

# TEST REPORT

**STANDARD : FCC Part15B Class B**

Applicant	Testing Laboratory
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<b>Equipment Type</b>	USB PROGRAMMING INTERFACE CABLE
<b>Trademark</b>	KENWOOD
<b>Model(s)</b>	KPG-22U / KPG-36U / KPG-43U / KPG-46U
<b>Serial No.</b>	None
<b>Equipment Authorization</b>	Certification (FCC ID : K44433200)
<b>Test Result</b>	Complied
<b>Report Number</b>	JM10110020
<b>Report Issue Date</b>	November 19, 2010

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Approved by

Yoshiaki Yoneyama  
[ Manager ]

Tested by

Hideaki Kosemura



Responsible Party of Test Item (Product)

Responsible Party	:
Add.	:
Tel.	:
Fax.	:
Contact Person	:

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## SECTION 1. GENERAL INFORMATION

### TEST PERFORMED

<b>Location</b>	Matsuda No.4 Test Site
<b>EUT Received</b>	October 28, 2010
<b>Date of Test</b>	From November 11, 2010 to November 12, 2010
<b>Standard Applied</b>	FCC Part15B Class B
<b>Measurement methods</b>	ANSI C63.4-2003
<b>Test Procedure</b>	Document number : RJP-EM001, RJP-EM003
<b>Deviation from Standard(s)</b>	None

### QUALIFICATIONS OF TESTING LABORATORY

ACCREDITATION	SCOPE	LAB. CODE	Remarks
VLAC	EMC Testing	VLAC-008-3	JAPAN
BSMI	EMC Testing	SL2-IN-E-6009	TAIWAN
<b>FILING</b>			
VCCI	EMC Testing	R-252, C-287, C-255, T-1723 R-253, C-288, C-256, T-1724 R-254, C-289, C-257, T-1725 R-255, C-290, C-258, T-1728 R-256, C-291, C-259, T-1729, G-122	JAPAN
FCC	EMC Testing	Designation Number : JP0009	USA
CB-Scheme	EMC Testing	TL223	IECEE
SAUDI ARABIA	EMC Testing	N/A	

### ABBREVIATIONS

EUT	: Equipment Under Test	DoC	: Declaration of Conformity
AMN	: Artificial Mains Network	ISN	: Impedance Stabilization Network
LISN	: Line Impedance Stabilization Network	Q-P	: Quasi-peak
AMP	: Amplifier	AVG	: Average
ATT	: Attenuator	PK	: Peak
ANT	: Antenna	Cal	: Calibration
BBA	: Broadband Antenna	N/A	: Not applicable or Not available
DIP	: Dipole Antenna	LCD	: Liquid-Crystal Display
AE	: Associated Equipment	HDMI	: High-Definition Multimedia Interface

## SECTION 2. SUMMARY OF TEST RESULTS

The minimum margins to the limits are as follows:

<b>Conducted disturbance at mains terminals</b>	Communication mode (KPG-46U)	12.6 dB (0.1500 MHz)
<b>Radiated disturbance</b>	Communication mode (KPG-36U)	3.1 dB (48.01 MHz)

Note :

1. See Section 10 for details.

< Measurement data correction >

\* Conducted disturbance at mains terminals

Emission Level [dB $\mu$ V] = Meter Reading [dB $\mu$ V] + Factor [dB]

Margin [dB] = Limit [dB $\mu$ V] - Emission Level [dB $\mu$ V]

\* Factor = LISN Factor + Cable Loss + ATT

\* Radiated disturbance

Emission Level [dB $\mu$ V/m] = Meter Reading [dB $\mu$ V] + Factor [dB/m]

Margin [dB] = Limit [dB $\mu$ V/m] - Emission Level [dB $\mu$ V/m]

\* Factor = Antenna Factor + Cable Loss - Amplifier Gain + ATT

( - Distance Conversion Factor)

## SECTION 3. EQUIPMENT UNDER TEST

The equipment under test (EUT) consisted of the following apparatus.

### 3.1 System Configuration

Symbol	Item	Model No.	Serial No.	Manufacturer	Remarks	FCC ID
A1	USB PROGRAMMING INTERFACE CABLE	KPG-22U	None	Kenwood		K44433200
A2	USB PROGRAMMING INTERFACE CABLE	KPG-36U	None	Kenwood		K44433200
A3	USB PROGRAMMING INTERFACE CABLE	KPG-43U	None	Kenwood		K44433200
A4	USB PROGRAMMING INTERFACE CABLE	KPG-46U	None	Kenwood		K44433200
<b>Rated Power</b> : DC 5V / 30mA (USB Bus Powered)						
<b>Supplied Power</b> : DC 5V (AC Adaptor for Personal Computer : AC120 V, 60 Hz)						
<b>Condition of Equipment</b>		Prototype				
<b>Type</b>		Tabletop (Handheld type)				
<b>Suppression Devices</b>		No Modifications by the laboratory were made to the device				

### 3.2 Port(s)/Connector(s)

Port Name	Connector Type	Connector Pin	Remarks
USB	Type A	4pin	
Radio	F-type	2pin	KPG-22U
Radio	Universal	14pin	KPG-36U
Radio	Universal	12pin	KPG-43U
Radio	Modular	8pin	KPG-46U

### 3.3 Highest Frequency Oscillator(s) / Crystal(s)

Base Clock	Operating Frequency	Board Name	Remarks
48 MHz	48 MHz	Main Unit	

### 3.4 Frequency Range of Measurements

	Required Measurement Frequency Range	Measured Frequency Range
Conducted	0.15 – 30 MHz	0.15 – 30 MHz
Radiated	30 – 1000 MHz	30 – 1000 MHz

### 3.5 Difference of Model(s)

Model No.	Connector Type	Radio Interface Cable	Remarks
KPG-22U	2Pin F-type Jack for Portable	Universal cable	Tested model
KPG-36U	14Pin Universal connector for Portable	Universal cable	Tested model
KPG-43U	12Pin Universal connector for Mobile	Universal cable	Tested model
KPG-46U	8Pin Modular connector for Mobile	Modular cable	Tested model

Note : Each model is the same other than the specifications of the connector type and the radio interface cable.

## SECTION 4. SUPPORT EQUIPMENT

The EUT was supported by the following equipment during the test.

Symbol	Item	Model No.	Serial No.	Manufacturer	Remarks	FCC ID
<b>B</b>	Personal Computer	PP05S	25159423029	DELL		DoC
<b>C</b>	AC Adaptor	ADP-50HH	CN-0U6166-48 661-566-0YTH	DELL		N/A
<b>D</b>	HUB	LSW4-GT-8 NS/WH	164864943991 50	BUFALLO		DoC
<b>E</b>	Transceiver	TK-3360-K	A9C90027	Kenwood	Jig for KPG-22U	ALH415100
<b>F</b>	Ni-MH Battery	KNB-56N	None	Kenwood	Battery for TK-3360-K	N/A
<b>G</b>	Transceiver	NX-300-K	A9402132	Kenwood	Jig for KPG-36U	ALH378500
<b>H</b>	Li-ion Battery	KNB-48L	None	Kenwood	Battery for NX-300-K	N/A
<b>I</b>	Transceiver	TK-5810-K2	B0700006	Kenwood	Jig for KPG-43U	K4439923120
<b>J</b>	Transceiver	NX-700-K	B0300544	Kenwood	Jig for KPG-46U	K44378600
<b>K</b>	Power Supply	PS-53	60800014	Kenwood		N/A
<b>L</b>	50ohm Terminator	1430-4	BW5572	Aeroflex/ Weinschel		N/A
<b>Supplied Power:</b>						
<b>C, D, K</b>	AC120 V, 60 Hz					

## SECTION 5. USED CABLE(S)

The following cable(s) was used for the test.

