







ISO/IEC17025 Accredited Lab.

Report No: FCC1505063-02 File reference No: 2015-05-26

Applicant: Technology Brokers, INC

Product: 7 INCH KIDS TABLET PC

Model No: TN1.8

Trademark: nickelodeon

Test Standards: FCC Part 15 Subpart B: 2012

Test result: It is herewith confirmed and found to comply with the requirements

set up by ANSI C63.4&FCC Part 15 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: May 26, 2015

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

# SHENZHEN TIMEWAY TESTING LABORATORIES

Room 512-519, 5/F., East Tower, Building 4, Anhua Industrial Zone, Futian District, Shenzhen, Guangdong, China

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timewaytech.com

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# **Special Statement:**

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

### **CNAS-LAB Code: L2292**

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

# FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

# IC-Registration No.: IC5205A-02

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-02.

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# **Test Report Conclusion**

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#### 1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Room 512-519,5/F., East Tower,Building 4, Anhua Industrial Zone,

Futian District, Shenzhen, Guangdong China

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 899988

For 3m & 10 m OATS

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A-02

For 3m & 10 m OATS

1.2 Applicant Details

Applicant: Technology Brokers, INC

Address: 7412 SW 48ST Suite B, Miami, FL, 33133

Telephone: ---

1.3 Description of EUT

Product: 7 INCH KIDS TABLET PC

Manufacturer: SHENZHEN ILIKE ELECTRONICS INDUSTRIES LIMITED
Address: Gaoke Industrial Park,No.8 Tangkeng Road,Shiyan Town,Bao

An District, Shenzhen, China

Brand Name:

nickelodeon.

Model Number: TN1.8

Additional Model Number: N/A

1.4 Submitted Sample: 2 Samples

1.5 Test Duration: 2015-05-11 to 2015-05-26

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB Radiated Emissions Uncertainty =4.7dB

The report refers only to the sample tested and does not apply to the bulk.

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1.7 Test Engineer

The sample tested by



Print Name: Terry Tong

#### 2.0 **List of Measurement Equipment**

#### 2.1 Conducted Emission Test

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESH3	860905/006	RS	2014.08.21	1Year
Spectrum Analyzer	ESA-L1500A	US37451154	HP	2014.08.21	1Year
PULSE LIMITER	ESH3-Z2	100281	RS	2014.08.22	1Year
LISN	ESH3-Z5	100294	RS	2014.08.22	1Year
LISN	ESH3-Z5	100253	RS	2014.08.22	1Year
LISN	LS16C	10010947251	AFJ	2014.08.21	1Year

#### 2.2 Radiated electromagnetic disturbance test

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESVD	100008	RS	2014.08.21	1Year
Coaxial Switch	MP59B	M70585	ANRITSU	N/A	N/A
Amplifier	8447D	2727A05017	HP	2014.08.22	1Year
Bilog Antenna	VULB9163	9163/340	Schwarebeck	2014.08.23	1Year
Horn Antenna	BBHA 9120D	9120D-631	Schwarebeck	2014.08.23	1Year
Horn Antenna	BBHA 9170	BBHA9170265	Schwarebeck	2014.08.23	1Year
Test Receiver	ESI26	838786/013	RS	2014.08.22	1Year

#### 2.3 Auxiliary Equipment

					FCC DOC/
Name	Model No.	Serial No.	Manufacturer	Cable	ID
				Data cable of	
Monitor	P2450		SAMSUNG	1.5m length	FCC DOC
Passive Earphone					FCC VOC
PC	R400		IBM		FCC DOC
Mouse	M-F105		L.SEletron		FCC DOC
Keyboard	K100		Logitech		FCC DOC

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### 3.0 Technical Details

3.1 Investigations Requested

Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

3.2 Test Standards

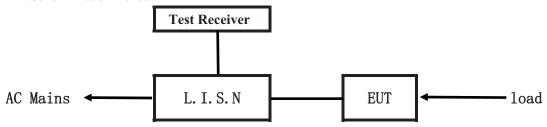
FCC Part 15 Subpart B: 2012

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#### 4.0 Conducted Power line Test

### 4.1 Schematics of the test



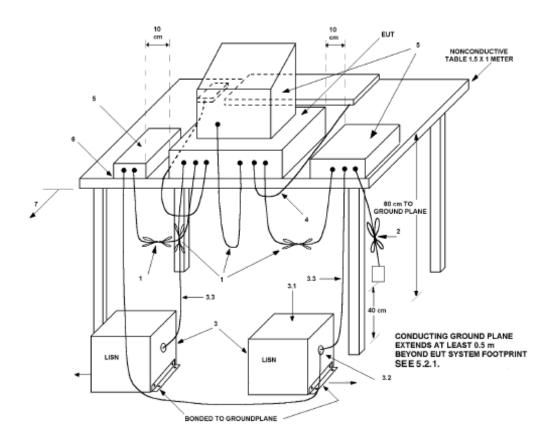
**EUT: Equipment Under Test** 

#### 4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2009. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2009. Cables and peripherals were moved to find the maximum emission levels for each frequency.

