







#### ISO/IEC17025 Accredited Lab.

Report No: FCC1311053-01 File reference No: 2013-11-29

Applicant: Guangzhou Sunday Electronics Co., Ltd.

Product: Wireless Receiver

Model No: RX101

Trademark: Sunday

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: November 29, 2013

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 TECHNOLOGY CONSULTING CO., LTD

East 5/Block 4, Anhua Industrial Zone, No.8, Tairan Rd. Chegongmiao, FuTian District, Shenzhen, CHINA.

Tel (755) 83448688 Fax (755) 83442996

Report No: 1311053-02 Page 2 of 22

Date: 2013-11-29



# **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.



Date: 2013-11-29



# **Test Report Conclusion**

#### Content

1.0	General Details	4
1.1	Test Lab Details	4
1.2	Applicant Details	4
1.3	Description of EUT	4
1.4	Test Uncertainty.	4
1.5	Submitted Sample	4
1.6	Test Duration.	4
2.0	List of Measurement Equipment.	5
2.1	Conducted Emission Test.	5
2.2	Radiated electromagnetic disturbance test.	5
2.3	Auxiliary Equipment	5
3.0	Technical Details.	6
3.1	Investigations Requested.	6
3.2	Test Standards.	6
4.0	Power line Conducted Emission Test.	7
5.0	Radiated Disturbance Test.	11
6.0	FCC ID Label	17
7.0	Photo of testing	15



#### 1.0 General Details

Date: 2013-11-29

#### 1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD

Address: East 5/Block 4, Anhua Industrial Zone, No.8, Tairan Rd. CheGongMiao, FuTian District,

Shenzhen, CHINA.

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

1.2 Applicant Details

Applicant: Guangzhou Sunday Electronics Co., Ltd.

Address: No.236-238, Minsheng Road, Lanhe Town, Nansha District, Guangzhou, China

Telephone: 020-84928933 Fax: 020-84928823

1.3 Description of EUT

Product: Wireless Receiver

Manufacturer: Guangzhou Sunday Electronics Co., Ltd.

Address: NO.236-238, MINSHENG RD., LANHE TOWN, NANSHA DISTRICT,

GUANGZHOU,511480, CHINA

Brand Name: Sunday
Model Number: RX101
Additional Model Number: N/A

Rating: DC5.0V, Powered by PC

1.4 Submitted Sample: 1 Sample

1.5 Test Duration: 2013-11-13 to 2013-11-27

1.6 Test Uncertainty

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

1.7 Test Engineer

The sample tested by

Teny Tong

Print Name: Terry Tong

Date: 2013-11-29



#### List of Measurement Equipment 2.0

#### 2.1 Conducted Emission Test

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESH3	860905/006	RS	2013.8.24	1Year
Spectrum Analyzer	ESA-L1500A	US37451154	HP	2013.8.24	1Year
PULSE LIMITER	ESH3-Z2	100281	RS	2013.8.24	1Year
LISN	ESH3-Z5	100294	RS	2013.8.24	1Year
LISN	ESH3-Z5	100253	RS	2013.8.24	1Year

#### 2.2 Radiated electromagnetic disturbance test

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESI26	838786/013	RS	2013.8.23	1Year
Coaxial Switch	MP59B	M70585	ANRITSU	N/A	N/A
Bilog Antenna	VULB9163	9163/340	Schwarebeck	2013.8.24	1Year
Horn Antenna	BBHA 9120D	9120D-631	Schwarebeck	2013.8.24	1Year

#### 2.3 **Auxiliary Equipment**

	J =quipinoni				
Name	Model No.	Serial No.	Manufacturer	Cable	FCC ID/DOC
Notebook	R4		IBM		FCC DOC
Notebook	E43L		LENOVO		FCC DOC
				Data cable of	
				1.5m length	
Mouse			DELL	unshielded	FCC DOC
				Data cable of	
Passive				1.5m length	
Earphone				unshielded	FCC VOC
LCD Monitor	PH2450		SUMSANG		FCC DOC
Monitor	LM170		LG		FCC DOC

Report No: 1311053-02 Page 6 of 22

2 TIMEWAY TESTINGLAS

#### 3.0 Technical Details

Date: 2013-11-29

3.1 Investigations Requested

Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

3.2 Test Standards

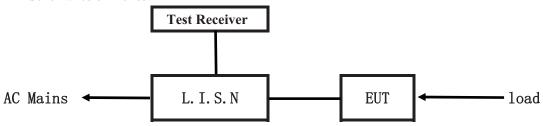
FCC Part 15 Subpart B: 2012

Date: 2013-11-29



#### 4.0 Conducted Power line Test

#### 4.1 Schematics of the test



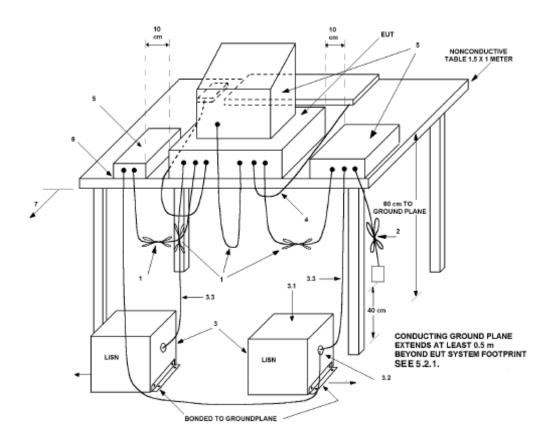
**EUT: Equipment Under Test** 

#### 4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2003. 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 –2003. Cables and peripherals were moved to find the maximum emission levels for each frequency.