No.	Name	Length (m)	Shield	Metal Connector	Ferrite Core
1	Universal cable	1.10	No	No	
2	Modular cable	1.10	No	No	
3	USB cable	0.37	Yes	Yes	
4	LAN cable	2.00	No	No	
5	Antenna cable	1.00	Yes	Yes	
6	Power cable for Personal Computer (DC)	1.85	No	No	Fixed x 1
7	Power cable for Personal Computer (AC)	0.90	No	No	
8	Power cable for HUB	1.80	No	No	
9	Power cable for Transceiver (DC)	0.25	No	No	
10	Power cable for Transceiver (DC)	3.00	No	No	
11	Power cable for Power Supply	1.80	No	No	
12	ACC cable	0.25	No	No	

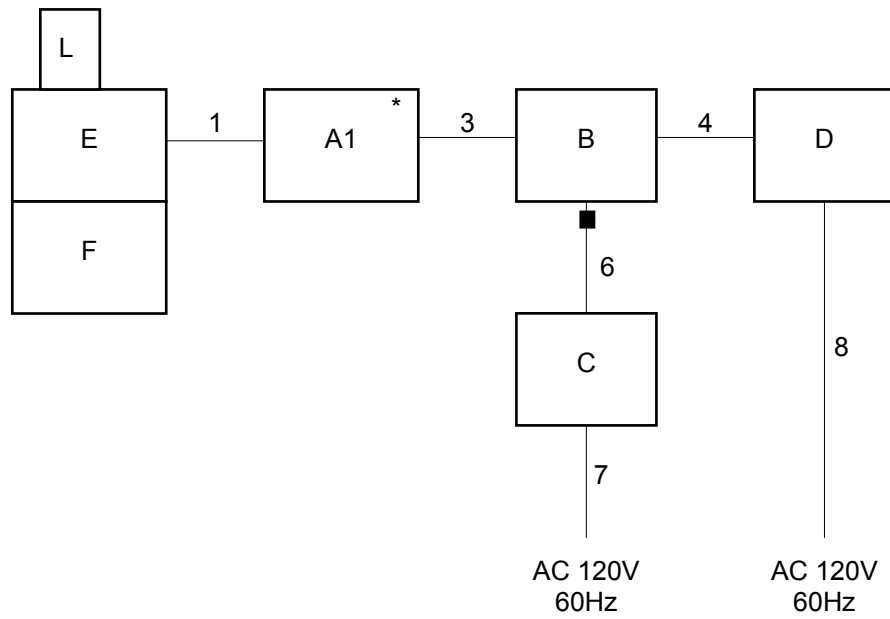
Note :

1. No.1 or No.2 cable is fixed-mounted to the EUT.
2. No.3 cable is fixed-mounted to the EUT.
3. No.6 cable is supplied together with AC Adaptor (C).

## SECTION 6. TEST CONFIGURATION

### 6.1 KPG-22U

\* : EUT  
■ : Ferrite core

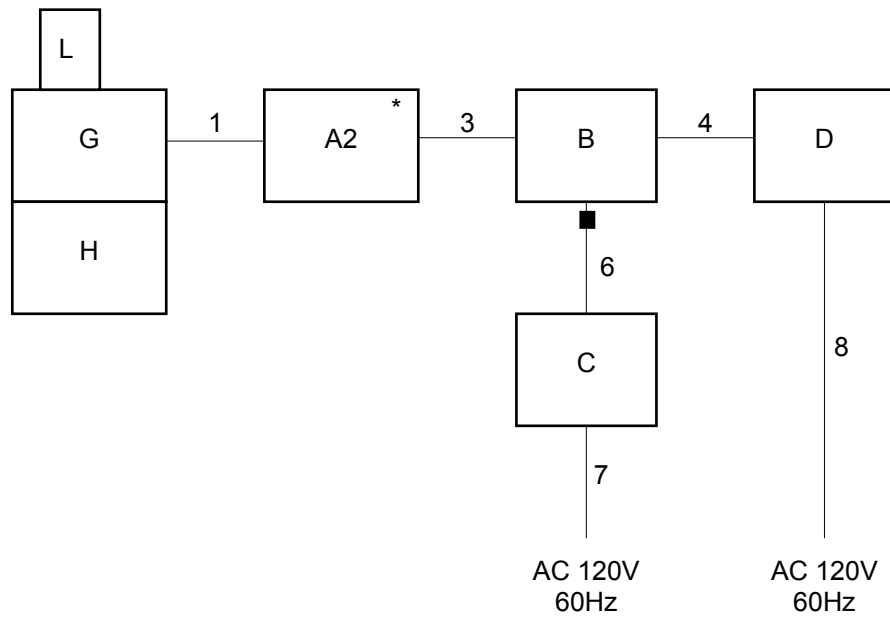


The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.



