



ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR FCC CLASS B CERTIFICATION

Test report file number : E018R-026

Applicant : Keter Corporation
Address : #402 Sungwoo EQ B/D, 1099-1 Sanbon-Dong, Kunpo-Si, Kyonggi-Do, Korea
Manufacturer : Cal-Comp Electronics Public Company Limited
Address : 191/54, 57, 18th Floor, CTI Tower, Rachadapis Road, Klong Toey, Bangkok 10110 Thailand
Type of Equipment : Dual Mode Digital Camera
FCC ID : PTZKT-1000F
Model / Type No. : KT-1000F
Serial number : N/A
Total page of Report : 13 pages (including this page)
Date of Incoming : August 14, 2001
Date of Issuing : August 20, 2001

SUMMARY

The equipment complies with the regulation; *FCC CFR 47 PART 15 SUBPART B, Class B.*

This test report contains only the results of a single test of the sample supplied for the examination.

It is not a general valid assessment of the features of the respective products of the mass-production.

Reviewed by:

Y.K. Nam / Asst. Chief Engineer
EMC Dept.
ONETECH Corp.

Approved by:

Y. K. Kwon / Chief Engineer
EMC Dept.
ONETECH Corp.



CONTENTS

	Page
1. VERIFICATION OF COMPLIANCE.....	3
2. GENERAL INFORMATION	4
2.1 PRODUCT DESCRIPTION.....	4
2.2 RELATED SUBMITTAL(S) / GRANT(S)	4
2.3 TEST SYSTEM DETAILS.....	5
2.4 TEST METHODOLOGY	5
2.5 TEST FACILITY	5
3. SYSTEM TEST CONFIGURATION.....	6
3.1 JUSTIFICATION	6
3.2 EUT EXERCISE SOFTWARE	6
3.3 CABLE DESCRIPTION.....	6
3.4 NOISE SUPPRESSION PARTS ON CABLE	7
3.5 EQUIPMENT MODIFICATIONS.....	7
3.6 CONFIGURATION OF TEST SYSTEM.....	7
4. PRELIMINARY TEST	8
4.1 AC POWER LINE CONDUCTED EMISSION TEST.....	8
4.2 RADIATED EMISSION TEST.....	8
5. FINAL RESULT OF MEASUREMENT	9
5.1 CONDUCTED EMISSION TEST.....	9
5.2 RADIATED EMISSION TEST.....	10
6. FIELD STRENGTH CALCULATION	12
7. LIST OF TEST EQUIPMENT.....	13

**1. VERIFICATION OF COMPLIANCE**

APPLICANT : Keter Corporation
ADDRESS : #402 Sungwoo EQ B/D, 1099-1 Sanbon-Dong, Kunpo-Si, Kyonggi-Do, Korea
CONTACT PERSON : Young-Hwan, Kim / Manager
TELEPHONE NO : +82-31-390-1203
FCC ID : PTZKT-1000F
MODEL NO/NAME : KT-1000F
SERIAL NUMBER : N/A
DATE : August 20, 2001

DEVICE TYPE	Peripheral Device for Class B Computing Device - Unintentional Radiator
E.U.T. DESCRIPTION	Dual Mode Digital Camera
THIS REPORT CONCERNS	ORIGINAL GRANT
MEASUREMENT PROCEDURES	ANSI C63.4/1992
TYPE OF EQUIPMENT TESTED	PRE-PRODUCTION
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	CERTIFICATION
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15, SECTION 15.101 (Class B)
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	No
FINAL TEST WAS CONDUCTED ON	3 METER OPEN AREA TEST SITE

The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.



2. GENERAL INFORMATION

2.1 Product Description

The Keter Corporation, Model KT-1000F (referred to as the EUT in this report) is a Dual Mode Digital Camera, which has two functions, one is digital camera and the other is a PC camera. It can take photograph such as digital camera and displayed captured video from EUT on the screen of monitor such as a PC camera, also storage image data in EUT was transferred to PC using USB interface cable. Product specification described herein was obtained from product data sheet or user's manual.

CHASSIS TYPE	Plastic – Non coated
LIST OF EACH OSC. OR CRY. FREQ.(FREQ.>=1MHz)	2.048 MHz, 48.0 MHz on the main board
POWER REQUIREMENT	DC 1.5V x 2 supplied from batteries
NUMBER OF LAYERS	4 Layers
EXTERNAL CONNECTOR	USB Port

Model Differences:

- . The following list consists of added model name and their difference. The basic and added models are identical except for used memory.

