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TEST REPORT

Report No.: Z01C-01292

Issue Date: August 2, 2001

The device, as described herewith, was tested pursuant to applicable test procedure indicated below and complies with the requirements of;

FCC Part15 Subpart B, Class B

The EUT complies with section 15.37 "Transition provision for compliance with the rules".

The test results are traceable to international or national standards.

Applicant	: Sanyo Electric Co., Ltd. Information Products Division 1-1-1, Sakata, Oizumi-machi Ora-gun , Gunma-ken 370-0596 Phone: +81-276-61-8006 Fax.: +81-276-61-8752
Equipment under test (EUT)	: CD-RW Drive
FCC ID	: JBQCDR024
Trade Name	: SANYO
Model Number	: CRD-BP1500U
Serial Number	: U-0195
EUT Condition	: Pre-production

Test procedure : ANSI C63.4-1992

Date of test : July 27, 2001

Test place : Site 3

Test results : Complied

Zacta Technology Corporation certifies that no party to the application is subject to a denial of federal benefits, that include FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21U.S.C. 853(a).

The results in this report are applicable only to the samples tested.

This report shall not be re-produced except in full without the written approval of ZACTA Technology Corporation.

Test performed by: Takuya Osato / EMC engineer

Authorized by: Kiyoshi Endo / Manager of Technical Division



NVLAP LAB CODE 200306-0

Table of contents

	Page
1. Equipment description.....	3
1.1 EUT information.....	3
1.2 Operating flow.....	3
2. Configuration information.....	4
2.1 Peripheral(s) information (Internal Mode)	4
2.2 Cable(s) information (Internal Mode).....	4
2.3 System configuration (Internal Mode).....	5
2.4 Peripheral(s) information (External Mode).....	6
2.5 Cable(s) information (External Mode).....	6
2.6 System configuration (External Mode).....	7
3. Test procedure.....	8
3.1 Description of Conducted Emission testing.....	8
3.2 Test equipment for Conducted emission.....	8
3.3 Description of Radiated emission testing.....	9
3.4 Test equipment for Radiated emission	10
4. Laboratory description.....	11
4.1 Description for Test Site.....	11
4.2 Uncertainty	12
5. Results of the measurements	13
5.1 Results of the measurements.....	13
5.2 Deviation from the standard.....	13
5.3 Sample of field strength calculation	13
6. Test Data.....	14

1. Equipment description

1.1 EUT information

No.	EUT	Company	Model No.	Serial No.	FCC ID/DoC	Comment
1	CD-RW Drive	SANYO	CRD-BP1500U	U-0195	JBQCDR024	-

Max. used frequency : 310.00MHz (±25%)

Oscillator(s)/Crystal(s) : 20.00MHz, 33.86MHz, 30.00MHz, 310.00MHz (±25%)

Operating frequency

Power ratings : For Internal use
DC +5V, +12V
[EUT is powered from Host PC .
Power supply for Host PC in testing was AC 120V 60Hz.]

For External use
DC +5V, +12V
[EUT is powered from DC power supply.
Power supply for DC power supply in testing was AC 120V 60Hz.]

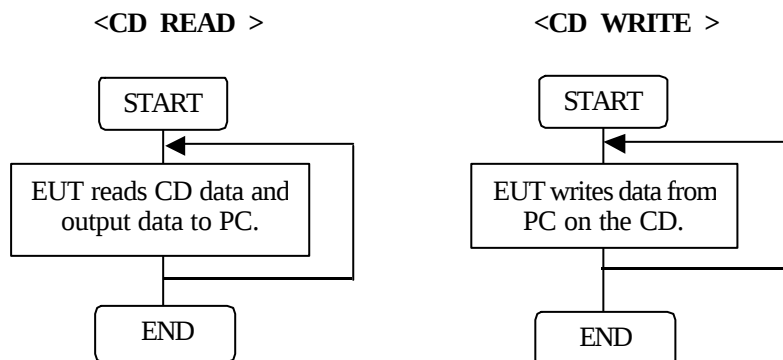
Port(s) : Headphones jack
Analog Audio connector (For Internal use)
Line Out (For External use)
Digital Audio connector (For internal use)
USB Type A connector
DC connector from PC power supply (for Internal use)
DC connector from DC power supply (for External use)

Size : (W) 146 x (D) 188.5 x (H) 41.3 mm

Operating mode : Internal CD READ mode
Internal CD WRITE mode
External CD READ mode
External CD WRITE mode