6.2 KPG-36U

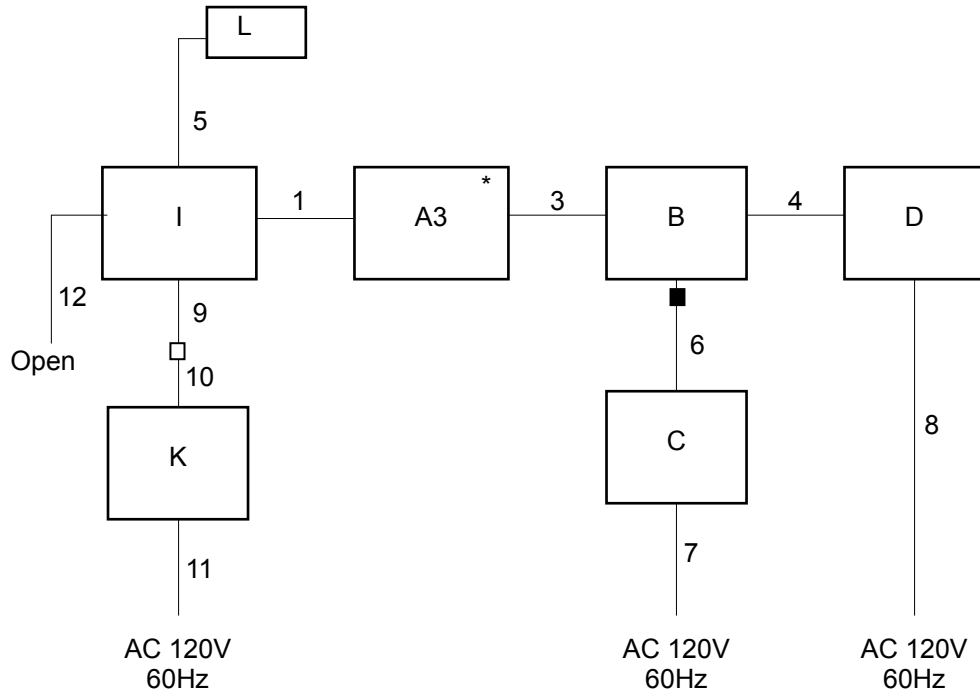
\* : EUT  
■ : Ferrite core



The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

6.3 KPG-43U

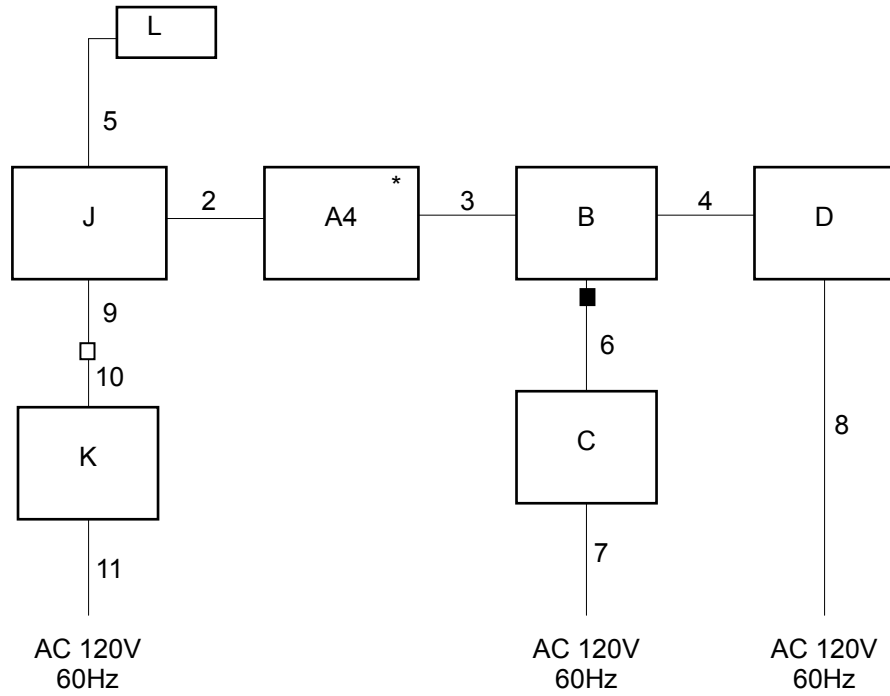
\* : EUT  
■ : Ferrite core  
□ : Joint connector



The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

6.4 KPG-46U

\* : EUT  
■ : Ferrite core  
□ : Joint connector



The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

## SECTION 7. OPERATING CONDITION

The EUT was operated under the following conditions during the test.

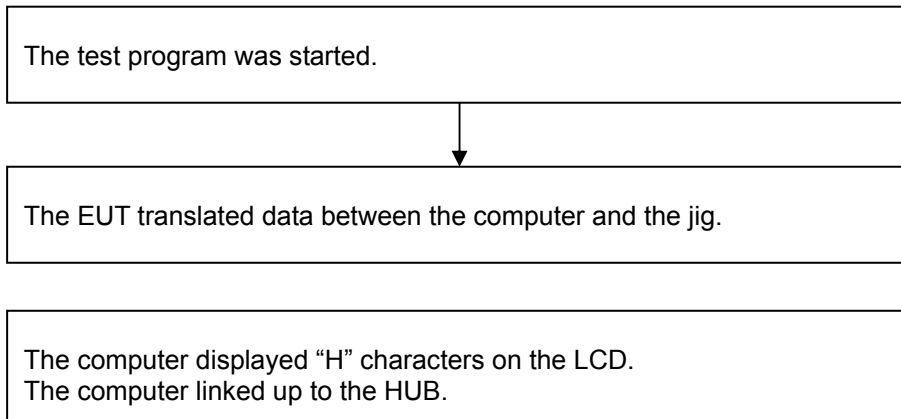
### 7.1 Operating Condition

The test was carried out under Communication mode.

EUT was examined in the operating conditions that had maximum emissions.

### 7.2 Operating Flow [ Communication mode]

Following operations were performed continuously.

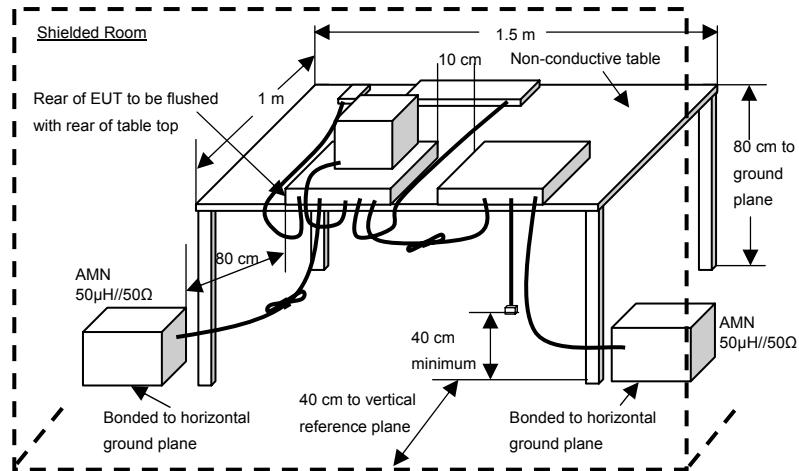


## SECTION 8. TEST PROCEDURE(S)

Test was carried out under the following conditions.

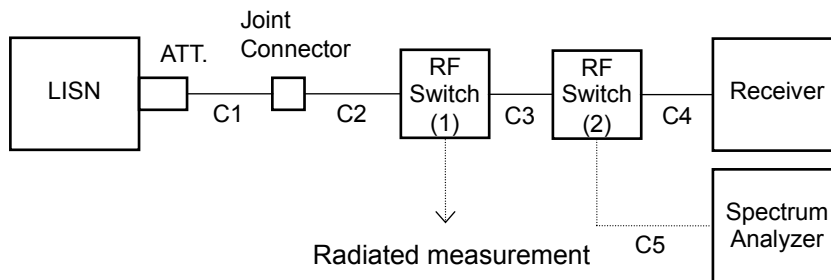
### Conducted disturbance at mains terminals

Test setup as per standard



\* Reference Ground plane : greater than 2 x 2m

### Diagram of the measuring instruments



### Setting for the instruments

Frequency [MHz]	Instrument	Detector Function	Resolution Bandwidth	Video Bandwidth
0.15 – 30	Receiver	Quasi Peak	10 kHz	N/A
		Average	10 kHz	N/A

#### [ Preliminary Measurement ]

EUT is tested on all operating conditions.

The spectrum analyzer is controlled by the computer program to sweep the frequency range to be measured, then spectrum chart is plotted out to find the worst emission conditions in operating mode and/or configuration decision for the final test.

All leads other than safety ground are tested.

#### [ Final Measurement ]

The EUT is operated in the worst emission condition found by the preliminary test.

The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.

At least six highest spectrum are measured in quasi-peak and average (if necessary) using the test receiver.

