	-6.8	L1
1.000	37.6	---	---	56.0	46.0	-18.4	-8.4	L1
0.205	50.6	---	---	63.4	53.4	-12.8	-2.8	L2
0.326	38.4	---	---	59.6	49.6	-21.2	-11.2	L2
0.424	44.6	---	---	57.4	47.4	-12.8	-2.8	L2
0.649	38.0	---	---	56.0	46.0	-18.0	-8.0	L2
0.869	39.2	---	---	56.0	46.0	-16.8	-6.8	L2
1.000	37.2	---	---	56.0	46.0	-18.8	-8.8	L2

L1 = Line One (Hot side) / L2 = Line Two (Neutral side)

****NOTE: “---” denotes the emission level was complied with the Average limits at least 2dB margin, so no re-check anymore.**

C&C Lab.(Taiwan) Cond. Test Site #1

CISPR 22 - Class B QP/AV Limit



Model:DC-600

No. 1 Test Date: 3 Apr 1998 15:50:30

Remark:MA15-060 (FCC)

Auto-Marking;RBW=VBW=10 KHz;SWEEP TIME AUTO

LISN= L1

Tested by:James Yang

Detector= Peak

No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Total (dBuV)	AV.Lmt (dBuV)	Margin (dB)	Warning Mark
1	.155	51.2	-	51.2	55.7	-4.5	
2	.235	42.2	-	42.2	52.3	-10.1	
3	.326	37.2	-	37.2	49.6	-12.4	
4	.424	44.8	-	44.8	47.4	-2.6	!
5	.653	39.2	-	39.2	46.0	-6.8	!
6	.660	35.2	-	35.2	46.0	-10.8	!
7	.873	39.2	-	39.2	46.0	-6.8	!
8	1.000	37.6	-	37.6	46.0	-8.4	!
9	1.041	37.6	-	37.6	46.0	-8.4	!

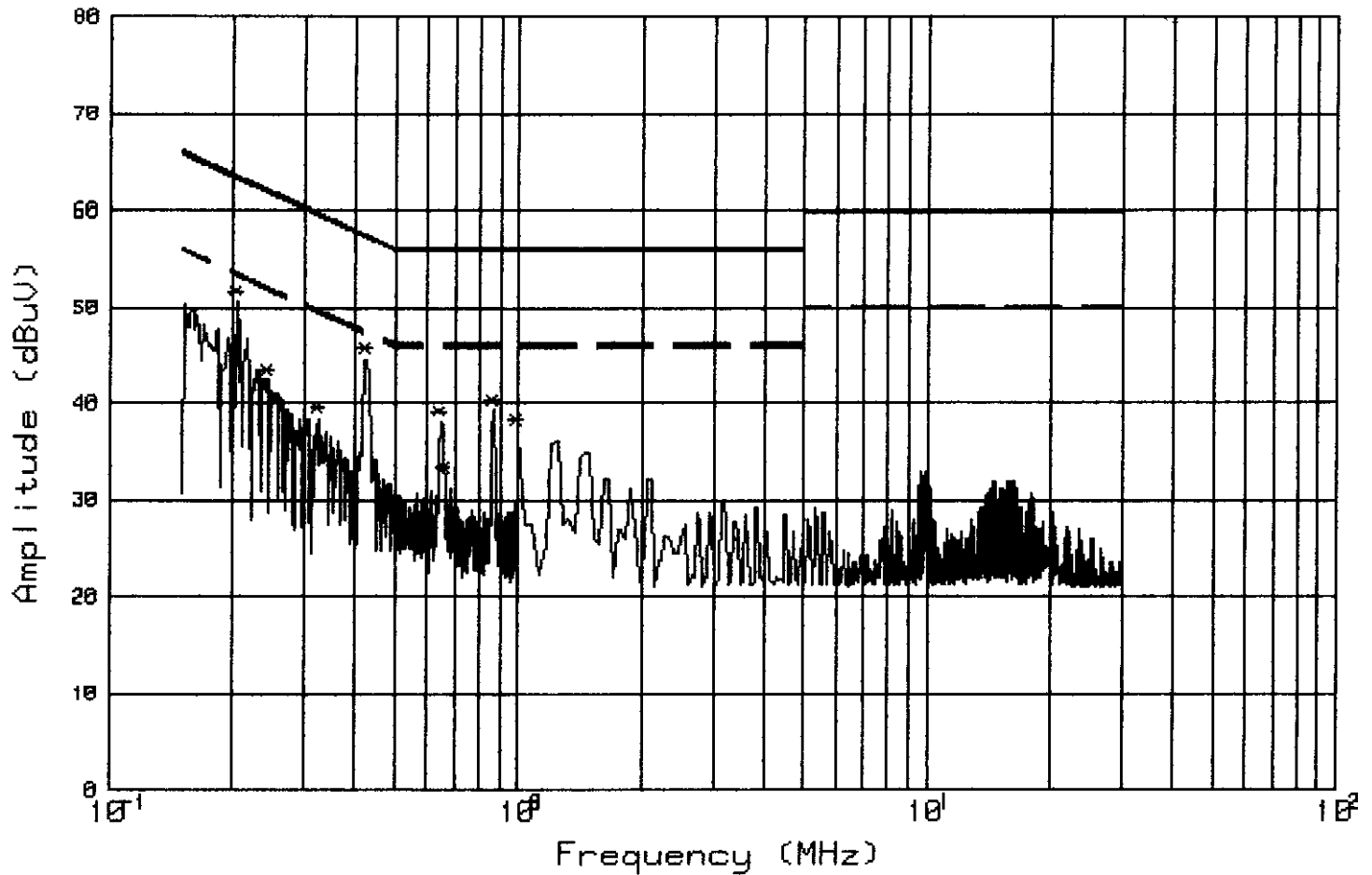
C&C Lab. Co.