Variation of model(s) : Not applicable

1.2 Operating flow



2. Configuration information

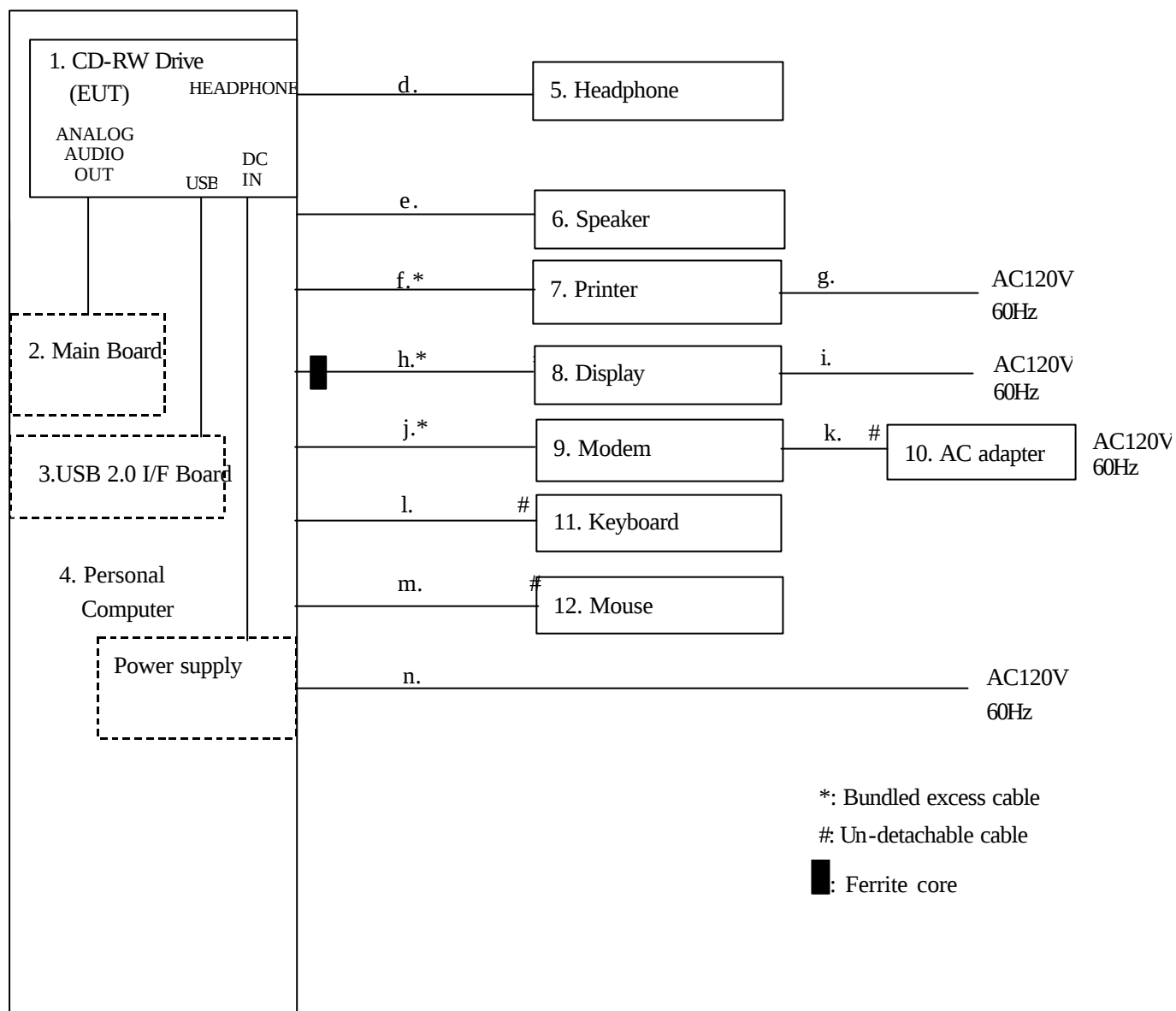
2.1 Peripheral(s) information (Internal Mode)

No.	Equipment	Company	Model No.	Serial No.	DoC / FCC ID	Comment
2	Main board	COMPAQ	N/A	N/A	N/A	-
3	USB 2.0 I/F Board	Adaptec	AUA-3100LP	-	DoC	-
4	Personal Computer	COMPAQ	Prosig 320 C500/ M1 JPN2	7016 CZLIP0116	DoC	-
5	Headphone	FISHER	N/A	N/A	N/A	-
6	Speaker	Panasonic	RP-SP30	N/A	N/A	-
7	Printer	HP	C4555A	SG69A1425N	B94C4555X	-
8	Display	Goldstar	Studio Works 56i	15005G004960	BEJCS585	-
9	Modem	US Robotics	839	000839032BK6YV4J	DoC	-
10	AC adapter for Modem	US Robotics	N/A	N/A	N/A	-
11	Keyboard	COMPAQ	KB-9965	B13B00WBUJ6150	DoC	-
12	Mouse	COMPAQ	IntelliMouse	0805393-5	DoC	-

2.2 Cable(s) information (Internal Mode)

No.	Cable	Length [m]	Shield	Connector	From	To	Comment
a	Audio cable	0.5	Unshielded	Plastic	EUT	Main board	-
b	USB Cable	1.4	Unshielded	Plastic	EUT	USB 2.0 I/F Board	Bundled excess cable.
c	DC cable	0.2	Unshielded	Plastic	EUT	Power supply	-
d	Headphone cable	2.0	Unshielded	Metal	EUT	Headphone	-
e	Speaker cable	1.0	Unshielded	Metal	PC	Speaker	-
f	Centronics cable	2.0	Shielded	Metal	PC	Printer	Bundled excess cable.
g	AC power cord for Printer	2.0	Shielded	Plastic	Printer	AC outlet	-
h	Analog RGB cable	1.5	Shielded	Metal	PC	Display	Bundled excess cable.
i	AC power cord for Display	2.2	Unshielded	Plastic	Display	AC outlet	-
j	RS-232C cable	2.0	Shielded	Metal	PC	Modem	Bundled excess cable.
k	DC cable for Modem AC adapter	2.0	Unshielded	Metal	Modem	AC adapter	-
l	Keyboard cable	2.0	Unshielded	Metal	PC	Keyboard	-
m	Mouse cable	1.8	Unshielded	Metal	PC	Mouse	-
n	AC power cord for PC	2.0	Shielded	Plastic	PC	AC outlet	-

2.3 System configuration (Internal Mode)



Note 1: Numbers assigned to equipment or cables on this diagram are corresponded to the list in “1.1 EUT information”, “2.1 Peripheral(s) information” and “2.2 Cable(s) information”.