**Radiated disturbance**  
Test setup as per standard

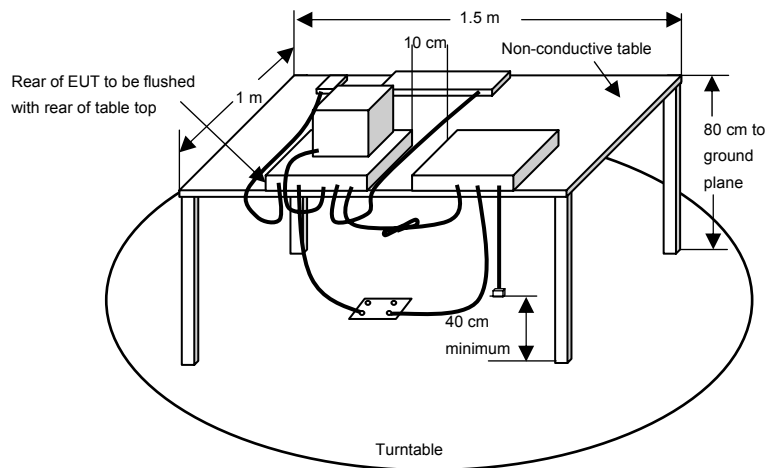
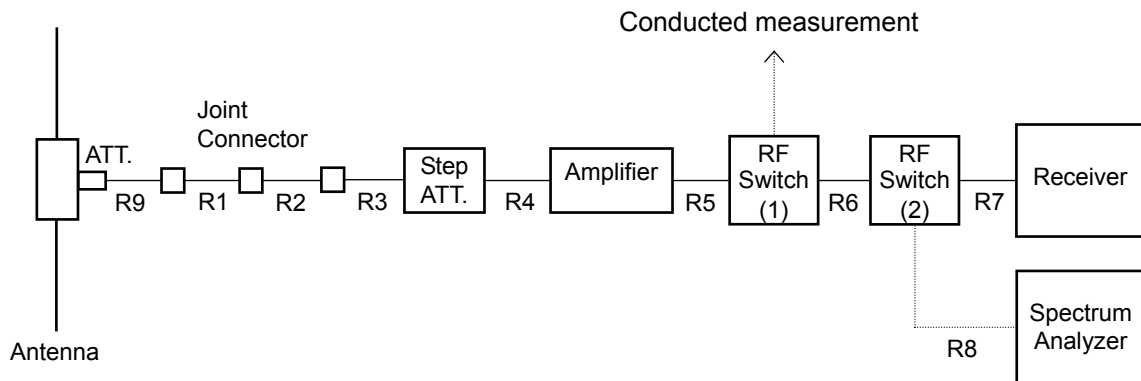


Diagram of the measuring instruments ( 30-1000MHz )



Setting for the instruments

Frequency [MHz]	Instrument	Detector Function	Resolution Bandwidth	Video Bandwidth
30 – 1000	Receiver	Quasi Peak	120 kHz	N/A
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz
		Average	1 MHz	10 Hz

[ Preliminary Measurement ]

EUT is tested on all operating conditions.

The spectrum analyzer is set max-hold mode and swept during turntable was rotated 0 to 360 degree, And find the worst emission conditions in configuration, operating mode, or ambient noise notation.

[ Final Measurement ]

The EUT operated in the worst emission condition found by the preliminary test.

The turntable azimuth (EUT direction) and antenna height are adjusted the position so that maximum field strength is obtained for each frequency spectrum to be measured.

The equipment and cables are arranged or manipulated within the range of the test standard in the above condition. At least six highest spectrums are measured by the test receiver (quasi-peak) and spectrum analyzer (peak and average). When the uncertain result was obtained (30 – 1000 MHz), the measurement is retried by using the half wave dipole antenna instead of the broadband antenna.

## SECTION 9. MEASUREMENT UNCERTAINTY

<b>Radiated disturbance at 3m</b>	$U_{lab}$	$U_{cispr}$
30 MHz – 1000 MHz	+/- 4.74 dB	5.2 dB
Above 1 GHz CISPR22	+/- 4.20 dB	
ANCI 63.4	+/- 4.47 dB	
<b>Radiated disturbance at 10m</b>		
30 MHz – 1000 MHz	+/- 4.64 dB	5.1 dB
Above 1 GHz	+/- 4.37 dB	
<b>Radiated disturbance at 30m</b>		
	N/A	5.2 dB
<b>Radiated disturbance (power)</b>		
11.7 GHz – 12.7 GHz	N/A	Nil
<b>Conducted disturbance at mains terminals</b>		
9 kHz – 150 kHz	+/- 2.87 dB	4.0 dB
150 kHz – 30 MHz		3.6 dB
<b>Conducted disturbance at telecommunication ports (voltage)</b>		
9 kHz – 30 MHz	+/- 3.02 dB	Nil
<b>Conducted disturbance at telecommunication ports (current)</b>		
9 kHz – 30 MHz	+/- 3.12 dB	Nil
<b>Conducted disturbance at terminals</b>		
150 kHz – 30 MHz	+/- 3.07 dB	Nil
<b>Disturbance power</b>		
30 MHz – 300 MHz	+/- 3.27 dB	4.5 dB

The above expanded instrumentation uncertainty,  $U_{lab}$ , is estimated in accordance with CISPR 16-4-2. Traceability to national standard in SI units is ensured with these values. Compliance with the limits in this standard are determined without in consideration of the measurement uncertainty of the measurement instrumentation.

## SECTION 10. EVALUATION OF TEST RESULTS

### 10.1 Conducted disturbance at mains terminals

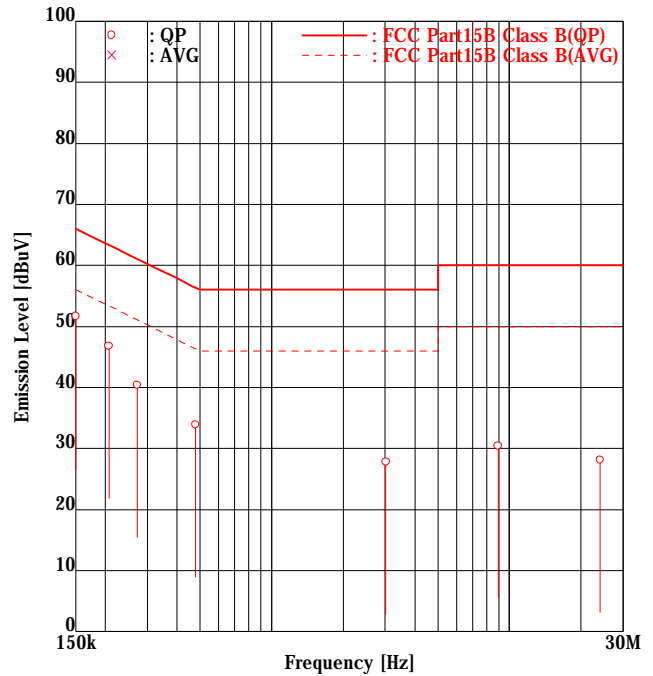
#### 10.1.1 KPG-22U

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Matsuda No.4 Test Site

Conducted Voltages on Mains Port

APPLICANT : Kenwood Corporation  
 EUT NAME : USB PROGRAMMING INTERFACE  
 CABLE  
 MODEL NO. : KPG-22U  
 SERIAL NO. : None  
 TEST MODE : Communication mode  
 POWER SOURCE : AC 120V / 60Hz  
 DATE TESTED : Nov 12 2010  
 FILE NO. : JM10110020  
 REGULATION : FCC Part15B Class B  
 TEST METHOD : ANSI C63.4-2003  
 TEMPERATURE : 17.0 [degC]  
 HUMIDITY : 59.0 [%]  
 NOTE :



ENGINEER : Hideaki Kosemura

FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	41.4	<u>41.6</u>	10.1	10.1	51.5	<u>51.7</u>	66.0	14.5	<u>14.3</u>
2	0.2066	QP	36.2	<u>36.7</u>	10.1	10.1	46.3	<u>46.8</u>	63.3	17.0	<u>16.5</u>
3	0.2727	QP	29.8	<u>30.3</u>	10.1	10.1	39.9	<u>40.4</u>	61.0	21.1	<u>20.6</u>
4	0.4794	QP	19.0	<u>23.8</u>	10.1	10.1	29.1	<u>33.9</u>	56.3	27.2	<u>22.4</u>
5	3.0199	QP	<u>17.4</u>	15.3	10.4	10.4	<u>27.8</u>	25.7	56.0	<u>28.2</u>	30.3
6	8.9452	QP	19.5	<u>19.7</u>	10.7	10.7	30.2	<u>30.4</u>	60.0	29.8	<u>29.6</u>
7	24.0364	QP	16.6	17.0	11.0	11.1	27.6	28.1	60.0	32.4	31.9

