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# RF Exposure Evaluation declaration

**Applicant:** :ELELUX INTERNATIONAL LTD.

**Manufacture:** :ANDAH ELECTRONICS ( SHENZHEN) LTD.

**FCC ID:** : PY9MP935WID01

**Equipment Under Test (EUT):**

Name: Mp3 Player Series

Item No.: MP-935WID MP-935W MP-935WT MP-935WDD MP-935WD♣



Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical.

**Date of Receipt:** 18 July 2008

**Date of Test:** 18 to 30 July 2008

**Date of Issue:** 30 July 2008

**Test Result :**

**PASS\***

\* In the configuration tested, the EUT complied with the standards specified above.

Robinson Lo  
Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. 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. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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## 1 RF Exposure Evaluation

### 1.1 Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

#### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	300

F= Frequency in MHz

#### Friis Formula

Friis transmission formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

$\pi$  = 3.1416

R = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the



total power input to the antenna, through the calculation, we will know the distance  $r$  where the MPE limit is reached.

## 1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

## 1.3 Test Result of RF Exposure Evaluation

Product : Wireless Headphone

Test Item : RF Exposure Evaluation

Test Site : No.3 OATS

Antenna Gain

Antenna Gain: The maximum Gain measured in fully anechoic chamber is -0.99dBi in linear scale.

802.11b

Output Power Into Antenna & RF Exposure Evaluation Distance (-0.99dBi):

Channel	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )
1	2412	15.922	0.0025
6	2437	15.590	0.0025
11	2462	16.181	0.0031

The distance  $r$  (4th column) calculated from the Fries transmission formula is far shorter than 20 cm separation requirement.



802.11g

**Output Power Into Antenna & RF Exposure Evaluation Distance (-0.99dBi):**

Channel	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )
1	2412	45.814	0.0072
6	2437	32.659	0.0052
11	2462	26.002	0.0041

The distance r (4th column) calculated from the Fries transmission formula is far shorter than 20 cm separation requirement.