File No: 78028-2

Page: 3 - 1

C&C Lab.(Taiwan) Cond. Test Site #1

CISPR 22 - Class B QP/AV Limit



Model:DC-600

No. 2

Test Date: 3 Apr 1998 15:54:20

Remark:MA15-060 (FCC)

Auto-Marking;RBW=VBW=10 KHz;SWEEP TIME AUTO

LISN= L2

Tested by:James Yang

Detector= Peak

No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Total (dBuV)	AV.Lmt (dBuV)	Margin (dB)	Warning Mark
1	.205	50.6	-	50.6	53.4	-2.8	!
2	.244	42.4	-	42.4	52.0	-9.6	!
3	.326	38.4	-	38.4	49.6	-11.2	!
4	.424	44.6	-	44.6	47.4	-2.8	!
5	.649	38.0	-	38.0	46.0	-8.0	!
6	.660	32.2	-	32.2	46.0	-13.8	!
7	.869	39.2	-	39.2	46.0	-6.8	!
8	1.000	37.2	-	37.2	46.0	-8.8	!
9	1.000	37.2	-	37.2	46.0	-8.8	!

C&C Lab. Co.

File No: 980038-E

Report: 980038-E

SUMMARY DATA (RADIATED EMISSION TEST)

Model Number: DC-600

Location: Site #1

Tested by: Garry Hsieh

Test Mode: EUT + Battery

Test Results: Passed

Temperature: 18°C

Humidity: 60%RH

(The chart below shows the highest readings taken from the final data)

