



## **TEST REPORT**

Report No. : AF009750-001 Date : 2005 May 26  
Application No. : LF206744(1)  
Applicant : Bestlink Electronics Ltd  
Unit 11, 9/F, Hung Tai Industrial Building,  
37-39 Hung To Road, Kwun Tong,  
Kowloon, Hong Kong  
Sample Description : One(1) item of submitted sample stated to be:  
Model Name : MP3 player  
Model No. : IP 837, IP 816, IP 819, IP 832, IP 833, IP 836, IP 838,  
IP 839, IP 862, IP 863, IP 866, IP 868  
Rating : 1 x 1.5V AAA size battery  
No. of sample : One (1) piece\*\*\*  
Date Received : 2005 April 21  
Test Period : 2005 April 21 – 2005 May 16  
Test Requested : FCC Part 15 Certification  
Test Method : FCC Rules and Regulations Part 15 – July 2004  
ANSI C63.4 – 2003  
Test Result : See attached sheet(s) from page 2 to 14.  
Conclusion : The submitted sample was found to comply with requirement of FCC Part 15  
Subpart B.  
Remark : All twelve models are the same in circuitry and components; and therefore model  
IP 837 was chosen to be the representative of the test sample.

*For and on behalf of*  
CMA Testing and Certification Laboratories

Authorized Signature : \_\_\_\_\_

  
Daimy Chui

EMC Engineer - EL. Division

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FCC ID : TBN20050500000837



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### **1 General Information**

#### **1.1 General Description**

The equipment under test (EUT) is a standalone multi-function product and is powered by 1 x 1.5V AAA size battery with built-in 512MB memory. Controlled by a 24.576MHz crystal, the digital audio player has three different features:

1. Music player (supports MP3, WMA and WAV file formats)
2. Voice recorder
3. USB interface for uploading and downloading files and as mass storage through a USB connection cable

A brief circuit description is saved with filename : OpDes.pdf

#### **1.2 Related Submittal Grants**

This is a single application for certification of a computer peripheral product.



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### **1.3 Location of the test site**

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at :

Ground Floor, Yan Hing Centre,  
9 – 13 Wong Chuk Yeung Street,  
Fo Tan, Shatin,  
New Territories,  
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. A shielded room is located at :

Ground Floor, Yan Hing Centre,  
9 – 13 Wong Chuk Yeung Street,  
Fo Tan, Shatin,  
New Territories,  
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### **1.4 List of measuring equipment**

Equipment	Manufacturer	Model No.	Serial No.	Calibration Certification No.
EMI Test Receiver	R&S	ESCS30	100001	S43284
Broadband Antenna	Schaffner	CBL6112B	2692	CA3025
Signal Generator	IFR	2023B	202302/938	S43098
LISN	R&S	ESH3-Z5	100038	S43377
LISN	R&S	ESH3-Z5	100010	S43101
Pulse Limiter	R&S	ESH3-Z2	100001	S43325
Biconical Antenna	R&S	HK116	837414/004	2GB05000535-0001



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### **1.5 List of support equipment**

1. Intel CPU P4 2.8GHz / 512k cache / 533MHz bus  
Model: 9426A657
2. Intel Mother Board  
Model: Intel Type: D815GVHZ
3. Seagate Hard-disk  
Model: ST340014A, 40GB
4. Proview LCD Monitor  
Model: 568  
S/N: FYUJ240040133
5. IBM Mouse  
Model: 12J3618  
S/N: 23-005077
6. Acer Keyboard  
Model:6511-VA
7. Hewlett Packard LaserJet 2100TN  
Model: C4172A  
S/N: SGGS038577
8. PenPower Handwriting System  
Model: PP403N  
S/N: PT9122239
9. USB cable  
(Provided by Applicant)
10. Earphone



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### **2 Description of the radiated emission test**

#### **2.1 Test Procedure**

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

#### **2.2 Test Result**

All modes had been test. The measurement data based on measurements employing the CISPR quasi-peak detector were indicated in next page.

All other measurements were 20 dB below the 15.109 limits. Thus, those highest emissions were presented in next page (section 2.3).

It was found that the EUT meet the FCC requirement.