Note 2: Display is certified with the molded ferrite core on cable (No. h). I/F cable is Un-detachable and ferrite core is not added during testing

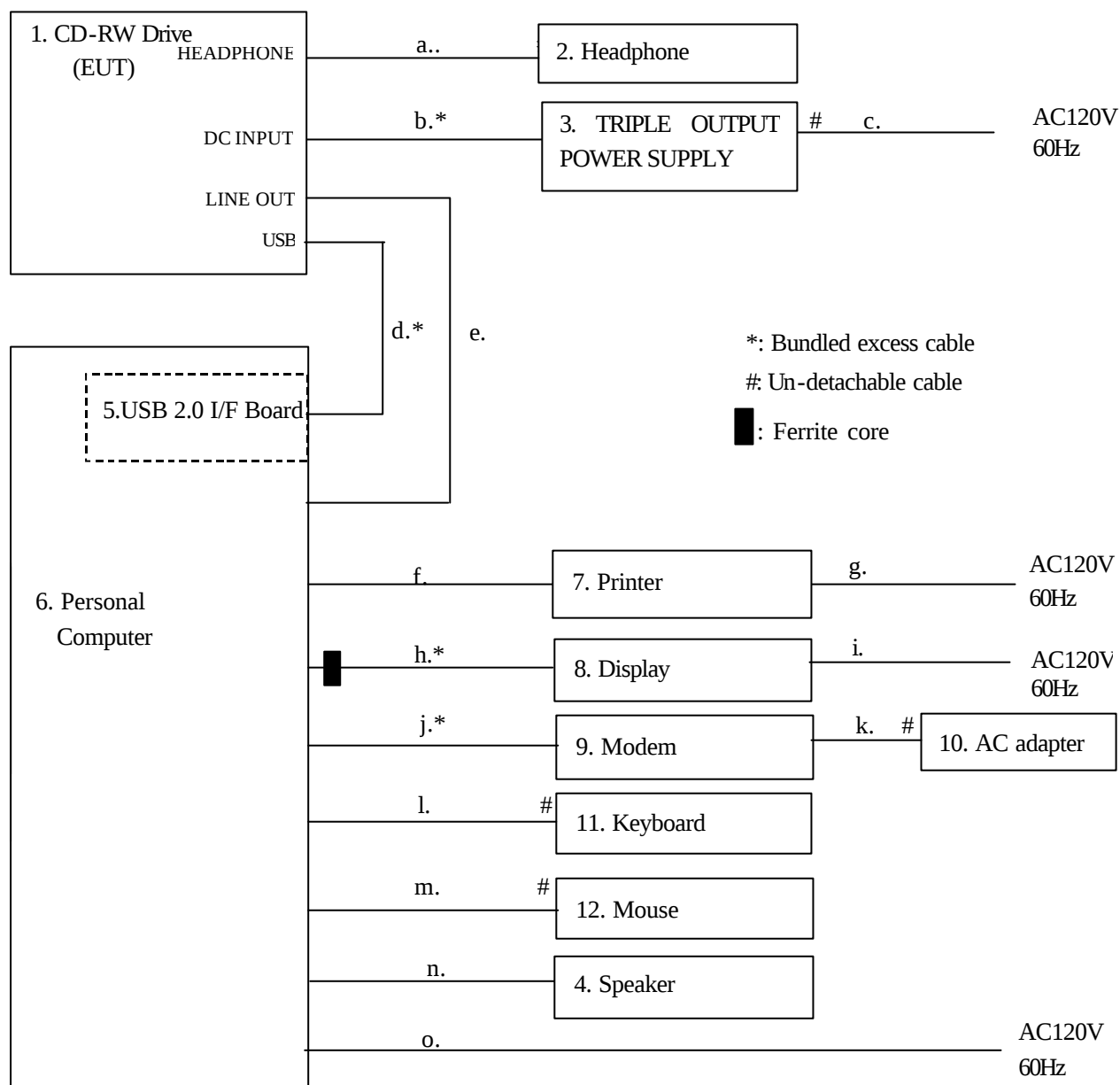
2.4 Peripheral(s) information (External Mode)

No.	Equipment	Company	Model No.	Serial No.	DoC / FCC ID	Comment
2	Headphone	FISHER	N/A	N/A	N/A	-
3	TRIPLE OUTPUT POWER SUPPLY	Agilent Technologies	6236B	2735A-1983	N/A	-
4	Speaker	Panasonic	RP-SP30	N/A	N/A	-
5	USB 2.0 I/F Board	Adaptec	AUA-3100LP	-	DoC	-
6	Personal Computer	COMPAQ	Prosig 320 C500/M1 JPN2	7016 CZLIPO116	DoC	-
7	Printer	HP	C4555A	SG69A1425N	B94C4555X	-
8	Display	Goldstar	Studio Works 56i	15005G004960	BEJCS585	-
9	Modem	US Robotics	839	000839032BK6YV4J	DoC	-
10	AC adapter for Modem	US Robotics	N/A	N/A	N/A	-
11	Keyboard	COMPAQ	KB-9965	B13B00WBUJ6150	DoC	-
12	Mouse	COMPAQ	IntelliMouse	0805393-5	DoC	-