Actual Working Voltage and Frequency: 120V~, 60Hz

Block diagram of Test setup



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### 4.3 Power line conducted Emission Limit

Eraguanay (MHz)	Class A Li	mits dB(μV)	Class B Limits dB(μV)		
Frequency(MHz)	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level	
0.15 ~ 0.50	79.00	66.00	66.00~56.00*	56.00~46.00*	
0.50 ~ 5.00	73.00	60.00	56.00	46.00	
5.00 ~ 30.00	73.00	60.00	60.00	50.00	

Notes: 1. \*decreasing linearly with logarithm of frequency.

2. The tighter limit shall apply at the transition frequencies

# 4.4 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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# A: Conducted Emission on Live Terminal (150kHz to 30MHz)

**EUT Operating Environment** 

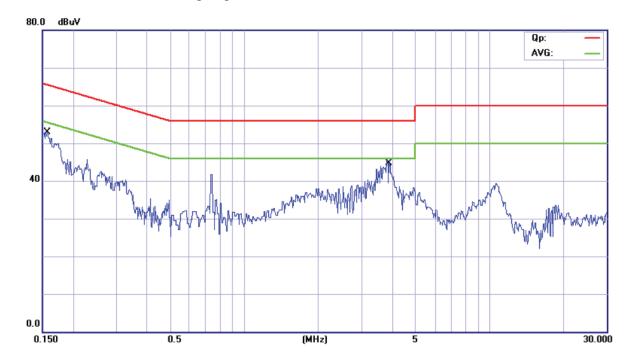
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Communication with PC** 

**Equipment Level: Class B** 

**Results: PASS** 

Please refer to following diagram for individual



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBu∀	dBuV	dB	Detector	Comment
1	3.9235	24.40	13.07	37.47	56.00	-18.53	QP	
2	3.9235	5.90	13.07	18.97	46.00	-27.03	AVG	
3 *	0.1548	39.70	11.01	50.71	65.74	-15.03	QP	
4	0.1548	15.30	11.01	26.31	55.74	-29.43	AVG	

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# B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

**EUT Operating Environment** 

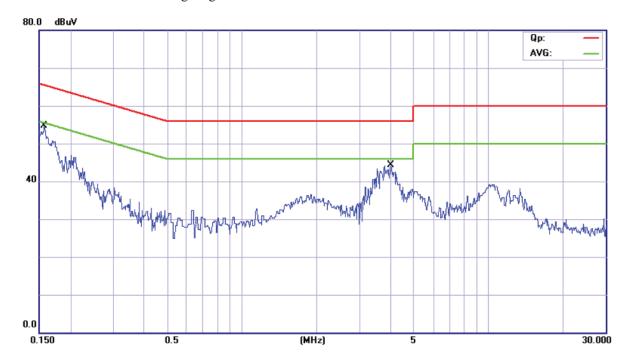
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Communication with PC** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	4.0014	25.60	13.10	38.70	56.00	-17.30	QP	
2	4.0014	12.10	13.10	25.20	46.00	-20.80	AVG	
3 *	0.1550	40.50	11.01	51.51	65.73	-14.22	QP	
4	0.1550	28.50	11.01	39.51	55.73	-16.22	AVG	

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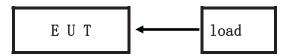
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#### 5.0 Radiated Disturbance Test

#### 5.1 Schematics of the test

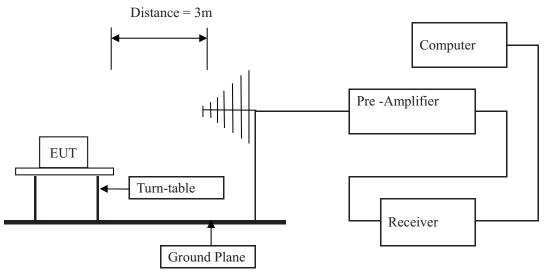


### 5.2 Test Method and test Procedure:

The EUT was tested according to ANSI C63.4 –2009; The frequency spectrum from 30MHz to 5GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. For measurement above 1GHz, peak values with RBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK detector.