FREQ MHz	RAW dBuV/m	SITE CF	CORR'D dBuV/m	Q.P. LIMIT (dBuV/m)	Q.P. MARGIN dB	Antenna Height (cm)	Table Pos. (deg)	Detector	NOTE
45.72	14.3	11.2	25.5	30.0	-4.5	100.0	217.4	Q.P.	Vert
49.08	16.9	8.9	25.8	30.0	-4.2	100.0	321.4	Q.P.	Vert
220.93	12.8	13.7	26.5	30.0	-3.5	100.0	190.4	Q.P.	Vert
344.00	12.3	18.8	31.1	37.0	-5.9	308.4	287.2	Q.P.	Vert
368.80	8.9	19.8	28.7	37.0	-8.3	268.8	129.9	Q.P.	Vert
516.80	7.6	23.2	30.8	37.0	-6.2	309.1	37.4	Q.P.	Vert
49.09	12.3	9.6	21.9	30.0	-8.1	400.0	57.8	Q.P.	Horz
122.72	11.4	14.4	25.8	30.0	-4.2	400.0	54.2	Q.P.	Horz
174.71	11.9	12.5	24.4	30.0	-5.6	400.0	81.8	Q.P.	Horz
182.61	12.6	12.7	25.3	30.0	-4.7	400.0	51.0	Q.P.	Horz
344.00	12.5	18.2	30.7	37.0	-6.3	335.5	256.6	Q.P.	Horz
515.48	8.5	23.3	31.8	37.0	-5.2	328.8	290.0	Q.P.	Horz

SUMMARY DATA (RADIATED EMISSION TEST)

Model Number: DC-600

Location: Site #1

Tested by: Garry Hsieh

Test Mode: EUT + Power (POTRANS)

Test Results: Passed

Temperature: 18°C

Humidity: 60%RH

(The chart below shows the highest readings taken from the final data)

FREQ MHz	RAW dBuV/m	SITE CF	CORR'D dBuV/m	Q.P. LIMIT (dBuV/m)	Q.P. MARGIN dB	Antenna Height (cm)	Table Pos. (deg)	Detector	NOTE
45.72	14.9	11.2	26.1	30.0	-3.9	100.0	146.3	Q.P.	Vert
49.08	17.3	8.9	26.2	30.0	-3.8	100.0	246.3	Q.P.	Vert
220.94	11.5	13.7	25.2	30.0	-4.8	100.0	360.0	Q.P.	Vert
344.00	13.5	18.8	32.3	37.0	-4.7	285.1	249.9	Q.P.	Vert
368.80	10.6	19.8	30.4	37.0	-6.6	312.2	98.8	Q.P.	Vert
516.80	8.1	23.2	31.3	37.0	-5.7	277.8	44.5	Q.P.	Vert
49.09	14.5	9.6	24.1	30.0	-5.9	400.0	238.4	Q.P.	Horz
122.75	10.5	14.4	24.9	30.0	-5.1	400.0	344.4	Q.P.	Horz
174.71	13.2	12.5	25.7	30.0	-4.3	400.0	281.6	Q.P.	Horz
182.61	13.7	12.7	26.4	30.0	-3.6	400.0	158.1	Q.P.	Horz
344.00	14.1	18.2	32.3	37.0	-4.7	285.7	0.0	Q.P.	Horz
515.49	9.6	23.3	32.9	37.0	-4.1	315.8	141.0	Q.P.	Horz

SUMMARY DATA (RADIATED EMISSION TEST)

Model Number: DC-600

Location: Site #1

Tested by: Garry Hsieh

Test Mode: EUT + Power (KENTEX)

Test Results: Passed

Temperature: 20°C

Humidity: 65%RH

(The chart below shows the highest readings taken from the final data)

FREQ MHz	RAW dBuV/m	SITE CF	CORR'D dBuV/m	Q.P. LIMIT (dBuV/m)	Q.P. MARGIN dB	Antenna Height (cm)	Table Pos. (deg)	Detector	NOTE
45.65	6.8	12.6	19.4	30.0	-10.6	100.3	263.2	PEAK	Vert
120.42	5.4	15.5	20.9	30.0	-9.1	100.3	0.0	PEAK	Vert
159.06	8.8	13.8	22.6	30.0	-7.4	103.8	290.2	PEAK	Vert
171.94	10.0	12.5	22.5	30.0	-7.5	103.8	98.6	PEAK	Vert
185.74	10.8	11.7	22.5	30.0	-7.5	100.7	13.4	PEAK	Vert
196.50	12.8	11.7	24.5	30.0	-5.5	100.7	338.9	PEAK	Vert
49.08	6.4	10.7	17.1	30.0	-12.9	372.0	292.7	PEAK	Horz
120.86	7.6	15.2	22.8	30.0	-7.2	385.2	72.7	PEAK	Horz
135.45	5.8	14.3	20.1	30.0	-9.9	385.2	263.1	PEAK	Horz
170.87	8.8	12.4	21.2	30.0	-8.8	400.0	102.5	PEAK	Horz
181.65	9.0	12.2	21.2	30.0	-8.8	400.0	259.7	PEAK	Horz
198.50	12.4	12.0	24.4	30.0	-5.6	400.0	354.8	PEAK	Horz