2.5 Cable(s) information (External Mode)

No.	Cable	Length [m]	Shield	Connector	From	To	Comment
a	Headphone cable	2.0	Unshielded	Metal	EUT	Headphone	-
b	DC cable	1.5	Unshielded	Plastic	EUT	Power supply	-
c	AC power cord for Power Supply	2.0	Unshielded	Plastic	Power Supply	AC outlet	-
d	USB cable	1.4	Unshielded	Plastic	EUT	USB 2.0 I/F Board	Bundled excess cable.
e	Line cable	1.0	Unshielded	Metal	EUT	PC	-
f	Centronics cable	2.0	Shielded	Metal	PC	Printer	-
g	AC power cord for Printer	2.0	Shielded	Plastic	Printer	AC outlet	-
h	Analog RGB cable	1.5	Shielded	Metal	PC	Display	Bundled excess cable.
i	AC power cord for Display	2.2	Unshielded	Plastic	Display	AC outlet	-
j	RS-232C cable	2.0	Shielded	Metal	PC	Modem	Bundled excess cable.
k	DC cable for Modem AC adapter	2.0	Unshielded	Metal	Modem	AC adapter	-
l	Keyboard cable	2.0	Unshielded	Metal	PC	Keyboard	-
m	Mouse cable	1.8	Unshielded	Metal	PC	Mouse	-
n	Speaker cable	1.0	Unshielded	Metal	PC	Speaker	-
o	AC power cord for PC	2.0	Shielded	Plastic	PC	AC outlet	-

2.6 System configuration (External Mode)



Note 1: Numbers assigned to equipment or cables on this diagram are corresponded to the list in “1.1 EUT information”, “2.5 Peripheral(s) information” and “2.6 Cable(s) information”.

Note 2: Display is certified with the molded ferrite core on cable (No. h). I/F cable is Un-detachable and ferrite core is not added during testing

3. Test procedure

3.1 Description of Conducted Emission testing

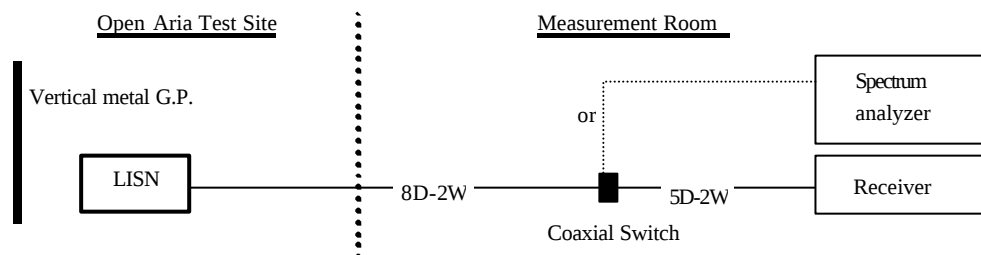
Conducted emission testing is performed using test receiver. The detector function of the receiver is set to CISPR quasi-peak mode and the bandwidth is set to 9kHz. The frequency range from 450kHz to 30 MHz is scanned, and six highest emissions (Min.) are reported. The test results represent the worst-case emission for each emission with manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation.

EUT and support equipment is on a 1 meter x 1.5 meter surface, 0.8-meter height wooden table that is placed 40 cm away from the vertical metal ground plane.

Conducted emission of Host PC and DC power supply was tested because EUT is powered from Host PC (Internal mode) or DC power supply (External mode). 50 Ω /50uH Line Impedance Stabilization Network (LISN) are 80cm away from the Host PC and placed on the conducting ground plane. LISN for peripheral is terminated in 50 Ω .

Sufficient time for the EUT, support equipment and test equipment are allowed in order for them to warm up to their normal operating condition.

Test Configuration for Conducted emission Test



3.2 Test equipment for Conducted emission

Equipment	Company	Model No.	Serial No.	Calibration date	Period
Spectrum analyzer	Agilent Technologies	8568B	2841A04243	Sep. 2000	1 year
Test Receiver	Kyoritsu Electrical Works, Ltd.	KNM-2402	4N-220-1	Sep. 2000	1 year
Line Impedance Stabilization Network for EUT	Kyoritsu Electrical Works, Ltd.	KNW-242	8-1094-5	May. 2001	1 year
Line Impedance Stabilization Network for Peripheral	Kyoritsu Electrical Works, Ltd.	KNW-407	8-663-4	May. 2001	1 year
50 Ω terminator	Agilent Technologies	11593A	N/A	Aug. 2000	1 year
Coaxial cable	FUJIKURA	8D-2W/15m 5D-2W/1m	YTCRFC#3C	May. 2001	1 year
Coaxial Switch	ANRITSU	MP59B	6100097270	May. 2001	1 year

*The above equipment calibration is traceable to NIST or an equivalent standards reference organization.

