# **FCC Test Report**

Report No.: AGC07573160702FE03

FCC ID : 2AJLHPT1000

**APPLICATION PURPOSE** : Original Equipment

**PRODUCT DESIGNATION**: Wireless Guide System

BRAND NAME : Plant-Tour.com

**MODEL NAME** : PT-1000, PT-1100

**CLIENT** : PlantTours Communications Co.

**DATE OF ISSUE** : Aug. 19, 2016

**STANDARD(S)** : FCC Part 15 Subpart B

**REPORT VERSION**: V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

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## **Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes		
V1.0	/	Aug.19, 2016	Valid	Original Report		

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## 1. VERIFICATION OF CONFORMITY

Applicant	PlantTours Communications Co.				
Address	810 TYVOLA RD. SUITE 132, CHARLOTTE, North Carolina,28217,United States				
Manufacturer	NINGBO PROMIC TECHNOLOGY CO.,LTD				
Address	NO.25-3 GangXi Avenue, Ningbo.Free Trade Zone, WestArea,Zhejiang,p.r.c 315800				
Product Designation	Wireless Guide System				
Brand Name	Plant-Tour.com				
Test Model	PT-1000				
Series Model	PT-1100				
Model Difference	All the same except for the model name.				
Date of test	Aug.03, 2016 to Aug.18, 2016				
Deviation	None				
Condition of Test Sample	Normal				
Report Template	AGCRT-US-BR/RF (2013-03-01)				

We hereby certify that:

The above equipment was tested by Dongguan Precise Testing Service Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2014) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC part 15 Subpart B.

Tested by

Max Zhang(Zhang Yi) Aug. 19, 2016

Reviewed by

Bart Xie(Xie Xiaobin)) Aug. 19, 2016

Approved by

Solger Zhang(Zhang Hongyi) Aug. 19, 2016

Aug. 19, 2016

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## 2. GENERAL INFORMATION

## 2.1. PRODUCT DESCRIPTION

A major technical description of EUT is described as following

Operation Frequency	72.1-72.9MHz; 74.7MHz; 75.3-75.9MHz			
Field Strength(3m)	34.46dBuV/m(PK)@3m			
Modulation	FM			
Number of channels	17			
Hardware Version	REV01			
Software Version	REV01			
Power Supply	DC3V by battery			

**NOTE:** 1. About the EUT, please refer to User's Manual.

## Channel list

Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	72.1	10	74.7
02	72.2	11	75.3
03	72.3	12	75.4
04	72.4	13	75.5
05	72.5	14	75.6
06	72.6	15	75.7
07	72.7	16	75.8
08	72.8	17	75.9
09	72.9		

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## 3. MEASUREMENT UNCERTAINTY

Conducted measurement: +/- 3.18dB Radiated measurement: +/- 3.91dB

## 4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION					
1	Receiving mode					
N.L. C.						

#### Note:

- 1. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
- 2. The EUT had been tested under normal operating condition.
- 3. Only the result of the worst case was recorded in the report, if no other cases.

## 5. SYSTEM TEST CONFIGURATION

#### **5.1. EQUIPMENT USED IN EUT SYSTEM**

ŀ	tem	Equipment	Model No.	ID or Specification	Remark
	1	Wireless Guide System	PT-1000	2AJLHPT1000	EUT

## **5.2. SUMMARY OF TEST RESULTS**

FCC RULES	DESCRIPTION OF TEST	RESULT
15.109	Radiated Emission	Compliant

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## **6. TEST FACILITY**

Site Dongguan Precise Testing Service Co., Ltd.					
Location  Building D, Baoding Technology Park, Guangming Road2, Dongcheng District, Dongguan, Guangdong, China.					
FCC Registration No.	371540				
Description	The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2014.				

## **ALL TEST EQUIPMENT LIST**

Radiated Emission Test Site								
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration			
EMI Test Receiver	Rohde & Schwarz	ESCI	101417	July 3, 2016	July 2, 2017			
Trilog Broadband Antenna (25M-1GHz)	na		9160-3355	July 3, 2016	July 2, 2017			
Signal Amplifier	SCHWARZBECK	BBV 9475	9745-0013	July 3, 2016	July 2, 2017			
RF Cable	SCHWARZBECK	AK9515E	96221	July 3, 2016	July 2, 2017			
3m Anechoic Chamber	c Chamber CHENGYU 966		PTS-001	June 3, 2016	June 2, 2017			
MULTI-DEVICE Positioning Controller	Max-Full	MF-7802	MF780208339	N/A	N/A			
Active loop antenna (9K-30MHz)	Schwarzbeck	FMZB1519	1519-038	June 3, 2016	June 2, 2017			
Spectrum analyzer	Agilent	E4407B	MY46185649	June 3, 2016	June 2, 2017			

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#### 7. RADIATED EMISSION

#### 7.1. MEASUREMENT PROCEDURE

- 1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground and opposite the horn antenna. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions below 1GHz, use 120KHz RBW and VBW>=3RBW for QP reading.
- 7. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.
- 8. Only the worst case is reported.