APPENDIX 1

LETTER OF AGENT AUTHORIZATION

APPENDIX 2

LETTER OF MODIFICATION

PRETEC CORPORATION

新竹市科學工業園區力行路10號6樓

6F NO.10, LI-SHIN RD, SCIENCE-BASED INDUSTRIAL PARK,

HSINCHU, TAIWAN, R.O.C. TEL: 886-3-5679899 FAX: 886-3-5784205

Federal Communications Commission

Authorization and Evaluation Division

7435 Oakland Mills Road

Columbia, MD 21046

U.S.A

FCC ID : NJBPRT114

Gentlemen:

The following modifications will be installed to our Model No. DC-600 in order to comply with FCC rules for a class B computing device. These modifications will be incorporated in each unit sold under the above FCC ID.

1. Added one ferrite core on DC power cable.
2. Added one ferrite core on I/O cable and TV cable.

We understand that changes may be made to the product if the product is re-tested and a Class I or Class II permissive changes (as applicable) is applied for. We understand that the Equipment Grant Authorization must be issued before we can marketed our product, or the Class I or Class II change must be approved before we can market our product.

We also understand that peripherals (computer input/output device, modems, printer, etc.) certified to comply with the Class B limits are the only peripherals that may be sold with this computer.

Sincerely yours,



Steve Lin / Project Manager

APPENDIX 6

TEST FACILITY

TEST FACILITY

- Location:** No. 15, 14 Line, Chin Twu Chi, Lu Chu Hsiang, Taoyuan, Taiwan, R.O.C.
- Description:** There are two 3/10m open area test sites and two line conducted labs for final test, and one 3/10m open area test site for engineering lab. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 1992 and CISPR 22/EN 55022 requirements.
- Site Filing:** A site description is on file with the Federal Communications Commission, 7435 Oakland Mills Road, Columbia, MD 21046.
- Registration also was made with Voluntary Control Council for Interference (VCCI).
- Site Accreditation:** Accredited by NEMKO (Authorization #: ELA 124) for EMC & A2LA (Certificate #: 824.01) for Emission
- Instrument Tolerance:** All measuring equipment is in accord with ANSI C63.4 and CISPR 22 requirements that meet industry regulatory agency and accreditation agency requirement.
- Ground Plane:** Two conductive reference ground planes were used during the Line Conducted Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna. It has no holes or gaps having longitudinal dimensions larger than one-tenth of a wavelength at the highest frequency of measurement up to 1GHz.
- Site #1 & # 3 Line Conducted Test Site:** Vertical ground plane (2.0m x 2.5m)
Horizontal ground plane (2.0m x 2.5m)

APPENDIX 7

TEST EQUIPMENT

MEASURING INSTRUMENT SETTING

TEST TYPE	DETECTOR	FREQUENCY RANGE	RESOLUTION BANDWIDTH	VIDEO BANDWIDTH
Conducted	Peak/Avg	10Khz-150kHz	300Hz	100kHz
Conducted	Peak/QP/Avg	150kHz-30MHz	9kHz	100kHz
Radiated	Peak	30MHz-1GHz	100kHz	100kHz
Radiated	QP	30MHz-1GHz	120kHz	120kHz
Radiated	Peak/Avg	Above 1GHz	1MHz	1MHz

Note: All readings on data pages are taken with the detector in peak mode unless otherwise stated.