	Model Name	Model Difference
Basic Model Name	KT-1000F	Flash ROM version (Flash & SDRAM)
Added Model Name	KT-1000S	SDRAM version (SDRAM only)

2.2 Related Submittal(s) / Grant(s)

Original submittal only



2.3 Test System Details

The model numbers for all the equipments that were used in the tested system is:

Model	Manufacturer	FCC ID	Description	Connected to
KT-1000F	Keter Corporation	PTZKT-1000F	Dual Mode Digital Camera (EUT)	NOTEBOOK PC
PA2450U	TOSHIBA	N/A	AC/DC ADAPTER	NOTEBOOK PC
PAT8006	TOSHIBA	DoC	NOTEBOOK PC	-
2225C	HP	DSI6XU2225	PRINTER	NOTEBOOK PC
020-0470	CARDINAL	GDE0196	MODEM	NOTEBOOK PC

2.4 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4/1992. Radiated testing was performed at a distance of 3 meters from EUT to the antenna.

2.5 Test Facility

The open area test site and conducted measurement facilities are located on at 426-1 Daessangryung-Ri, Chowol-Myun, Kwangju-Kun, Kyunggi-Do 464-080 Korea. Description details of test facilities were submitted to the Commission on January 12, 1999. (Registration Number: 92819)



3. SYSTEM TEST CONFIGURATION

3.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	Keter Corporation	DSC-COA12	N/A

3.2 EUT exercise Software

The EUT was operated at each mode for digital camera and PC camera mode.

During the test, the image captured from the EUT was continuously displayed on the screen of monitor and storage image data in the EUT were transferred to a PC continuously.

3.3 Cable Description

	Power Cord Shielded (Y/N)	I/O cable Shielded (Y/N)	Length (M)
Dual Mode Digital Camera (EUT)	N/A	Y	1.2(D)
AC/DC ADAPTER	N	N/A	1.5(P)
NOTEBOOK PC	N	N/A	1.5(P)
MODEM	N	Y	1.5(P), 1.5(D)
PRINTER	N	Y	1.5(P), 1.5(D)

* The marked "(P)" means the Power Cable and "(D)" means the Data Cable.



3.4 Noise Suppression Parts on Cable

	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
Dual Mode Digital Camera (EUT)	Y	EUT END	Y	BOTH END
AC/DC ADAPTER	N	N/A	Y	NOTEBOOK PC END
NOTEBOOK PC	-	-	-	-
MODEM	N	N/A	Y	BOTH END
PRINTER	N	N/A	Y	BOTH END

3.5 Equipment Modifications

To achieve compliance to CLASS B levels, the following change(s) was made by ONETECH Corp. during compliance testing:

“There was no Modified items during EMI test”

3.6 Configuration of Test System

Line Conducted Test: The EUT was connected to USB port of NOTE PC and the power line of PC was connected to LISN. All supporting equipments were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.4/1992 7.2.3 to determine the worse operating conditions.

Radiated Emission Test: Preliminary radiated emission test was conducted using the procedure in ANSI C63.4/1992 8.3.1.1 to determine the worse operating conditions. Final radiated emission test was conducted at 3 meters open area test site.

**4. PRELIMINARY TEST****4.1 AC Power line Conducted Emission Test**

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition (Please check one only)
Standby mode	
Digital camera mode	
PC camera mode	X

4.2 Radiated Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition (Please check one only)
Standby mode	
Digital camera mode	
PC camera mode	X

**5. FINAL RESULT OF MEASUREMENT**

Preliminary test was done in normal operation mode. And the final measurement was selected for the maximized emission level