Higher six points are underlined.  
 Other frequencies : Below the FCC Part15B Class B limit  
 Emission Level = Read + Factor(LISN,Pad,Cable)

emiT 3, 0, 0, 0

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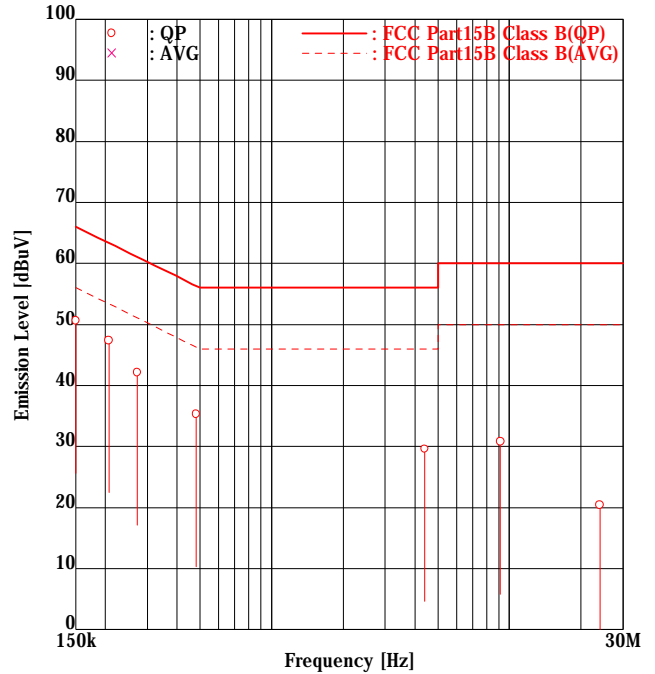
10.1.2 KPG-36U

**Intertek Japan K.K.**

**Matsuda No.4 Test Site**

**Conducted Voltages on Mains Port**

APPLICANT : Kenwood Corporation  
 EUT NAME : USB PROGRAMMING INTERFACE  
 CABLE :  
 MODEL NO. : KPG-36U  
 SERIAL NO. : None  
 TEST MODE : Communication mode  
 POWER SOURCE : AC 120V / 60Hz  
 DATE TESTED : Nov 12 2010  
 FILE NO. : JM10110020  
 REGULATION : FCC Part15B Class B  
 TEST METHOD : ANSI C63.4-2003  
 TEMPERATURE : 17.0 [degC]  
 HUMIDITY : 59.0 [%]  
 NOTE :



ENGINEER : Hideaki Kosemura

FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	40.4	<u>40.5</u>	10.1	10.1	50.5	<u>50.6</u>	66.0	15.5	<u>15.4</u>
2	0.2066	QP	35.7	<u>37.3</u>	10.1	10.1	45.8	<u>47.4</u>	63.3	17.5	<u>15.9</u>
3	0.2725	QP	28.9	<u>32.0</u>	10.1	10.1	39.0	<u>42.1</u>	61.0	22.0	<u>18.9</u>
4	0.4805	QP	18.7	<u>25.2</u>	10.1	10.1	28.8	<u>35.3</u>	56.3	27.5	<u>21.0</u>
5	4.3939	QP	12.5	<u>19.1</u>	10.5	10.5	23.0	<u>29.6</u>	56.0	33.0	<u>26.4</u>
6	9.1587	QP	<u>20.1</u>	20.0	10.7	10.7	<u>30.8</u>	30.7	60.0	<u>29.2</u>	29.3
7	23.9991	QP	9.1	9.3	11.1	11.1	20.2	20.4	60.0	39.8	39.6

Higher six points are underlined.  
 Other frequencies : Below the FCC Part15B Class B limit  
 Emission Level = Read + Factor(LISN,Pad,Cable)

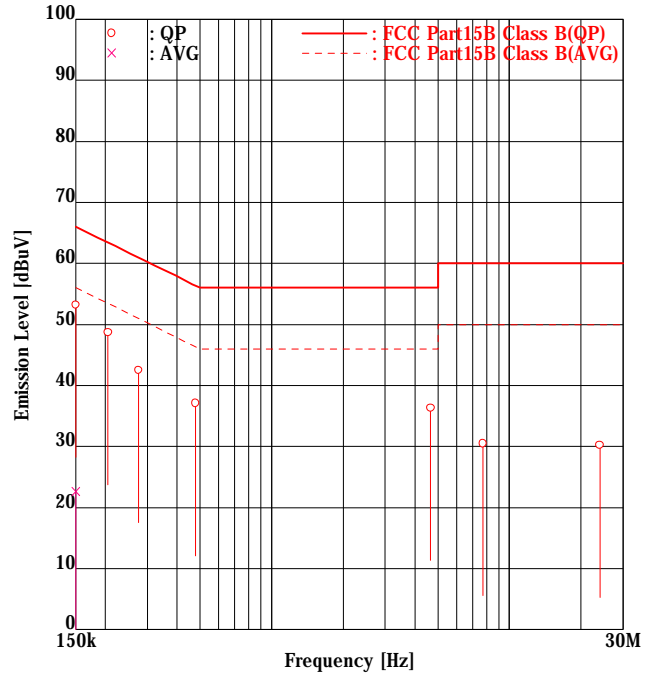
10.1.3 KPG-43U

**Intertek Japan K.K.**

**Matsuda No.4 Test Site**

**Conducted Voltages on Mains Port**

APPLICANT : Kenwood Corporation  
 EUT NAME : USB PROGRAMMING INTERFACE  
 CABLE  
 MODEL NO. : KPG-43U  
 SERIAL NO. : None  
 TEST MODE : Communication mode  
 POWER SOURCE : AC 120V / 60Hz  
 DATE TESTED : Nov 12 2010  
 FILE NO. : JM10110020  
 REGULATION : FCC Part15B Class B  
 TEST METHOD : ANSI C63.4-2003  
 TEMPERATURE : 17.0 [degC]  
 HUMIDITY : 59.0 [%]  
 NOTE :



ENGINEER : Hideaki Kosemura

FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	42.9	<u>43.1</u>	10.1	10.1	53.0	<u>53.2</u>	66.0	13.0	<u>12.8</u>
2	0.1500	AVG	12.5	12.5	10.1	10.1	22.6	22.6	56.0	33.4	33.4
3	0.2051	QP	37.6	<u>38.6</u>	10.1	10.1	47.7	<u>48.7</u>	63.4	15.7	<u>14.7</u>
4	0.2752	QP	31.4	<u>32.4</u>	10.1	10.1	41.5	<u>42.5</u>	61.0	19.5	<u>18.5</u>
5	0.4791	QP	21.2	<u>27.0</u>	10.1	10.1	31.3	<u>37.1</u>	56.4	25.1	<u>19.3</u>
6	4.6648	QP	<u>25.8</u>	24.7	10.5	10.5	<u>36.3</u>	35.2	56.0	<u>19.7</u>	20.8
7	7.7350	QP	<u>19.8</u>	19.7	10.7	10.7	<u>30.5</u>	30.4	60.0	<u>29.5</u>	29.6
8	23.9820	QP	18.8	19.1	11.1	11.1	29.9	30.2	60.0	30.1	29.8

Higher six points are underlined.  
 Other frequencies : Below the FCC Part15B Class B limit  
 Emission Level = Read + Factor(LISN,Pad,Cable)