3.3 Description of Radiated emission testing

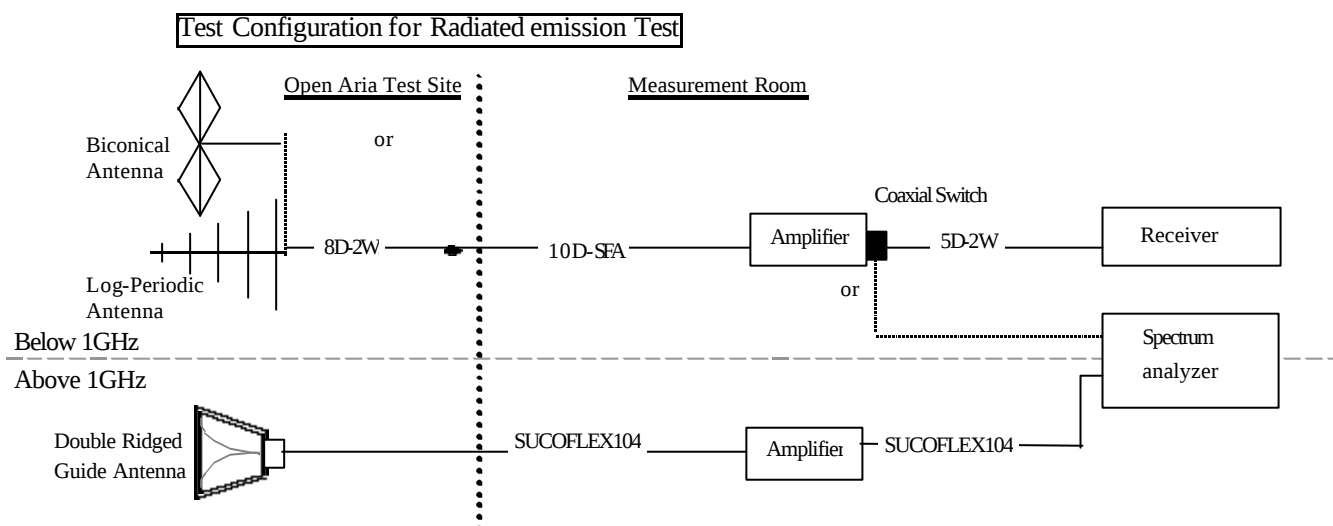
Radiated emission testing is performed at 3m distance using broadband antenna (Biconical antenna, log-periodic antenna and double-ridged guide antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1 to 4 meters and stopped at height producing the maximum emission. Frequency Range: 30MHz –1GHz is scanned and investigated using receiver, and above 1GHz, using spectrum analyzer. The detector function of the test receiver is set to CISPR Quasi-peak mode and the bandwidth is set to 120kHz. Peak and average detectors are used for measurements above 1GHz. The bandwidth of spectrum analyzer is set to 1MHz.

The EUT and support equipment are placed on a 1 meter x 1.5 meter surface, 0.8 meter height wooden table. The turntable is rotated by 360 degrees and stopped at azimuth of producing the maximum emission.

Interconnecting cables, which hanging closer than 40cm to the horizontal metal ground plane are bundled its excess in center. Six highest emissions (Min.) are reported. The test results represent the worst-case emission for each emission with manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation.

Sufficient time for the EUT, support equipment, and test equipment are allowed in order for them to warm up to their normal operating condition.

The highest frequency used in the EUT is 310MHz, therefore, the frequency range is investigated from 30MHz up to the frequency 2GHz, as specified in CFR section 15.33.



3.4 Test equipment for Radiated emission

[Testing below 1GHz]

Equipment	Company	Model No.	Serial No.	Calibration date	Period
Spectrum analyzer	Agilent Technologies	8568B	2841A04243	Sep. 2000	1 year
RF Preamplifier	Anritsu	MH648A	M96257	Nov. 2000	1 year
Test Receiver	Kyoritsu Electrical Works, Ltd.	KNM-5002 KCV-6002	4N-187-10 4-257-1	Dec. 2000	1 year
Biconical Antenna	Schwarzbeck	VHA9103LE/BBA9106	1488	Jun. 2001	1 year
Log Periodic Antenna	Schwarzbeck	UHALP9108A	0398	May. 2001	1 year
Coaxial cable	FUJIKURA	8D-2W/8m 10D-SFA/29m 5D-2W/1m	YTCRFC#3R	May. 2001	1 year
Coaxial Switch	ANRITSU	MP59B	6100097270	May. 2001	1 year
Site attenuation	ZACTA Technology Corp.	Site 3	N/A	Dec. 2000	1 year

[Testing above 1GHz]

Equipment	Company	Model No.	Serial No.	Calibration date	Period
Spectrum Analyzer	ADVANTEST	R3271A	65050042	Jun. 2001	1 year
RF Preamplifier	Agilent Technologies	HP8449B	3008A00589	Jun. 2001	1 year
Double Ridged Guide Antenna	EMCO	3115	4328	Sep. 2000	1 year
Coaxial cable	SUHNER	SUCOFLEX 104/15m SUCOFLEX 104/1m	108014/4 108015/4	Jun. 2001	1 year

Calibration is traceable to NIST or an equivalent standards reference organization.

4. Laboratory description

4.1 Description for Test Site

1. Location: ZACTA Technology Corporation Yonezawa Testing Center
4149-7 Hachimanpara 5-chome Yonezawa-shi Yamagata 992-1128 Japan
Phone: +81-238-28-2880 Fax: +81-238-28-2888

2. The Number and Type of Site:

Site name: Site 1, Site 2 and Site 3 - Total 3 sites.

Site type : Whether protected site

*3m/10m Radiated emission & Conducted emission testing can be performed on each site

3. Facility filing information:

1) FCC site filing: Pursuant to CFR47§2.948

Site name	Final filing date
Site 1, Site 2 and Site 3	March 6, 2000

2) VCCI site filing: Pursuant to V-5/99.05 VCCI Regulations for Registration of measurement facilities

Site name	Radiated emission Registration No.	Conducted emission Registration No.	Duration of Registration
Site 1	R-136	C-132	September 30, 2003
Site 2	R-137	C-133	September 30, 2003
Site 3	R-138	C-134	September 30, 2003

3) NVLAP Accreditation:

NVLAP Lab. code: **200306-0**

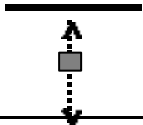
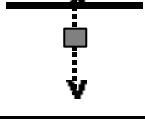
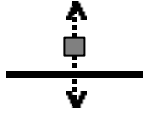
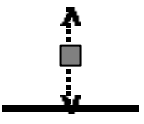
NVLAP information: NVLAP accreditation does not constitute any product endorsement by NVLAP or any agent of the U.S. Government

4.2 Uncertainty

Expanded Uncertainties stated were calculated with a coverage Factor $k=2$.