5.1 Conducted Emission Test

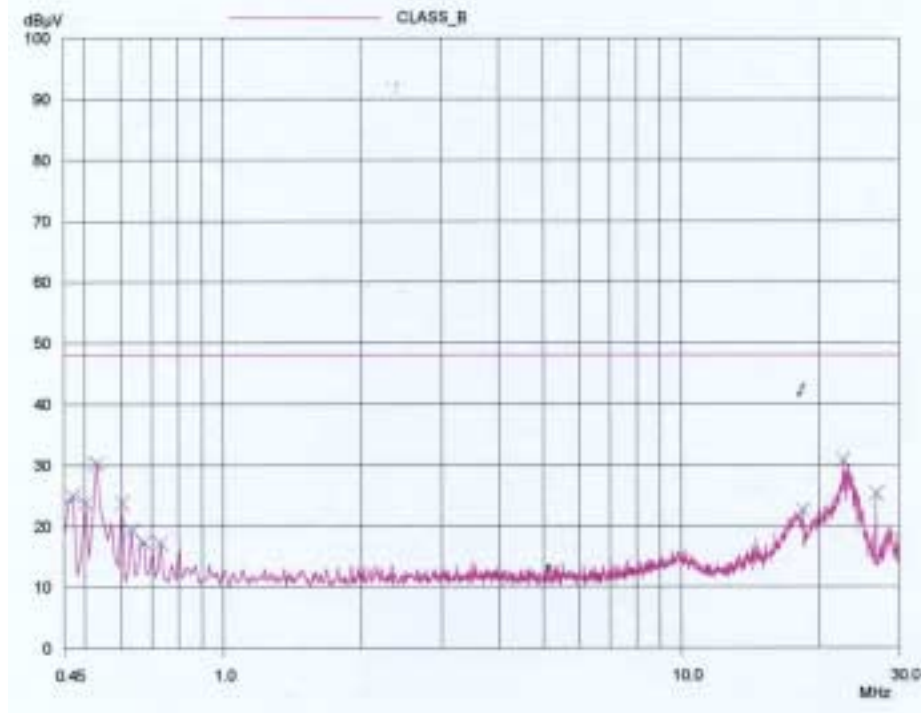
Humidity Level : 50 % Temperature : 25 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.107
 Type of Test : CLASS B
 Result : PASSED BY -17.10 dB at 0.53 MHz

EUT : Dual Mode Digital Camera Date: August 6, 2001
 Operating Condition : PC camera mode
 Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

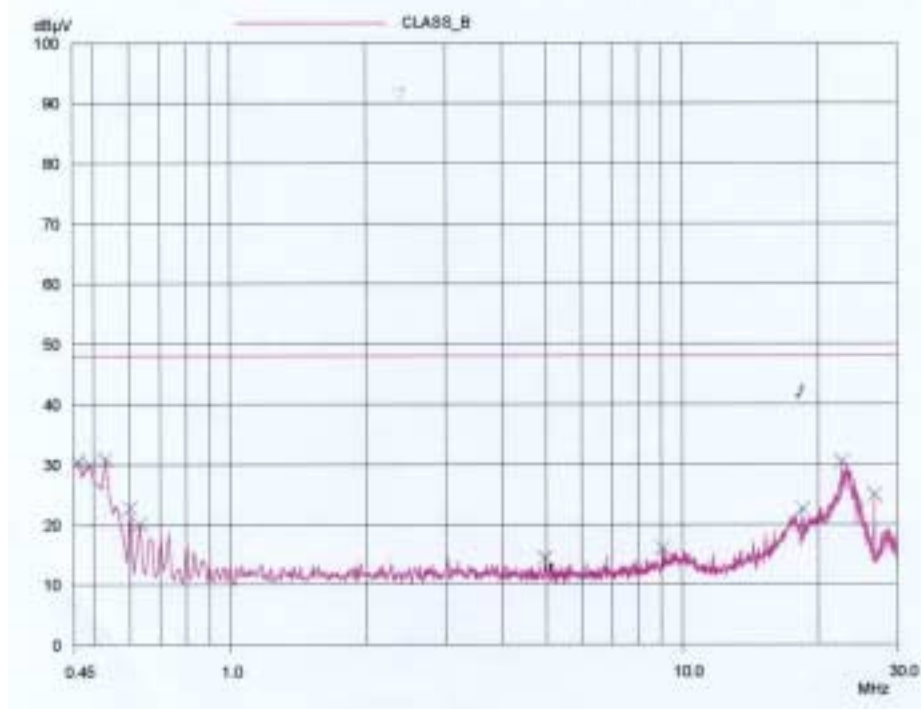
Power Line Conducted Emission			FCC CLASS B	
Frequency (MHz)	Amplitude (dBuV)	Conductor	Limit (dBuV)	Margin (dB)
0.46	30.52	NEUTRAL	48.00	-17.48
0.53	30.90	NEUTRAL	48.00	-17.10
0.60	22.72	NEUTRAL	48.00	-25.28
4.96	14.47	NEUTRAL	48.00	-33.53
9.05	15.99	NEUTRAL	48.00	-32.01
18.43	22.61	HOT	48.00	-25.39
22.53	30.75	HOT	48.00	-17.25
26.62	25.27	HOT	48.00	-22.73