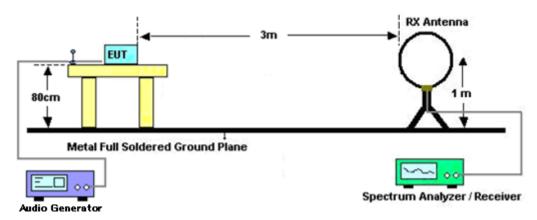
The following table is the setting of spectrum analyzer and receiver.

Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RBW 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RBW 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RBW 120KHz for QP

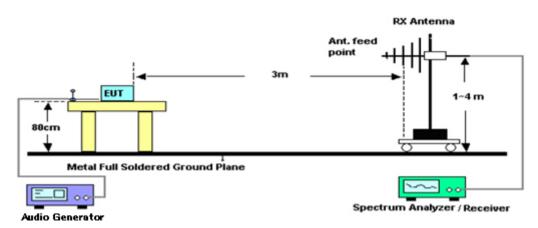
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## 7.2. TEST SETUP

## Radiated Emission Test-Setup Frequency Below 30MHz



## RADIATED EMISSION TEST SETUP 30MHz-1000MHz



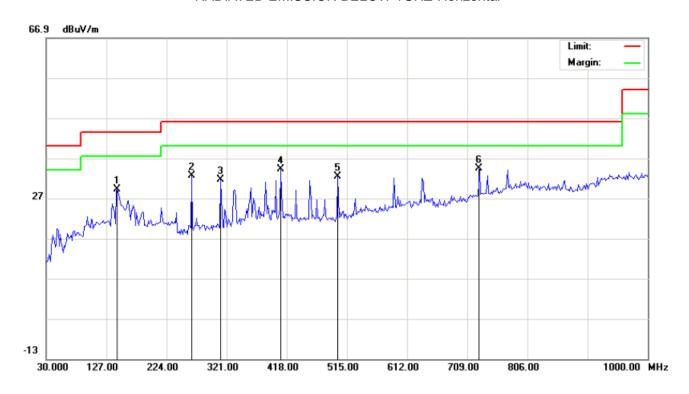
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## 7.3. TEST RESULT

## **RADIATED EMISSION BELOW 30MHz**

No emission found between lowest internal used/generated frequencies to 30MHz.

RADIATED EMISSION BELOW 1GHZ-Horizontal

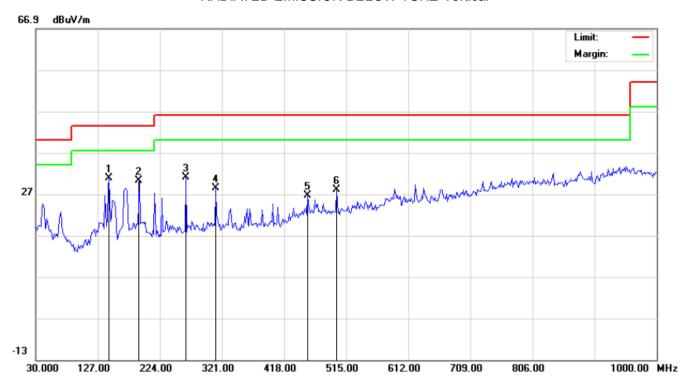


No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		144.7831	15.19	14.04	29.23	43.50	-14.27	peak			
2		264.4166	23.18	9.35	32.53	46.00	-13.47	peak			
3		311.3000	15.43	16.16	31.59	46.00	-14.41	peak			
4		408.3000	14.80	19.32	34.12	46.00	-11.88	peak			
5		500.4499	11.25	21.14	32.39	46.00	-13.61	peak			
6	*	728.3999	8.45	26.01	34.46	46.00	-11.54	peak			

**RESULT: PASS** 

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## **RADIATED EMISSION BELOW 1GHZ-Vertical**



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height		Comment
	-	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	144.7831	15.57	15.23	30.80	43.50	-12.70	peak			
2		191.6665	19.12	11.11	30.23	43.50	-13.27	peak			
3		264.4166	16.76	14.34	31.10	46.00	-14.90	peak			
4		311.3000	12.27	16.16	28.43	46.00	-17.57	peak			
5		455.1831	5.95	20.65	26.60	46.00	-19.40	peak			
6		500.4499	6.83	21.14	27.97	46.00	-18.03	peak			

