

**TEST REPORT**  
**EN50332-2:2013**

**Sound system equipment: Headphones and earphones associated with personal music players — Maximum sound pressure level measurement methodology**

**Part 2: Matching of sets with headphones if either or both are offered separately, or are offered as one package equipment but with standardised connectors between the two allowing to combine components of different manufacturers or different design**

Report reference No .....: RSZ160309003-03	
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Date of issue .....: 2016-03-25	
Testing laboratory .....: Bay Area Compliance Laboratories Corp. (Shenzhen)	
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Testing location .....: As above	
Applicant1 .....: Advanced Technologies SRL	
Address .....: Ion Heliade Radulescu nr 26, Bucharest 021255, ROMANIA	
Standard .....: EN 50332-2:2013	
Test sample(s) received .....: 2016-03-14	
Test in period .....: 2016-03-14 To 2016-03-24	
Procedure deviation .....: N.A.	
Non-standard test method .....: N.A.	
This test report is for the customer shown above and their specific product only. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Shenzhen).	
Type of test object .....: Smartphone Xylo	
Trademark .....: ---	
Test Model .....: Xylo Q	
Multiple model.....: Xylo X	
Manufacturer .....: Shenzhen East Xinyi Electronic Technology Co.,Ltd	
Rating .....: 5.0V=1A (Built-in a 3.7V/1400mAh Li-ion rechargeable battery)	

**2 General Information**

Similarity declaration

The differences between Xylo Q which is under test and Xylo X are the memory of flash and the pixels of camera, since the model Xylo Q is 512M and Xylo X is 1G. The pixels of camera are different since Xylo Q is equipped with 200W and Xylo X is equipped with 500W. No other changes are made to them.

**2.1 Description of EUT**

**I/O Signal Ports:** Headphone

**NOTE:**

1. For a more detailed features description about the EUT, please refer to the User’s Manual.

**2.2 Objective**

Perform Maximum output voltage tests for customer acquirement.

**2.3 Test Standards and Results**

The EUT has been tested according to the following specifications:

Standard	Test Type	Result
EN 50332-2:2013	Maximum output voltage $V_m$	Pass
EN 50332-2:2013	Simulated programme signal characteristic voltage	Not applicable

**2.4 List of Equipments Used**

Equipment	Equipment No.	Model NO.	Calibration Date	Due Date
Measuring Amplifier	T-03-EM319	Type 2636	2015-12-07	2016-12-06
Microphone Power Supply	F-03-EM039	---	---	---
Audio Analyzer	T-03-EM328	UPV	2015-06-02	2016-06-01
True-rms Digital Multimeters	T-03-EM325	287	2015-04-10	2016-04-09
Head and Torso Simulator with ear simulator	T-03-EM336	4128C	2015-06-04	2016-06-03
Temperature & Humidity Meter	T-03-EE216	TA218B	2016-01-08	2017-01-07

**NOTE:** Equipments listed above have been calibrated and are in the period of validation.

**3 Maximum output voltage Measurement**

**3.1 Limits of Mains Terminal Disturbance Voltage**

Sets measured by the method described in this standard shall not deliver more than 150mV for maximum output voltage.

**3.2 EUT Setup and Operating Conditions**

Devices under test (DUT) shall be powered by a stabilized power supply, at their nominal supply voltage, with a tolerance of  $\pm 3\%$ .

When testing devices, all measurements shall be taken at the following settings:

- noise reduction system : OFF
- volume control : maximum
- tone control : adjusted in order to maximize the sound pressure level

The EUT is working at audio play mode during the test.

The test signal is a stationary wide-band signal, the spectral content of which is representative of the musical signals. The test signal shall be recorded at an RMS value of -10dB (ref 0 dB full scale).

### **3.3 Test Method**

- a. The measuring instruments shall conform to EN 60804, class 1.
- b. Player output shall be loaded with a resistive load of 32 $\Omega$ .
- c. The maximum output voltage shall be defined as unweighted true r.m.s voltage at the load, using averaging time of 30s or more.

## **4. Simulated programme signal characteristic voltage Measurement**

### **4.1 Limits of Simulated programme signal characteristic voltage**

Result measured by the method described in this standard shall not deliver less than 75mV for input signal voltage.

### **4.2 Method of measurement arrangement and conditions**

#### **4.2.1 Input signal**

The test signals shall be the programme simulation noise as defined in HD 483.1 S2. Further details are given in the respective subclauses of EN 50332-1:2013, Clause 5.

#### **4.2.2 Source impedance**

The output impedance of the test signal source shall be  $\leq 2 \Omega$ .

#### **4.2.3 Head and Torso Simulator (HATS)**

The acoustical measurements are preferably done by using a suitable HATS as defined in EN 50332-1:2013, 4.2.

#### **4.2.4 Headphones/earphones fit**

Headphones/earphones shall be positioned on the HATS correctly, so that the measured sound pressure level is maximised. The manufacturer's instructions for correct use have to be taken into account.

#### **4.2.5 Measurement**

The simulated programme signal characteristic voltage of analogue headphone input is the input signal voltage when the sound pressure level reaches 94 dB SPL A-weighted. Within guaranteed linear operation of the headphone/earphone the value can be calculated from results with other SPL output.

**5. Test Result**

Software version: vonino\_v1.1.3\_20160321

1. Maximum output voltage  $V_m$

Channel	Criterion request	Unit	Test Result
L	$\leq 150$	mV	62.11
R	$\leq 150$	mV	63.45

2. Simulated programme signal characteristic voltage

Channel	Criterion request	Unit	Test Result
L	$\geq 75$	mV	Not applicable
R	$\geq 75$	mV	Not applicable

Appendix A –EUT Photo

Whole view