UNITS OF MEASUREMENT

Measurements of radiated interference are reported in terms of dBuV/m, at a specified distance. The indicated readings on the spectrum analyzer are converted to dBuV/m by use of appropriate conversion factors. Measurements of conducted interference are reported in terms of dBuV.

TEST EQUIPMENT LIST (EMISSION)

Instrumentation: The following list contains equipment used at C & C Laboratory, Co., Ltd. for testing. The equipment conforms to the CISPR 16-1 / ANSI C63.2-1988 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 10kHz to 1.0 / 2.0 GHz.

Equipment used during the tests:

Open Area Test Site: ☒ # 1; ☐ #3

Open Area Test Site # 1					
EQUIPMENT TYPE	* MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL. DUE
Spectrum Analyzer (100Hz-1.5GHz)	HP	8568B	3001A05004 3014A18846	03/25/1998	03/24/1999
Quasi-Peak Adapter	HP	85650A	2811A01399	03/25/1998	03/24/1999
RF Preselector (20Hz-2GHz)	HP	85685A	2947A01064	03/25/1998	03/24/1999
Precision Dipole (30-300MHz)	ROHDE & SCHWARZ	HZ-12	846932/0004	06/06/1997	06/06/1998
Precision Dipole (300-1000MHz)	ROHDE & SCHWARZ	HZ-13	846556/0008	06/16/1997	06/16/1998
Horn Antenna (1GHz-18GHz)	EMCO	3115	9602-4659	N/A	N/A
Bilog Antenna (30MHz-2GHz)	CHASE	CBL6112A	2309	03/14/1998	03/14/1999

Open Area Test Site # 3					
EQUIPMENT TYPE	* MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL. DUE
Spectrum Analyzer (9kHz-2.6GHz)	ADVANTE ST	R3261C	71720533	12/17/1997	12/17/1998
Pre-Amplifier (100kHz-1300MHz)	HP	8447D	2944A09173	01/14/1998	01/14/1999
Receiver (20MHz-1GHz)	ROHDE & SCHWARZ	ESVS10	846285/016	12/04/1997	12/03/1998
Precision Dipole (30-300MHz)	ROHDE & SCHWARZ	HZ-12	846932/0004	06/06/1997	06/06/1998

Conducted Emission Test Site: ☒ # 1 ; ☐ #3

Conducted Emission Test Site # 1					
EQUIPMENT TYPE	* MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL. DUE
Spectrum Analyzer (100Hz-1.5GHz)	HP	8568B	3001A05004 3014A18846	03/25/1998	03/24/1999
Quasi-Peak Adapter	HP	85650A	2811A01399	03/25/1998	03/24/1999
RF Preselector (20Hz-2GHz)	HP	85685A	2947A01064	03/25/1998	03/24/1999
LISN (10kHz-100MHz)	EMCO	3825/2	9106-1809	03/13/1998	03/12/1999
LISN (10kHz-100MHz)	EMCO	3825/2	9106-1810	03/13/1998	03/12/1999

Conducted Emission Test Site # 3					
EQUIPMENT TYPE	* MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL. DUE
Receiver (9kHz-2.75GHz)	ROHDE & SCHWARZ	ESCS30	844793/012	12/19/1997	12/18/1998
LISN (10kHz-100MHz)	EMCO	3825/2	1382	N/A	N/A
LISN (10kHz-100MHz)	ROHDE & SCHWARZ	ESH3-Z5	848773/014	11/19/1997	11/18/1998

The calibrations of the measuring instruments, including any accessories that may effect such calibration, are checked frequently to assure their accuracy. Adjustments are made and correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

APPENDIX 8

BLOCK DIAGRAM OF TEST SETUP

SYSTEM DIAGRAM OF CONNECTIONS BETWEEN EUT AND SIMULATORS

EUT: VIDEO CAMERA

Trade Name: PRETEC

Model Number: DC-600

Power Cord : Shielded, 1.8m(DC Side)

