

FCC COMPLIANCE REPORT

Order No. : SKE-04-0873/E
Reference No. : F690501/LF-EMC000629
Applicant : Be Interactive Co., Ltd.
Address of Applicant : 4F SeungMyeong Bldg., 1365-1, Seocho-Dong, Seoch-Gu, Seoul 137-875, Korea

Equipment Under Test (EUT) :

Product Name : Barcode Scanner
Model No. : Actvie Scan
FCC ID : PNGACTIVESCAN

Standards : FCC Part 15, Subpart B, Class B
ANSI C63.4:2001

Date of Receipt : 06 September 2004
Date of Test : 07 September 2004 to 08 September
Date of Issue : 09 September 2004

Test Result :	PASS
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In the configuration tested, the EUT complied with the standards specified above.

Remarks :

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report shall not be reproduced except in full, without the written approval of the laboratory. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.



Kew-Seung, Lim
EMC DIV. Manager
SGS Testing Korea Co., Ltd.

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1. General Information

1.1 Manufacturer Information

Manufacturer : Be Interactive Co., Ltd.

Address : 4F SeungMyeong Bldg, 1365-1, Seocho-Dong, Seocho-Gu, Seoul 137-875, Korea

1.2 General Description of EUT

Product Name : Barcode Scanner

Model No. : Active Scan

FCC ID : PNGACTIVESCAN

Serial No : None

1.3 Details of EUT

Tested Power Supply : AC 110V, 60Hz

Port : CF

Description of Operating : Connect to the PDA and output Barcode through EUT.

Modifications to the EUT : None

1.4 Description of Support Units

Product	Model No.	Serial No.	Manufacturer
MIC/Headphone	CDX-02MV	N/A	TEC SOUND
PDA	Pocket LOOX	N/A	Fujitsu

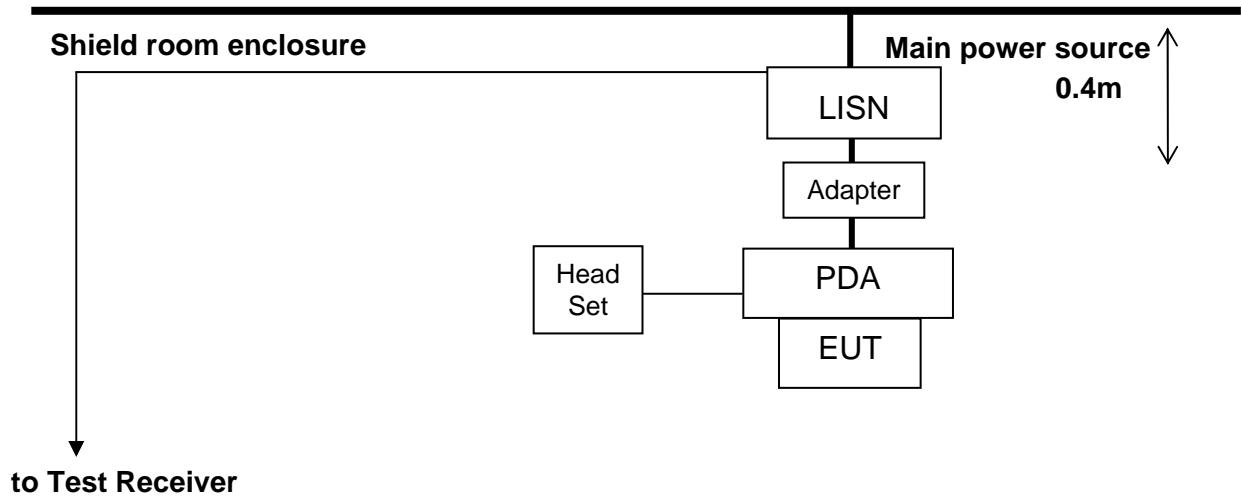
1.5 Cable List

Start		END		Cable Spec	
Name	I/O Port	Name	I/O Port	Length	Shield
EUT	CF	PDA	CF	-	-
PDA	CF DC IN Headphone	EUT Adapter Headset	CF - Headphone	1.0 2.5	Unshielded Unshielded
Adapter	-	LISN	-	1.0	Unshielded

1.6 System Configuration

Description	Model	Serial No.	Manufacturer
Main Board	Active Scan	N/A	Be Interactive Co., Ltd.
SCANER	SE-923-1000A	SPL4JP2	Symbol Technologies Inc.