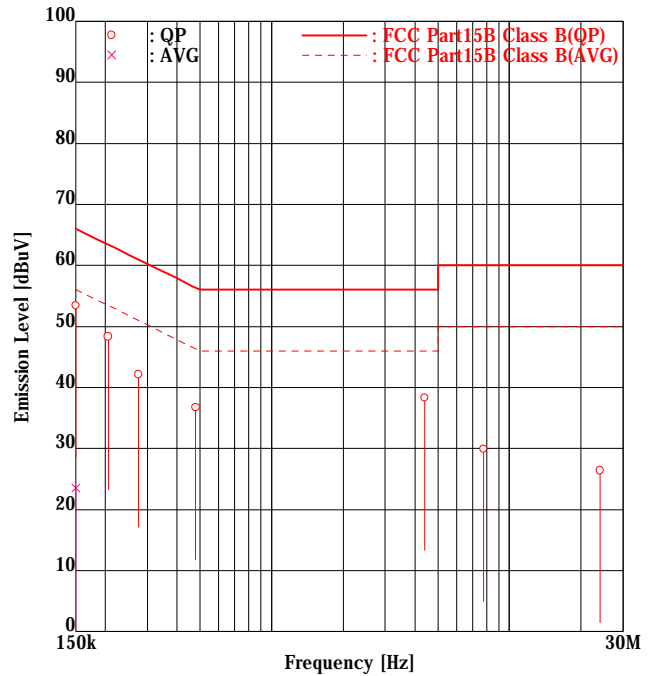
10.1.4 KPG-46U

**Intertek Japan K.K.**

**Matsuda No.4 Test Site**

**Conducted Voltages on Mains Port**

APPLICANT : Kenwood Corporation  
 EUT NAME : USB PROGRAMMING INTERFACE  
           CABLE  
 MODEL NO. : KPG-46U  
 SERIAL NO. : None  
 TEST MODE : Communication mode  
 POWER SOURCE : AC 120V / 60Hz  
 DATE TESTED : Nov 12 2010  
 FILE NO. : JM10110020  
 REGULATION : FCC Part15B Class B  
 TEST METHOD : ANSI C63.4-2003  
 TEMPERATURE : 17.0 [degC]  
 HUMIDITY : 59.0 [%]  
 NOTE :



ENGINEER : Hideaki Kosemura

FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	<u>43.3</u>	42.4	10.1	10.1	<u>53.4</u>	52.5	66.0	<u>12.6</u>	13.5
2	0.1500	AVG	13.2	13.4	10.1	10.1	23.3	23.5	56.0	32.7	32.5
3	0.2053	QP	37.5	<u>38.2</u>	10.1	10.1	47.6	<u>48.3</u>	63.4	15.8	<u>15.1</u>
4	0.2750	QP	31.7	<u>32.0</u>	10.1	10.1	41.8	<u>42.1</u>	61.0	19.2	<u>18.9</u>
5	0.4797	QP	22.6	<u>26.6</u>	10.1	10.1	32.7	<u>36.7</u>	56.3	23.6	<u>19.6</u>
6	4.3940	QP	<u>27.8</u>	27.1	10.5	10.5	<u>38.3</u>	37.6	56.0	<u>17.7</u>	18.4
7	7.7938	QP	19.0	<u>19.2</u>	10.7	10.7	29.7	<u>29.9</u>	60.0	30.3	<u>30.1</u>
8	24.0436	QP	15.1	15.3	11.0	11.1	26.1	26.4	60.0	33.9	33.6

Higher six points are underlined.  
 Other frequencies : Below the FCC Part15B Class B limit  
 Emission Level = Read + Factor(LISN,Pad,Cable)

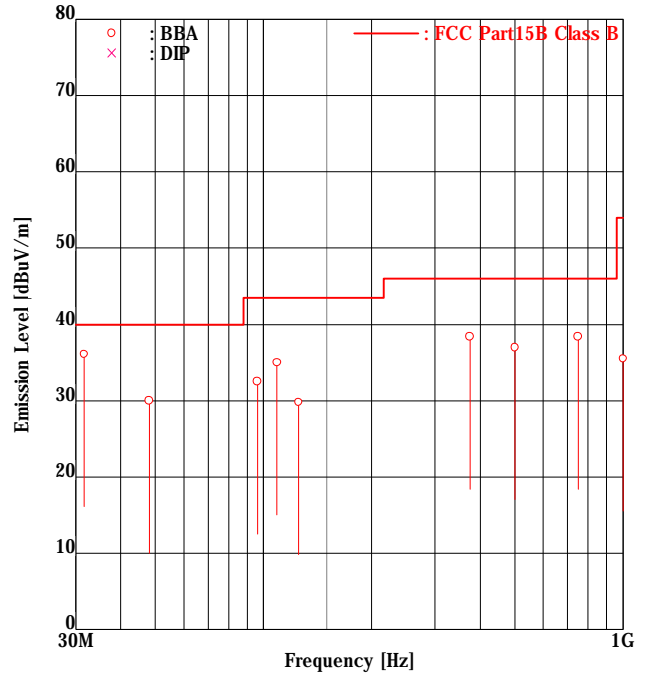
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10.2 Radiated disturbance  
10.2.1 KPG-22U

Intertek Japan K.K.  
Matsuda No.4 Test Site  
Radiated Electric Field

APPLICANT : Kenwood Corporation  
EUT NAME : USB PROGRAMMING INTERFACE  
CABLE  
MODEL NO. : KPG-22U  
SERIAL NO. : None  
TEST MODE : Communication mode  
POWER SOURCE : DC 5V (HOST : AC 120V / 60Hz)  
DATE TESTED : Nov 12 2010  
FILE NO. : JM10110020  
REGULATION : FCC Part15B Class B  
TEST METHOD : ANSI C63.4-2003  
DISTANCE : 3.00 [m]  
TEMPERATURE : 17.0 [degC]  
HUMIDITY : 59.0 [%]  
NOTE :



ENGINEER : Hideaki Kosemura

FREQUENCY [No]	ANT. [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	31.64	BBA	27.3	<u>44.2</u>	-8.1	-8.1	19.2	<u>36.1</u>	40.0	20.8	<u>3.9</u>
2	48.05	BBA	29.1	<u>36.2</u>	-6.2	-6.2	22.9	<u>30.0</u>	40.0	17.1	<u>10.0</u>
3	96.12	BBA	-	43.8	-11.3	-11.3	-	32.5	43.5	-	11.0
4	108.96	BBA	-	<u>44.3</u>	-9.3	-9.3	-	<u>35.0</u>	43.5	-	<u>8.5</u>
5	125.00	BBA	-	37.1	-7.3	-7.3	-	29.8	43.5	-	13.7
6	375.00	BBA	<u>40.9</u>	-	-2.5	-2.5	<u>38.4</u>	-	46.0	<u>7.6</u>	-
7	500.00	BBA	<u>35.8</u>	-	1.2	1.2	<u>37.0</u>	-	46.0	<u>9.0</u>	-
8	750.00	BBA	<u>32.0</u>	-	6.4	6.4	<u>38.4</u>	-	46.0	<u>7.6</u>	-
9	1000.00	BBA	25.3	-	10.2	10.2	35.5	-	54.0	18.5	-

Higher six points are underlined.  
Other frequencies : Below the FCC Part15B Class B limit  
Emission Level = Read + Factor(Antenna, Antenna Pad, Cable, Preamp)  
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