$\pm 2.97\text{dB}$	• • • For Conducted Emission
$\pm 5.23\text{dB}$	• • • For 3m Radiated Emission
$\pm 4.26\text{dB}$	• • • For 10m Radiated Emission

Judgment of Uncertainty under the measurement data and the scope of permission

Example A	Example B	Example C	Example D
			
Judgment: Complied	Judgment: Complied	Judgment: Not complied	Judgment: Not complied
The result of measurement is compliance with the limit in 95% or more confidence probability.	The result of measurement is compliance with the limit with less extent of uncertainty of the measurement. It is impossible to consider it complies with the limit in 95% confidence probability, but the result satisfies the limit in high probability.	The result of measurement is not compliance with the limit with less extent of uncertainty of the measurement. It is impossible to consider it complies with the limit in 95% confidence probability, but the result does not satisfy the limit in high probability.	The result of measurement is not compliance with the limit.

———— : Limit ■ : Result of the measurements - - - - - : Uncertainty

5. Results of the measurements

5.1 Results of the measurements

The minimum margins to the limits are as follows.

Conducted emission	Margin	Frequency	Detector	Operating mode	Data sheet
	10.1dB	0.470MHz	Quasi-peak	Internal CD Write mode	2

Radiated emission	Margin	Frequency	Antenna Polarity	Antenna Height	Table degree	Operating mode	Data sheet
	2.5dB	532.48MHz	Horizontal	1.1m	45 °	External CD Read mode	7

5.2 Deviation from the standard

Not applicable.

5.3 Sample of field strength calculation

Conducted Emission [Sample Calculation] $\text{dBuV} = 20\log_{10} (\text{uV})$

Class B
Limit @3.332MHz = 250uV = 48.0dBuV
Reading = 41.6dBuV Cable Loss + LISN Factor = 0.2 + 0.5 = 0.7dB Total = 41.6 + 0.7 = 42.3dBuV Margin = 48.0 - 42.3 = <u>5.7dB</u>

Radiated Emission [Sample Calculation] $\text{dBuV/m} = 20\log_{10} (\text{uV/m})$

Class B
Limit @147.6MHz = 150uV/m = 43.5dBuV/m
Reading = 42.8dBuV Ant. Factor + Cable Loss - Amp. Gain = 14.2 + 3.0 - 30.0 = -12.8dB Total = 42.8 - 12.8 = 30.0dBuV/m Margin = 43.5 - 30.0 = <u>13.5dB</u>

6. Test Data

***** CONDUCTED EMISSION *****

Standard : FCC Part15 SubpartB
Class : B

Sheet Number : 1

Date of test : 2001/7/27
Test Site : 3
Temperature [] : 26.0
Humidity [%] : 58.0
Operator : T.Osato
Company Name : SANYO
EUT : CD Rewrite Drive
Model Number : CRD-BP1500U
Serial Number : U-0195
Test Mode : Internal CD Read
Comment :

Phase	Frequency [MHz]	Reading		Factor [dB]	Emission Level		Limit		Margin		Comment
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
L1	0.471	37.4		0.3	37.7		48.0		10.3		*
L1	0.569	31.1		0.3	31.4		48.0		16.6		
L1	0.878	35.1		0.3	35.4		48.0		12.6		
L1	0.944	33.1		0.3	33.4		48.0		14.6		
L1	1.149	34.1		0.3	34.4		48.0		13.6		
L1	1.418	35.4		0.3	35.7		48.0		12.3		
L2	0.471	37.2		0.3	37.5		48.0		10.5		
L2	0.567	34.4		0.3	34.7		48.0		13.3		
L2	0.878	34.9		0.3	35.2		48.0		12.8		
L2	0.944	32.5		0.3	32.8		48.0		15.2		
L2	1.115	34.0		0.3	34.3		48.0		13.7		
L2	1.420	34.6		0.3	34.9		48.0		13.1		

* :The worst emission.

Factor 1.ISN Factor + Cable Loss

Ver.2.10 F3#002

***** CONDUCTED EMISSION *****

Standard : FCC Part15 SubpartB
Class : B

Sheet Number : 2

Date of test : 2001/7/27
Test Site : 3
Temperature [] : 26.0
Humidity [%] : 58.0
Operator : T.Osato
Company Name : SANYO
EUT : CD Rewrite Drive
Model Number : CRD-BP1500U
Serial Number : U-0195
Test Mode : Internal CD Write
Comment :

Phase	Frequency [MHz]	Reading		Factor [dB]	Emission Level		Limit		Margin		Comment
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
L1	0.470	37.6		0.3	37.9		48.0		10.1		*
L1	0.578	31.2		0.3	31.5		48.0		16.5		
L1	0.879	35.4		0.3	35.7		48.0		12.3		
L1	0.957	33.4		0.3	33.7		48.0		14.3		
L1	1.119	33.8		0.3	34.1		48.0		13.9		
L1	1.419	35.6		0.3	35.9		48.0		12.1		
L2	0.470	37.4		0.3	37.7		48.0		10.3		
L2	0.575	34.6		0.3	34.9		48.0		13.1		
L2	0.882	35.8		0.3	36.1		48.0		11.9		
L2	0.956	32.4		0.3	32.7		48.0		15.3		
L2	1.116	33.5		0.3	33.8		48.0		14.2		
L2	1.417	34.9		0.3	35.2		48.0		12.8		

* : The worst emission.