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### 2.3 Radiated Emission Measurement Data

**Radiated emission  
pursuant to  
the requirement of FCC Part 15 subpart B**

Mode: USB (PC Connected)

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dB $\mu$ V/m)	Antenna and Cable factor (dB)	Field Strength (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
81.210	H	29.8	7.2	37.0	40.0	-3.0
100.205	H	25.8	11.0	36.8	43.5	-6.7
267.235	H	29.1	13.9	43.0	46.0	-3.0
300.005	H	27.9	14.9	42.8	46.0	-3.2
310.570	H	28.0	14.9	42.9	46.0	-3.1
356.125	H	28.1	14.9	43.0	46.0	-3.0
372.295	H	23.3	14.9	38.2	46.0	-7.8
384.104	H	20.5	14.9	35.4	46.0	-10.6
432.019	H	17.2	17.7	34.9	46.0	-11.1
479.997	H	18.3	17.7	36.0	46.0	-10.0





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### 2.3 Radiated Emission Measurement Data

**Radiated emission  
pursuant to  
the requirement of FCC Part 15 subpart B**

Mode : Voice recorder

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dB $\mu$ V/m)	Antenna and Cable factor (dB)	Field Strength (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
114.288	H	20.0	11.0	31.0	43.5	-12.5
130.315	H	16.6	12.4	29.0	43.5	-14.5
147.708	H	16.1	11.9	28.0	43.5	-15.5
162.301	H	17.8	10.4	28.2	43.5	-15.3
192.005	H	17.9	9.2	27.1	43.5	-16.4
228.103	H	20.7	9.7	30.4	46.0	-15.6
270.312	H	18.6	13.9	32.5	46.0	-13.5
324.110	H	16.3	14.9	31.2	46.0	-14.8
444.361	H	16.5	17.7	34.2	46.0	-11.8
480.004	H	16.9	17.7	34.6	46.0	-11.4



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### 2.3 Radiated Emission Measurement Data

**Radiated emission  
pursuant to  
the requirement of FCC Part 15 subpart B**

Mode : MP3 player

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dB $\mu$ V/m)	Antenna and Cable factor (dB)	Field Strength (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
115.307	H	19.6	11.0	30.6	43.5	-12.9
125.201	H	16.1	12.4	28.5	43.5	-15.0
145.204	H	15.5	11.9	27.4	43.5	-16.1
154.410	H	15.4	11.9	27.3	43.5	-16.2
159.409	H	14.1	11.9	26.0	43.5	-17.5
215.997	H	19.1	9.7	28.8	43.5	-14.7
288.103	H	17.4	13.9	31.3	46.0	-14.7
323.654	H	15.9	14.9	30.8	46.0	-15.2
432.309	H	17.0	17.7	34.7	46.0	-11.3
480.211	H	17.7	17.7	35.4	46.0	-10.6



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### **3 Description of the Line-conducted Test**

#### **3.1 Test Procedure**

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003 The EUT was setup as described in the procedures, and both lines were measured.

#### **3.2 Test Result**

The PC connected mode had been tested. The EUT connecting with an USB cable and earphone produced the maximum emission. The measurement data was indicated in Appendix.

The result showed that the EUT met the FCC requirement.

#### **3.3 Graph and Table of Conducted Emission Measurement Data**

For electronic filing, the document are saved with filename TestRpt2.pdf



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### **4 Photograph**

#### **4.1 Photographs of the Test Setup for Radiated Emission and Conduction Emission**

For electronic filing, the photos are saved with filename TSup1.jpg to TSup5.jpg

#### **4.2 Photographs of the External and Internal Configurations of the EUT**

For electronic filing, the photos are saved with filename ExPho1.jpg to ExPho2.jpg and InPho1.jpg to InPho2.jpg



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### **5 Supplementary document**

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

<b>Document</b>	<b>Filename</b>
ID Label/Location	LabelSmp.jpg
Block Diagram	BlkDia.pdf
Schematic Diagram	Schem.pdf
Users Manual	UserMan.pdf
Operational Description	OpDes.pdf



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### **6 Appendices**

A1.	Photos of the set-up of Radiated Emissions	1	page
A2.	Photos of the set-up of Conducted Emissions	2	pages
A3.	Photos of External Configurations	1	page
A4.	Photos of Internal Configurations	1	page
A5.	ID Label/Location	1	page
A6.	Conducted Emission Measurement Data	2	pages
A7.	Block Diagram	1	page
A8.	Schematics Diagram	1	page
A9.	User Manual	25	pages
A10.	Operation Description	1	page

\*\*\*\*\* End of Report \*\*\*\*\*