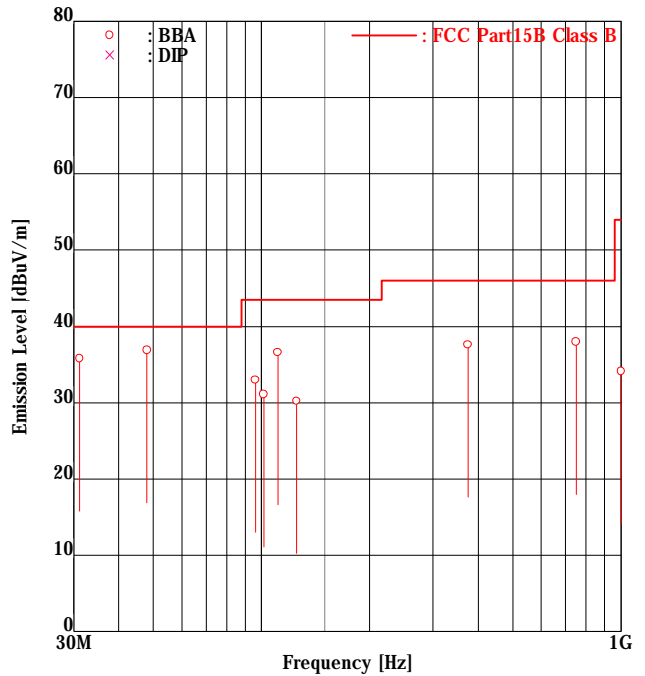
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10.2.2 KPG-36U

**Intertek Japan K.K.**  
**Matsuda No.4 Test Site**  
**Radiated Electric Field**

APPLICANT : Kenwood Corporation  
EUT NAME : USB PROGRAMMING INTERFACE  
CABLE  
MODEL NO. : KPG-36U  
SERIAL NO. : None  
TEST MODE : Communication mode  
POWER SOURCE : DC 5V (HOST : AC 120V / 60Hz)  
DATE TESTED : Nov 11 2010  
FILE NO. : JM10110020  
REGULATION : FCC Part15B Class B  
TEST METHOD : ANSI C63.4-2003  
DISTANCE : 3.00 [m]  
TEMPERATURE : 22.0 [degC]  
HUMIDITY : 35.0 [%]  
NOTE :



ENGINEER : Hideaki Kosemura

FREQUENCY [No]	ANT. [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]		
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert	
1	31.17	BBA	-	<u>43.9</u>	-8.1	-8.1	-	<u>35.8</u>	40.0	-	<u>4.2</u>
2	48.01	BBA	32.0	<u>43.1</u>	-6.2	-6.2	25.8	<u>36.9</u>	40.0	14.2	<u>3.1</u>
3	96.11	BBA	-	<u>44.3</u>	-11.3	-11.3	-	<u>33.0</u>	43.5	-	<u>10.5</u>
4	101.30	BBA	-	41.6	-10.5	-10.5	-	31.1	43.5	-	12.4
5	110.94	BBA	35.1	<u>45.6</u>	-9.0	-9.0	26.1	<u>36.6</u>	43.5	17.4	<u>6.9</u>
6	125.00	BBA	-	37.5	-7.3	-7.3	-	30.2	43.5	-	13.3
7	375.00	BBA	<u>40.1</u>	-	-2.5	-2.5	<u>37.6</u>	-	46.0	<u>8.4</u>	-
8	750.00	BBA	<u>31.6</u>	-	6.4	6.4	<u>38.0</u>	-	46.0	<u>8.0</u>	-
9	1000.00	BBA	23.9	-	10.2	10.2	34.1	-	54.0	19.9	-

Higher six points are underlined.  
Other frequencies : Below the FCC Part15B Class B limit  
Emission Level = Read + Factor(Antenna, Antenna Pad, Cable, Preamp)  
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

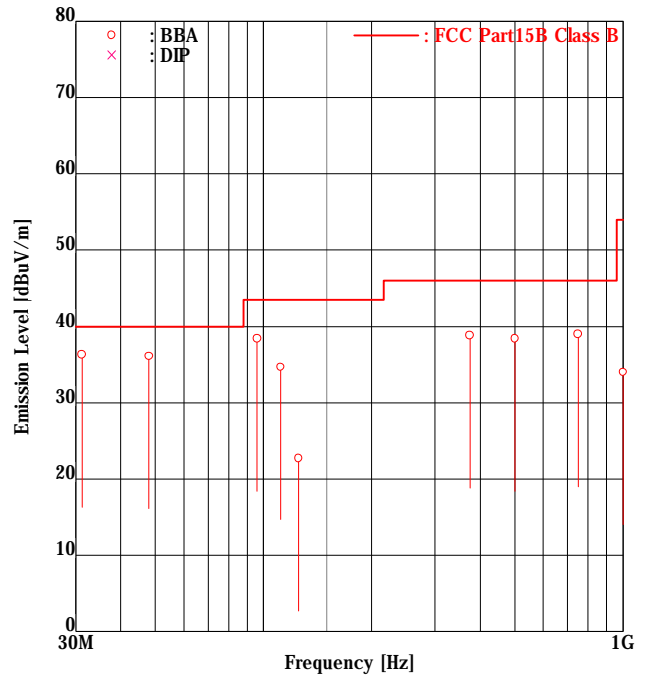
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10.2.3 KPG-43U

**Intertek Japan K.K.**  
**Matsuda No.4 Test Site**  
**Radiated Electric Field**

APPLICANT : Kenwood Corporation  
EUT NAME : USB PROGRAMMING INTERFACE  
CABLE  
MODEL NO. : KPG-43U  
SERIAL NO. : None  
TEST MODE : Communication mode  
POWER SOURCE : DC 5V (HOST : AC 120V / 60Hz)  
DATE TESTED : Nov 12 2010  
FILE NO. : JM10110020  
REGULATION : FCC Part15B Class B  
TEST METHOD : ANSI C63.4-2003  
DISTANCE : 3.00 [m]  
TEMPERATURE : 17.0 [degC]  
HUMIDITY : 59.0 [%]  
NOTE :



ENGINEER : Hideaki Kosemura

FREQUENCY [No]	ANT. [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	31.24	BBA	-	<u>44.4</u>	-8.1	-8.1	-	<u>36.3</u>	40.0	-	<u>3.7</u>
2	47.97	BBA	-	<u>42.3</u>	-6.2	-6.2	-	<u>36.1</u>	40.0	-	<u>3.9</u>
3	95.95	BBA	<u>49.7</u>	44.9	-11.3	-11.3	<u>38.4</u>	33.6	43.5	<u>5.1</u>	9.9
4	111.47	BBA	-	43.6	-8.9	-8.9	-	34.7	43.5	-	8.8
5	125.00	BBA	-	30.0	-7.3	-7.3	-	22.7	43.5	-	20.8
6	375.00	BBA	<u>41.3</u>	-	-2.5	-2.5	<u>38.8</u>	-	46.0	<u>7.2</u>	-
7	500.00	BBA	<u>37.2</u>	-	1.2	1.2	<u>38.4</u>	-	46.0	<u>7.6</u>	-
8	750.00	BBA	<u>32.6</u>	30.8	6.4	6.4	<u>39.0</u>	37.2	46.0	<u>7.0</u>	8.8
9	1000.00	BBA	23.8	-	10.2	10.2	34.0	-	54.0	20.0	-

Higher six points are underlined.  
Other frequencies : Below the FCC Part15B Class B limit  
Emission Level = Read + Factor(Antenna, Antenna Pad, Cable, Preamp)  
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