Factor 1/ISN Factor + Cable Loss

Ver.2.10 F3#002

***** CONDUCTED EMISSION *****

Standard : FCC Part15 SubpartB
Class : B

Sheet Number : 3

Date of test : 2001/7/27
Test Site : 3
Temperature [] : 26.0
Humidity [%] : 58.0
Operator : T.Osato
Company Name : SANYO
EUT : CD Rewrite Drive
Model Number : CRD-BP1500U
Serial Number : U-0195
Test Mode : External CD Read
Comment :

Phase	Frequency [MHz]	Reading		Factor [dB]	Emission Level		Limit		Margin		Comment
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
L1	1.789	19.7		0.3	20.0		48.0		28.0		
L1	6.054	32.9		0.4	33.3		48.0		14.7		
L1	8.426	26.7		0.6	27.3		48.0		20.7		
L1	11.700	30.6		0.7	31.3		48.0		16.7		
L1	15.685	35.4		0.8	36.2		48.0		11.8		*
L1	29.759	20.5		1.4	21.9		48.0		26.1		
L2	1.786	19.6		0.3	19.9		48.0		28.1		
L2	6.048	32.4		0.4	32.8		48.0		15.2		
L2	8.436	27.5		0.6	28.1		48.0		19.9		
L2	11.681	31.8		0.7	32.5		48.0		15.5		
L2	15.680	33.5		0.8	34.3		48.0		13.7		
L2	29.735	21.0		1.4	22.4		48.0		25.6		

* : The worst emission.

Factor 1/ISN Factor + Cable Loss

Ver.2.10 F3#002

***** CONDUCTED EMISSION *****

Standard : FCC Part15 SubpartB
Class : B

Sheet Number : 4

Date of test : 2001/7/27
Test Site : 3
Temperature [] : 26.0
Humidity [%] : 58.0
Operator : T.Osato
Company Name : SANYO
EUT : CD Rewrite Drive
Model Number : CRD-BP1500U
Serial Number : U-0195
Test Mode : External CD Write
Comment :

Phase	Frequency [MHz]	Reading		Factor [dB]	Emission Level		Limit		Margin		Comment
		QP [dB μ V]	AV [dB μ V]		QP [dB μ V]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]	
L1	1.795	20.3		0.3	20.6		48.0		27.4		
L1	6.041	32.4		0.4	32.8		48.0		15.2		
L1	8.429	26.8		0.6	27.4		48.0		20.6		
L1	11.654	30.8		0.7	31.5		48.0		16.5		
L1	15.651	34.7		0.8	35.5		48.0		12.5		
L1	29.894	21.4		1.4	22.8		48.0		25.2		
L2	1.795	19.8		0.3	20.1		48.0		27.9		
L2	6.041	32.3		0.4	32.7		48.0		15.3		
L2	8.429	27.6		0.6	28.2		48.0		19.8		
L2	11.654	32.5		0.7	33.2		48.0		14.8		
L2	15.651	36.4		0.8	37.2		48.0		10.8		*
L2	29.894	20.3		1.4	21.7		48.0		26.3		

* : The worst emission.

Factor LISN Factor + Cable Loss

Ver.2.10 F3#002

***** RADIATED EMISSION *****

Standard : FCC Part15 SubpartB
Class : B
Distance [m] : 3
Date of test : 2001/7/27
Test Site : 3
Temperature [] : 26.0
Humidity [%] : 58.0
Operator : T.Osato
Company Name : SANYO
EUT : CD Rewrite Drive
Model Number : CRD-BP1500U
Serial Number : U-0195
Test Mode : Internal CD Read
Comment :

Sheet Number : 5

Antenna Pol.	Height	Table Radian	Reading Frequency	Level	Factor	Emission Level	Limit	Margin	Comment
HOR/VER	[m]	[Deg.]	[MHz]	[dB μ V]	[dB μ V/m]	[dB μ V/m]	[dB μ V/m]	[dB]	
HOR	2.6	285	169.35	44.0	-12.5	31.5	43.5	12.0	
VER	1.0	150	197.39	36.8	-11.2	25.6	43.5	17.9	
HOR	1.5	135	208.72	44.4	-10.8	33.6	43.5	9.9	
VER	1.0	55	216.86	38.1	-10.7	27.4	46.0	18.6	
HOR	1.3	315	297.00	44.9	-8.9	36.0	46.0	10.0	
VER	1.7	180	304.71	46.8	-13.4	33.4	46.0	12.6	
HOR	1.1	65	306.07	49.0	-13.2	35.8	46.0	10.2	
HOR	1.0	330	432.05	42.9	-9.7	33.2	46.0	12.8	
VER	1.4	155	479.78	44.1	-9.2	34.9	46.0	11.1	
VER	1.1	175	532.10	41.7	-8.2	33.5	46.0	12.5	
HOR	1.0	135	572.74	44.7	-7.6	37.1	46.0	8.9	*

* : The worst emission.

Factor :Antenna Factor + Cable Loss - Amp Gain

Ver.2.10 F3#002

Standard : FCC Part15 SubpartB
Class : B
Distance [m] : 3
Date of test : 2001/7/27
Test Site : 3
Temperature [] : 26.0
Humidity [%] : 58.0
Operator : T.Osato
Company Name : SANYO
EUT : CD Rewrite Drive
Model Number : CRD-BP1500U
Serial Number : U-0195
Test Mode : Internal CD Write
Comment :

Sheet Number : 6

Antenna Pol.	Antenna Height [m]	Table Radian [Deg.]	Reading Frequency [MHz]	Reading Level [dB μ V]	Factor [dB μ V/m]	Emission Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Comment
HOR/VER									
VER	2.7	35	124.16	45.1	-15.8	29.3	43.5	14.2	
HOR	2.5	115	169.34	45.6	-12.5	33.1	43.5	10.4	
HOR	1.5	115	197.52	44.8	-11.2	33.6	43.5	9.9	
HOR	1.5	310	208.63	41.4	-10.8	30.6	43.5	12.9	
HOR	1.3	310	242.04	42.3	-10.6	31.7	46.0	14.3	
HOR	1.1	70	311.16	55.1	-13.0	42.1	46.0	3.9	*
VER	1.4	5	311.16	46.2	-13.0	33.2	46.0	12.8	
HOR	1.9	145	432.06	42.3	-9.7	32.6	46.0	13.4	
VER	1.2	160	479.76	43.7	-9.2	34.5	46.0	11.5	
VER	1.2	5	536.09	44.9	-8.1	36.8	46.0	9.2	
HOR	1.0	130	572.73	43.3	-7.6	35.7	46.0	10.3	
VER	1.2	85	572.73	37.9	-7.6	30.3	46.0	15.7	

* : The worst emission.