## **RESULT: PASS**

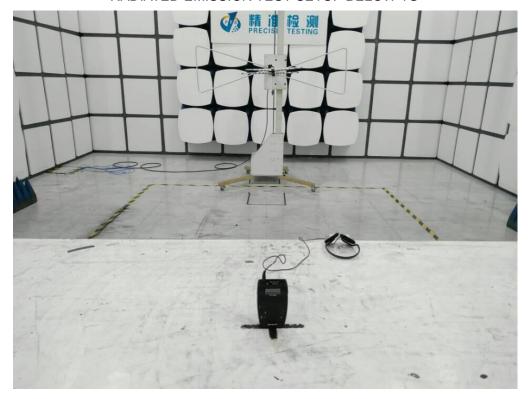
## Note:

- 1. Factor=Antenna Factor + Cable loss Amplifier gain, Margin=Measurement-Limit.
- 1. The "Factor" value can be calculated automatically by software of measurement system.
- 2. All test modes had been tested. The receiving at 75.3MHz is the worst case and recorded in the report.

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## **APPENDIX A: PHOTOGRAPHS OF TEST SETUP**

RADIATED EMISSION TEST SETUP BELOW 1G



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## **APPENDIX B: PHOTOGRAPHS OF EUT**

ALL VIEW OF EUT



TOP VIEW OF EUT



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**BOTTOM VIEW OF EUT** 



FRONT VIEW OF EUT



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**BACK VIEW OF EUT** 



LEFT VIEW OF EUT



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RIGHT VIEW OF EUT



**OPEN VIEW OF EUT-1** 

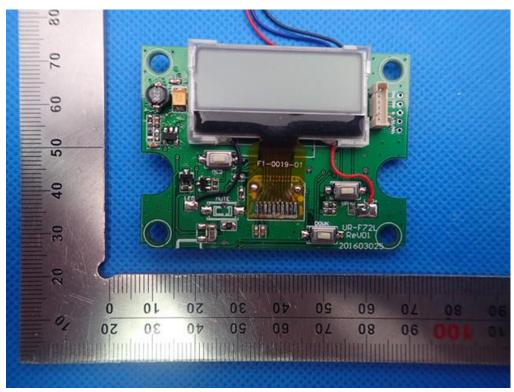


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**OPEN VIEW OF EUT-2** 

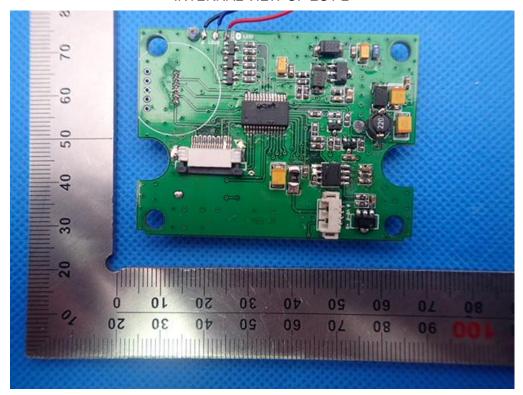


**INTERNAL VIEW OF EUT-1** 

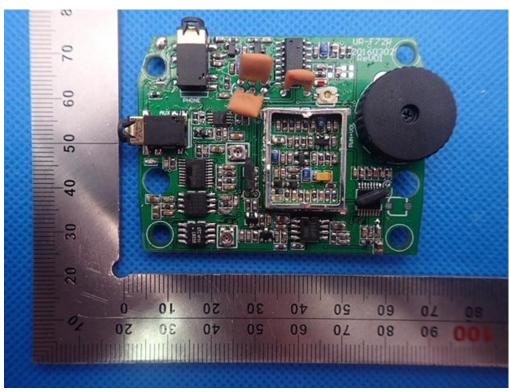


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**INTERNAL VIEW OF EUT-2** 

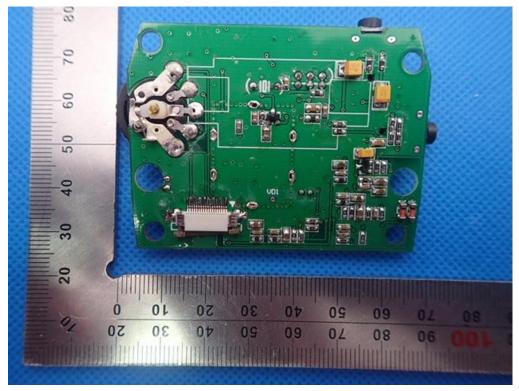


**INTERNAL VIEW OF EUT-3** 



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## INTERNAL VIEW OF EUT-4



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