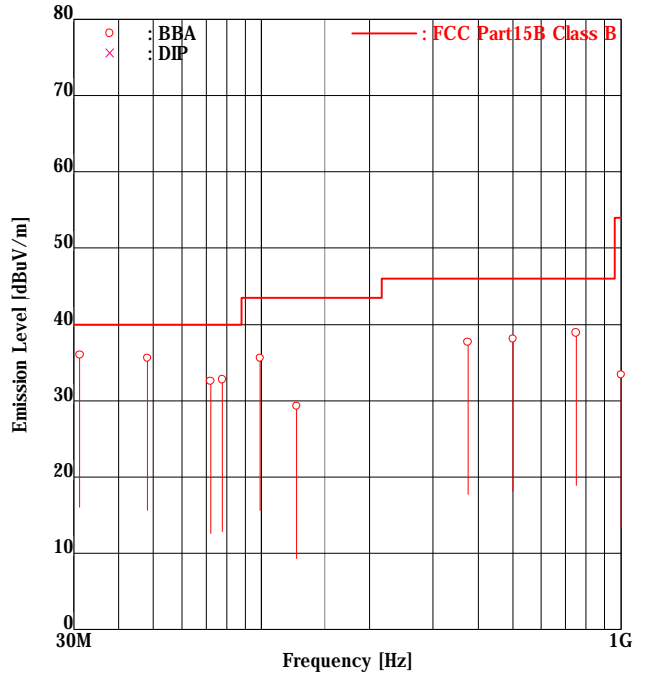
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10.2.4 KPG-46U

**Intertek Japan K.K.**  
**Matsuda No.4 Test Site**  
**Radiated Electric Field**

APPLICANT : Kenwood Corporation  
EUT NAME : USB PROGRAMMING INTERFACE  
CABLE  
MODEL NO. : KPG-46U  
SERIAL NO. : None  
TEST MODE : Communication mode  
POWER SOURCE : DC 5V (HOST : AC 120V / 60Hz)  
DATE TESTED : Nov 12 2010  
FILE NO. : JM10110020  
REGULATION : FCC Part15B Class B  
TEST METHOD : ANSI C63.4-2003  
DISTANCE : 3.00 [m]  
TEMPERATURE : 17.0 [degC]  
HUMIDITY : 59.0 [%]  
NOTE :



ENGINEER : Hideaki Kosemura

FREQUENCY [No]	ANT. [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert
1	31.19	BBA	24.5	<u>44.1</u>	-8.1	-8.1	16.4	<u>36.0</u>	40.0	23.6	<u>4.0</u>
2	48.10	BBA	-	<u>41.8</u>	-6.2	-6.2	-	<u>35.6</u>	40.0	-	<u>4.4</u>
3	72.14	BBA	40.0	<u>41.1</u>	-8.5	-8.5	31.5	<u>32.6</u>	40.0	8.5	<u>7.4</u>
4	77.67	BBA	-	<u>42.7</u>	-9.9	-9.9	-	<u>32.8</u>	40.0	-	<u>7.2</u>
5	99.15	BBA	-	<u>46.4</u>	-10.8	-10.8	-	<u>35.6</u>	43.5	-	<u>7.9</u>
6	125.00	BBA	-	36.6	-7.3	-7.3	-	29.3	43.5	-	14.2
7	375.00	BBA	40.2	-	-2.5	-2.5	37.7	-	46.0	8.3	-
8	500.00	BBA	<u>36.9</u>	-	1.2	1.2	<u>38.1</u>	-	46.0	<u>7.9</u>	-
9	750.00	BBA	<u>32.5</u>	30.2	6.4	6.4	<u>38.9</u>	36.6	46.0	<u>7.1</u>	9.4
10	1000.00	BBA	23.2	-	10.2	10.2	33.4	-	54.0	20.6	-

Higher six points are underlined.  
Other frequencies : Below the FCC Part15B Class B limit  
Emission Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)  
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

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**SECTION 12. LIST OF MEASURING INSTRUMENTS**

Instrument	Model No.	Serial No.	Manufacturer	Cal. date	Due date
<b>Conducted disturbance at mains terminals</b>					
LISN(EUT)	ESH2-Z5	882395/019	Rohde & Schwarz	Jul.28,2010	Jul.31,2011
LISN(Peripheral)	KNW-242	8-851-25	Kyoritsu	Jul.28,2010	Jul.31,2011
10dB LISN Pad	090-0110A	E04AT10A	Misumi	Aug.3,2010	Aug.31,2011
50Ω Termination	65BNC-50-0-2/133NE	E04TRM50B	SUHNER	Jul.28,2010	Jul.31,2011
Coaxial Cable (C1)	3D-2W(5.0m)	MTS04CSR-1	Intertek	Aug.3,2010	Aug.31,2011
Coaxial Cable (C2)	RG-5A/U(4.0m)	MTS04CSR-2	Intertek	Aug.3,2010	Aug.31,2011
Coaxial Cable (C3)	RG214HF(1.5m)	MTS04CSR-3	SUHNER	Aug.3,2010	Aug.31,2011
Coaxial Cable (C4)	RG214HF(1.5m)	MTS04CSR-4	SUHNER	Aug.3,2010	Aug.31,2011
Coaxial Cable (C5)	RG214HF(1.5m)	MTS04CSR-5	SUHNER	Aug.3,2010	Aug.31,2011
<b>Radiated disturbance</b>					
Broad Band Antenna	VULB9168	332	Schwarzbeck	Nov.5,2009	Nov.30,2010
Amplifier	8447D	1937A02669	Hewlett Packard	Aug.3,2010	Aug.31,2011
6dB Attenuator	6806.17.AC	None	HUBER+SUHNER	Aug.3,2010	Aug.31,2011
Step Attenuator	8494A	1510A08521	Hewlett Packard	Aug.3,2010	Aug.31,2011
Coaxial Cable (R1)	RG214HF(9.0m)	MTS04R3-1	SUHNER	Aug.3,2010	Aug.31,2011
Coaxial Cable (R2)	8D-2W(15.0m)	MTS04R3-2	Intertek	Aug.3,2010	Aug.31,2011
Coaxial Cable (R3)	RG214HF(2.0m)	MTS04R3-3	SUHNER	Aug.3,2010	Aug.31,2011
Coaxial Cable (R4)	RG214HF(0.4m)	MTS04R3-4	SUHNER	Aug.3,2010	Aug.31,2011
Coaxial Cable (R5)	RG214HF(0.4m)	MTS04R3-5	SUHNER	Aug.3,2010	Aug.31,2011
Coaxial Cable (R6)	RG214HF(1.5m)	MTS04R3-6	SUHNER	Aug.3,2010	Aug.31,2011
Coaxial Cable (R7)	RG214HF(1.5m)	MTS04R3-7	SUHNER	Aug.3,2010	Aug.31,2011
Coaxial Cable (R8)	RG214HF(1.5m)	MTS04R3-8	SUHNER	Aug.3,2010	Aug.31,2011
Coaxial Cable (R9)	RG214HF(6.0m)	MTS04R3-9	SUHNER	Aug.3,2010	Aug.31,2011
Site Attenuation				Apr.15,2010	Apr.30,2011
<b>Common</b>					
Test Receiver	ESS (Firmware Version 1.08)	845637/001	Rohde & Schwarz	Dec.22,2009	Dec.31,2010
RF Switch(1)	MP59B	M21448	ANRITSU	Aug.3,2010	Aug.31,2011
RF Switch(2)	ACX-150-1	E04301501	Intertek	Aug.3,2010	Aug.31,2011
Testing Software	emiT (Version 3,0,0,0)				

Note : Test instruments are calibrated according to Quality Manual and Calibration Rules of Intertek Japan K.K.