Factor :Antenna Factor + Cable Loss - Amp Gain

Ver.2.10 F3#002

***** RADIATED EMISSION *****

Standard : FCC Part15 SubpartB
Class : B
Distance [m] : 3
Date of test : 2001/7/27
Test Site : 3
Temperature [] : 26.0
Humidity [%] : 58.0
Operator : T.Osato
Company Name : SANYO
EUT : CD Rewrite Drive
Model Number : CRD-BP1500U
Serial Number : U-0195
Test Mode : External CD Read
Comment :

Sheet Number : 7

Antenna Pol.	Height	Table Radian	Reading Frequency	Level	Factor	Emission Level	Limit	Margin	Comment
HOR/VER	[m]	[Deg.]	[MHz]	[dB μ V]	[dB μ V/m]	[dB μ V/m]	[dB μ V/m]	[dB]	
HOR	1.0	0	169.30	41.3	-12.5	28.8	43.5	14.7	
VER	2.0	75	169.35	42.4	-12.5	29.9	43.5	13.6	
VER	1.8	275	185.71	45.8	-11.6	34.2	43.5	9.3	
HOR	1.0	45	191.84	37.9	-11.4	26.5	43.5	17.0	
VER	1.8	275	196.84	45.8	-11.2	34.6	43.5	8.9	
HOR	1.0	325	253.93	48.3	-10.5	37.8	46.0	8.2	
VER	1.2	305	263.68	46.8	-10.1	36.7	46.0	9.3	
HOR	1.0	250	312.10	51.2	-13.0	38.2	46.0	7.8	
HOR	1.1	350	395.04	41.8	-10.1	31.7	46.0	14.3	
HOR	1.2	250	406.42	44.2	-10.0	34.2	46.0	11.8	
VER	1.9	315	414.88	38.4	-9.9	28.5	46.0	17.5	
HOR	1.1	170	428.94	46.8	-9.7	37.1	46.0	8.9	
VER	1.3	135	479.76	43.0	-9.2	33.8	46.0	12.2	
VER	1.1	115	532.43	51.3	-8.2	43.1	46.0	2.9	
HOR	1.1	45	532.48	51.7	-8.2	43.5	46.0	2.5	*
HOR	1.2	200	798.58	43.1	-2.7	40.4	46.0	5.6	
VER	1.0	320	798.63	45.7	-2.7	43.0	46.0	3.0	

* : The worst emission.

Factor :Antenna Factor + Cable Loss - Amp Gain

Ver.2.10 F3#002

***** RADIATED EMISSION *****

Standard : FCC Part15 SubpartB
Class : B
Distance [m] : 3
Date of test : 2001/7/27
Test Site : 3
Temperature [] : 26.0
Humidity [%] : 58.0
Operator : T.Osato
Company Name : SANYO
EUT : CD Rewrite Drive
Model Number : CRD-BP1500U
Serial Number : U-0195
Test Mode : External CD Write
Comment :

Sheet Number : 8

Antenna Pol.	Height	Table Radian	Reading Frequency	Level	Factor	Emission Level	Limit	Margin	Comment
HOR/VER	[m]	[Deg.]	[MHz]	[dB μ V]	[dB μ V/m]	[dB μ V/m]	[dB μ V/m]	[dB]	
VER	1.1	45	169.35	40.9	-12.5	28.4	43.5	15.1	
HOR	1.5	45	197.22	41.1	-11.2	29.9	43.5	13.6	
HOR	1.4	55	220.02	42.0	-10.7	31.3	46.0	14.7	
HOR	1.3	80	242.02	53.7	-10.6	43.1	46.0	2.9	
VER	1.0	305	242.40	49.8	-10.6	39.2	46.0	6.8	
HOR	1.3	255	311.09	55.2	-13.0	42.2	46.0	3.8	
VER	1.0	270	311.16	51.4	-13.0	38.4	46.0	7.6	
VER	1.0	0	405.61	40.8	-10.0	30.8	46.0	15.2	
HOR	1.1	180	414.88	46.5	-9.9	36.6	46.0	9.4	
VER	1.2	140	479.82	44.0	-9.2	34.8	46.0	11.2	
HOR	1.7	330	480.00	49.0	-9.1	39.9	46.0	6.1	
VER	1.3	155	537.48	49.9	-8.1	41.8	46.0	4.2	
HOR	2.0	175	538.52	51.3	-8.1	43.2	46.0	2.8	*
VER	1.3	310	572.74	40.9	-7.6	33.3	46.0	12.7	
VER	2.1	160	615.74	42.4	-6.9	35.5	46.0	10.5	
VER	1.4	135	960.00	39.7	-1.1	38.6	46.0	7.4	

* : The worst emission.

Factor :Antenna Factor + Cable Loss - Amp Gain

Ver.2.10 F3#002