Line Conducted Emission Tabulated Data

Tested by: Seung Hyun, Nam / Test Engineer



HOT LINE



NEUTRAL LINE

**5.2 Radiated Emission Test**

The following table shows the highest levels of radiated emission on both polarizations of horizontal and vertical.

Humidity Level : 50 % Temperature : 25 °C
 Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.109
 Type of Test : CLASS B
 Result : PASSED BY -4.05 dB at 288.00 MHz

EUT : Dual Mode Digital Camera Date: August 16, 2001
 Operating Condition : PC camera mode
 Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)
 Distance : 3 Meter

Radiated Emission		Ant	Correction Factors		Total	FCC CLASS B	
Freq. (MHz)	Amp. (dBuV)	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
48.00	20.80	V	11.25	0.91	32.96	40.00	-7.04
71.90	23.60	V	6.92	1.00	31.52	40.00	-8.48
84.80	20.30	V	7.25	1.10	28.65	40.00	-11.35
108.54	17.70	V	12.49	1.19	31.38	43.50	-12.12
120.83	17.60	V	13.31	1.23	32.14	43.50	-11.36
144.00	19.60	V	12.96	1.33	33.89	43.50	-9.61
239.80	22.30	H	12.20	1.78	36.28	46.00	-9.72
288.00	25.30	H	14.70	1.95	41.95	46.00	-4.05
336.40	20.60	H	15.20	2.21	38.01	46.00	-7.99
384.40	18.20	H	15.63	2.41	36.24	46.00	-9.76
432.00	17.60	H	16.53	2.50	36.63	46.00	-9.37
444.00	15.87	H	16.80	2.53	35.20	46.00	-10.80

Radiated Emissions Tabulated Data

Tested by : Seung Hyun, Nam / Test Engineer



6. FIELD STRENGTH CALCULATION

Meter readings are compared to the specification limit correcting for antenna and cable losses

+ Meter reading (dBuV)

+ Cable Loss (dB)

+ Antenna Factor (Loss) (dB/meter)

= Corrected Reading (dBuV/meter)

- Specification Limit (dBuV/meter)

= dB Relative to Spec (+/- dB)

**7. LIST OF TEST EQUIPMENT**

No.	EQUIPMENTS	MFR.	MODEL	SER. NO.	LAST CAL	DUE CAL	USE
1.	Test receiver	R/S	ESVS 10	827864/005	OCT/00	12MONTH	
2.	Test receiver	R/S	ESHS10	834467/007	APR/01	12MONTH	
3.	Spectrum analyzer	HP	8568B	3026A0226	SEP/00	12MONTH	
4.	RF preselector	HP	85685A	3107A01264	SEP/00	12MONTH	
5.	Quasi-Peak Adapter	HP	85650A	3107A01542	SEP/00	12MONTH	
6.	Dipole Antenna	EMCO	3121C	9107-745	JUN/00	12MONTH	
7.	Biconical antenna	EMCO	3104C	9109-4441 9109-4443 9109-4444	MAR/01	12MONTH	
8.	Log Periodic antenna	EMCO	3146	9109-3213 9109-3214 9109-3217	JUN/01	12MONTH	
9.	LISN	EMCO	3825/2	9109-1867 9109-1869	JUN/01	12MONTH	
10.	RF Amplifier	HP	8447F	3113A04554	JUN/01	N/A	
11.	Spectrum Analyzer	HP	8591A	3131A02312	APR/01	12MONTH	
12.	Computer System	HP	98581C	98543A	N/A	N/A	
	Hard disk drive		9153C	CMC762Z9153	N/A	N/A	
13.	Plotter	HP	7475A	30052 22986	N/A	N/A	
14.	Position Controller	EMCO	1090	9107-1038	N/A	N/A	
15.	Turn Table	EMCO	1080-1.21	9109-1576	N/A	N/A	
16.	Antenna Master	EMCO	1070-1	9109-1624	N/A	N/A	