1.7 Test Set-Up Configuration



1.8 Measurment Procedure

Conducted Emission Testing was performed according ANSI C63.4:2001 in a shielded room with peripherals placed on a table, 0.8m high over a metal floor. It was located more than required distance away from the shielded room wall.

Radiated Emission Testing was performed according to ANSI C63.4:2001 at the open field test site. The EUT was placed in a 0.8m high table along with the peripherals. The turn table was separated from the antenna distance 10meters. Cables were placed in a position to produce maximum emissions as determined by experimentation, and operation mode was selected for maximum.

The frequencies and amplitudes of maximum emission were measured at varying azimuths, antenna heights and antenna polarities. Reported are maximized emission levels.

1.9 Standards Applicable for Testing

Table of tests to be carried out under FCC Part 15, Subpart B, CLASS B

Test Standards	Status
FCC Part 15,Subpart B, Class B	Applicable
Deviation from Standard	No Deviation

1.10 Summary of Results

The data collected shows that Model **Active Scan** complies with Part 15.109 and 107 of FCC Technical Rules.

The highest emission level observed was at 3.37MHz for Q/P mode conducted emission with a margin of 16.0dB and at 3.37MHz for AV mode conducted emission with a margin of 18.7dB and at 36.27MHz radiated emission with a margin of 4.80dB.

Radio Disturbance

2.1 Test Results

	Results
Conducted Emission	PASS
Radiated Emission	PASS

2.2 Frequency Range

Conducted Emission : 150 kHz - 30 MHz

Radiated Emission : 30 MHz - 1000 MHz, Above 1000MHz

2.3 Limits Of Conducted And Radiated Emission

2.3.1 Limit Of Conducted Emission Of FCC Part 15, Subpart B

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi - peak	Average	Quasi - peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

Note : (1) The lower limit shall apply at the transition frequencies.

- (2) The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.
- (3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected there to, shall not exceed the level of field strengths specified above.

2.3.2 Limit Of Radiated Emission Of FCC Part 15, Subpart B

FREQUENCY (MHz)	Class A (at 10m)*		Class B (at 10m)*	
	dBuV/m		dBuV/m	
30-230	40		30	
230-1000	47		37	

* Detector Function : Quasi - Peak

2.4. Test of Conducted Emission

2.4.1 Test Equipments

Equipment	Manufacturer	Model No.	Date of Calibration
Test Receiver	R & S	ESPC	Nov. 2003
LISN	EMCO	3825/2	Dec. 2003
LISN	EMCO	3825/2	Nov. 2003
Pulse Limiter	PMM	PL-01	Jul. 2004
Shielded Room	N/A	N/A	-

2.4.2 Test Site

Name and address : SGS Testing Korea Co., Ltd.
18-34, Sanbon-dong, Gunpo, Gyeonggi-do, Korea, 435-041

2.4.3 Operating Environment

Temperature : 21.1 degree C Humidity : 37.5 %RH
Atmospheric Pressure : 1004 mBar

2.4.4 Measurement Data

Measurment Bandwidth : 9kHz

Date of Test : September 07 2004

FREQ. (MHz)	LEVEL(dB μ V)		LINE	LIMIT(dB μ V)		MARGIN(dB μ V)	
	Q-Peak	Average		Q-Peak	Average	Q-Peak	Average
0.68	33.3	22.0	N	56.0	46.0	22.7	24.0
3.37	40.0	27.3	N	56.0	46.0	16.0	18.7
3.42	38.9	25.6	N	56.0	46.0	17.1	20.4
3.46	35.6	26.5	N	56.0	46.0	20.4	19.5
3.72	39.4	26.3	N	56.0	46.0	16.6	19.7
4.05	33.3	22.5	N	56.0	46.0	22.7	23.5

* Measurements using CISPR quasi-peak mode



See - Ho, Lee / Test Engineer

2.5 Test of Radiated Emission

2.5.1 Test Instruments

Description	Manufacturer	Model No.	Date of Calibration
Test Receiver	R & S	ESVS30	Dec. 2003
Spectrum Analyzer	H.P	E4411A	Oct. 2003
RF Amplifier	H.P	8447F	May. 2004
Bilog Antenna	Schaffner	CBL6111C	Apr. 2004
RF Select s/w	DAIWA	CS201	Apr. 2004
Open Site	N/A	N/A	-

2.5.2 Test Site

Name and address : SGS Testing Korea Co., Ltd.
18-34, Sanbon-dong, Gunpo, Gyeonggi-do, Korea, 435-041