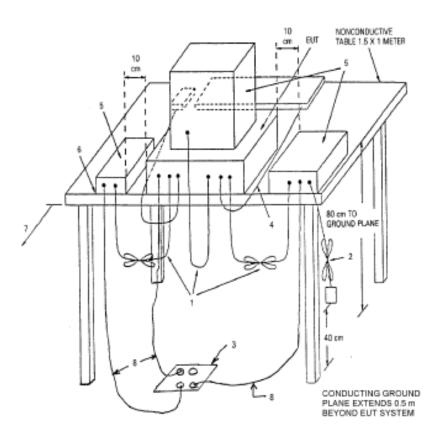
Actual Working Voltage and Frequency: 120V~, 60Hz

# **Block diagram of Test setup**



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#### 5.3 Radiated Emission Limit

Frequency Range (MHz)	Distance (m)	Field strength (dB µ V/m)
30-88	3	40.00
88-216	3	43.50
216-960	3	46.00
Above 960	3	54.00

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

2. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.

#### 5.4 Test result

The frequency spectrum from 30MHz to 18GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. For measurement above 1GHz, peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK. Measurements were made at 3 meters.

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#### Test result

## General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal/ In Vertical (30MHz----1000MHz)

**EUT set Condition:** Communication with PC

**Results: Pass** 

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
192.000	30.13	Н	43.50
704.000	43.63	Н	46.00
832.000	42.62	Н	46.00
160.080	34.77	V	43.50
974.000	38.60	V	54.00
128.000	35.61	V	43.50

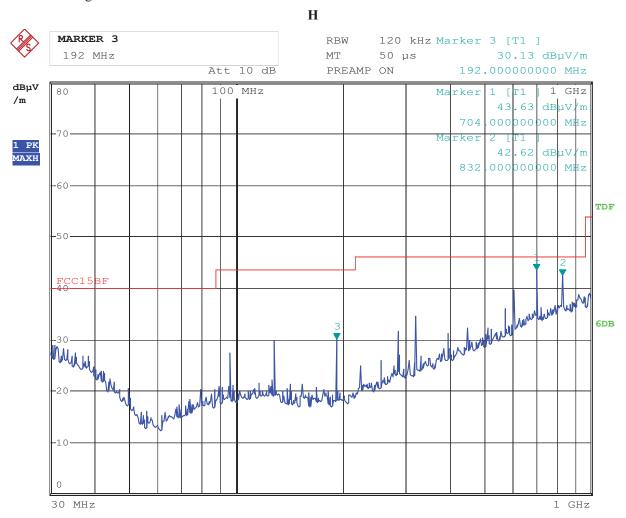
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### Test Figure:



Date: 26.MAY.2015 11:44:21

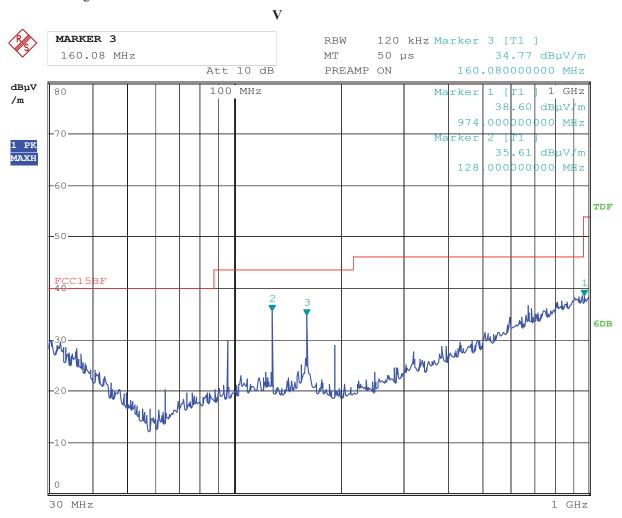
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### Test Figure:



Date: 26.MAY.2015 11:47:58

Date: 2015-05-26



# Radiated Disturbance (1000MHz----18000MHz)

**EUT Operating Environment** 

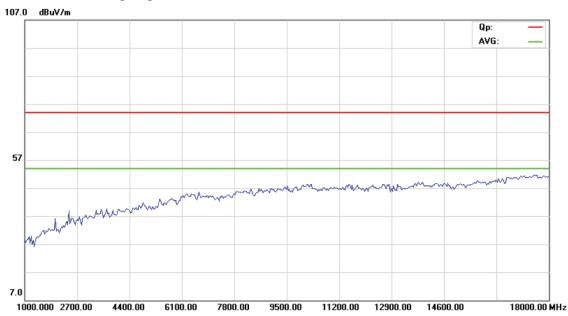
Temperature:25℃ Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Connected to PC** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



Frequency (MHz)	Level@3m ( $dB\mu V/m$ )	Antenna Polarity	Limit@3m (dBµV/m)
	-1	Н	54(AV)

Note: Pk scan value are lower than AV limit.