2.5.3 Operating Environment

Temperature : 23.2 degree C Humidity : 31.8 %RH
Atmospheric Pressure : 1009 mBar

2.5.4 Measurement Data

Measurement Bandwidth : 120kHz

Date of Test : September 08 2004

FREQ. (MHz)	LEVEL (dB μ V)	POL (H/V)	AF (dB)	CL (dB)	F/S (dB μ V/m)	LIMIT (dB)	MARGIN (dB μ V)
36.27	8.5	V	15.38	1.33	25.20	30.0	4.80
54.04	12.5	V	7.07	1.58	21.15	30.0	8.85
67.29	13.5	V	5.97	1.92	21.39	30.0	8.61
70.29	12.0	V	6.45	2.02	20.47	30.0	9.53
117.20	11.5	H	8.86	3.60	23.96	30.0	6.04
199.17	8.4	H	11.39	2.74	22.54	30.0	7.46

* AF = Antenna Factor. ** CL = Cable Loss.

*** Margin=Each Frequency Limit Level(dBuV) - (Level+AF+CL)


See - Ho, Lee / Test Engineer

3. Photographs of Test

- Front View of Conducted Emission



- Rear View of Conducted Emission



- **Front View of Radiated Emission**



- **Rear View of Radiated Emission**



Appendix A : Conducted Emission Test Data

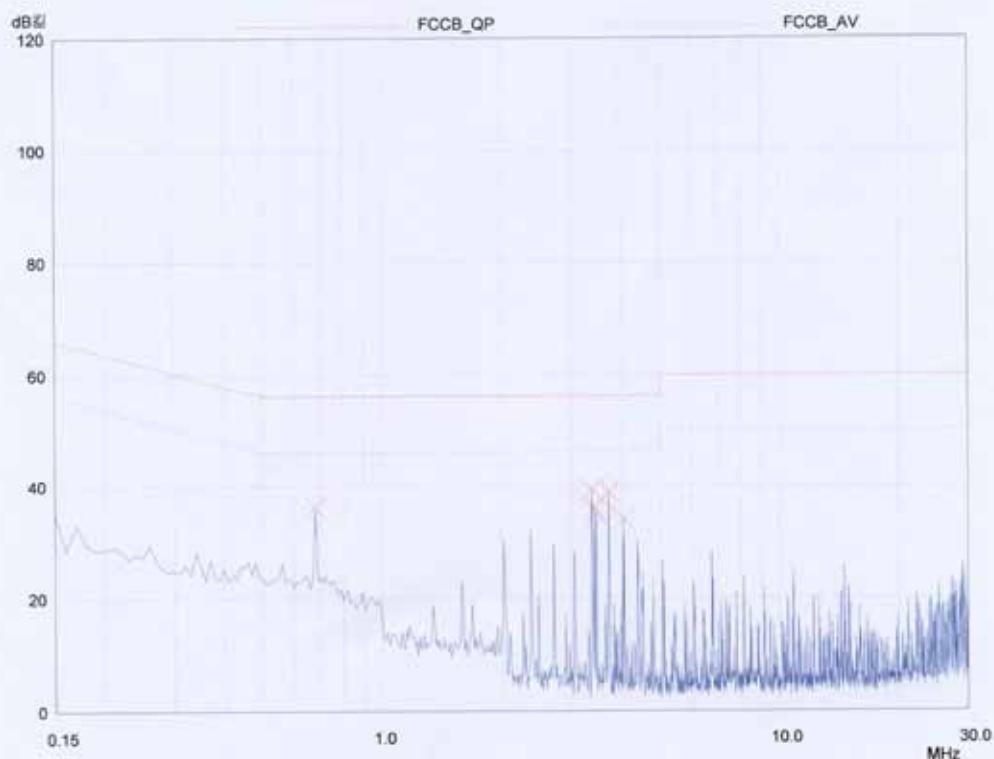
Be Ineractive Co., Ltd.

Active Scan

EUT: Barcode Scanner
Manuf: Be Ineractive Co., Ltd.
Op Cond: NEUTRAL
Operator: S.H.LEE *test*
Test Spec: FCC Part 15
Comment:

File: e0873n.dat : New Measurement

Prescan Measurement: X PK
Meas Time: see scan settings
Peaks: 8
Acc Margin: 25 dB



Be Ineractive Co., Ltd.

Active Scan

EUT: Barcode Scanner
Manuf: Be Ineractive Co., Ltd.
Op Cond: HOT
Operator: S.H.LEE *Forster*
Test Spec: FCC Part 15
Comment:

File: e0873h.dat : New Measurement

Prescan Measurement: X PK
Meas Time: see scan settings
Peaks: 8
Acc Margin: 25 dB