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# Radiated Disturbance (1000MHz----18000MHz)

# **EUT Operating Environment**

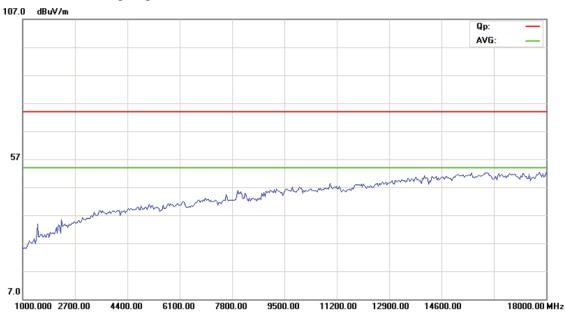
Temperature:25°C Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Connected to PC** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



Frequency (MHz)	Level@3m (dBμV/m)	Antenna Polarity	Limit@3m (dBµV/m)
		V	54(AV)

Note: Pk scan value are lower than AV limit.

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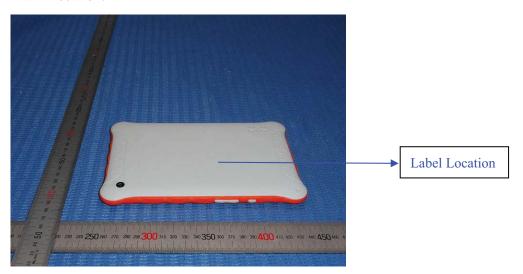
### 6.0 FCC ID Label

#### FCC ID: ZTP-TN1-8

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

#### Mark Location:



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# 7.0 Photo of testing

#### Conducted test View--7.1



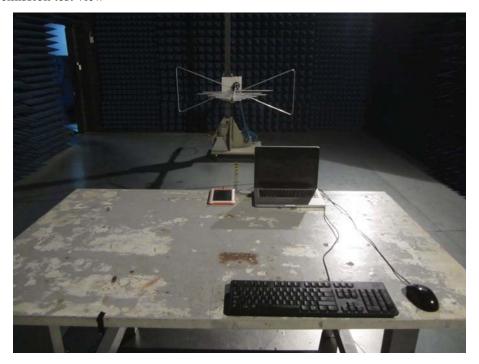
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#### 7.2 Radiated emission test view--





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# Photographs - EUT

#### Outside view





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Outside view





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Outside view



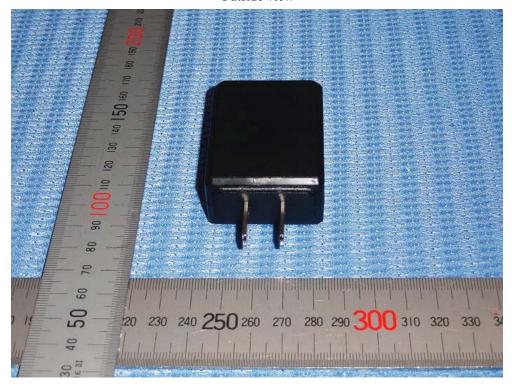


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Outside view





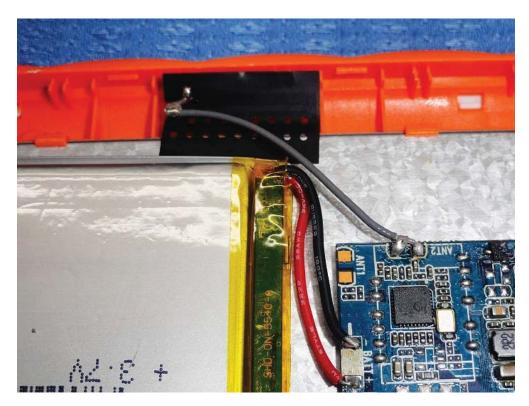
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Inside view





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Inside view





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Inside view





End of the report

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