Actual Working Voltage and Frequency: 120V~, 60Hz (PC HOST)

Block diagram of Test setup



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

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No: 1311053-02 Page 8 of 22

Report No: 1311053-02 Date: 2013-11-29



#### 4.3 Power line conducted Emission Limit

Fraguenay(MHz)	Class A Limits 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*
$0.50 \sim 5.00$	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 AV and quasi-peak values with a resolution bandwidth of 9kHz.

Date: 2013-11-29



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

**EUT Operating Environment** 

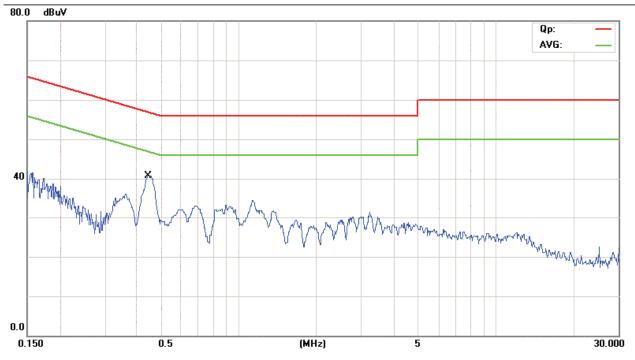
Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Communication with PC** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



	Frequency	Lina	Reading(dBμV)		Limit(dBµV)	
	(MHz)	Line	Quasi-peak	Average	Quasi-peak	Average
ĺ	0.4414	Live	38.21	34.01	57.04	47.04

Report No: 1311053-02 Page 10 of 22

Date: 2013-11-29



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

**EUT Operating Environment** 

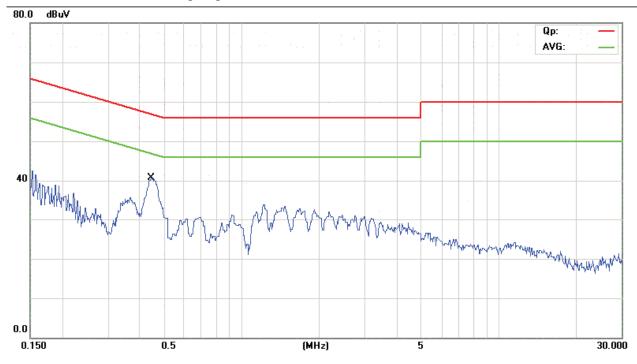
Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Communication with PC** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



]	Frequency	Lina	Reading(	dBμV)	Limit(	dBμV)
	(MHz)	Line	Quasi-peak	Average	Quasi-peak	Average
	0.4430	Neutral	38.31	34.51	57.01	47.01

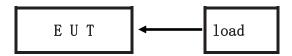
Report No: 1311053-02 Page 11 of 22

Date: 2013-11-29



#### 5.0 Radiated Disturbance Test

#### 5.1 Schematics of the test

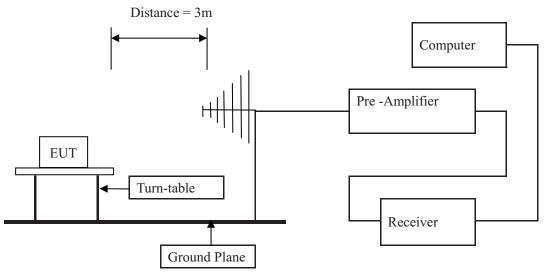


#### 5.2 Test Method and test Procedure:

The EUT was tested according to ANSI C63.4 –2003, The frequency spectrum from 30MHz to 6GHz 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 detector

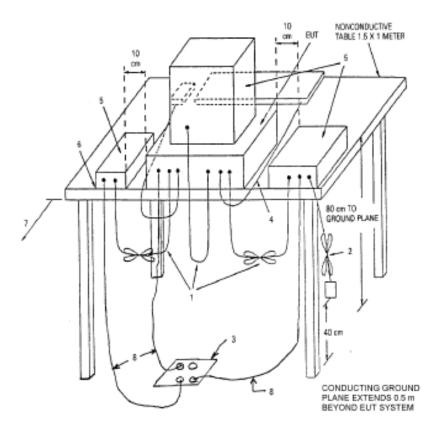
Actual Working Voltage and Frequency: 120V~, 60Hz (PC host)

## **Block diagram of Test setup**



Date: 2013-11-29





#### 5.3 Radiated Emission Limit

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

Note: The lower limit shall apply at the transition frequencies

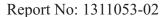
## 5.4 Test result

The frequency spectrum from 30MHz to 1GHz 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 detector. Measurements were made at 3 meters.

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

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Date: 2013-11-29

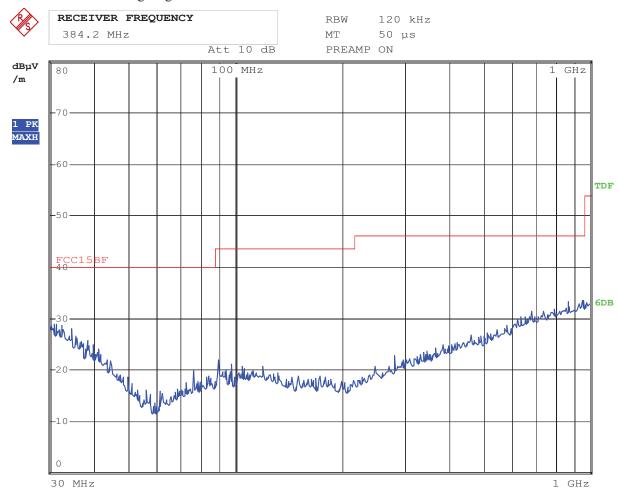


# A. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Communication with PC

#### **Results:** Pass

Please refer to following diagram for individual



Date: 27.NOV.2013 10:15:01

Remark: The curve as above is scanned by Peak detector.

Date: 2013-11-29

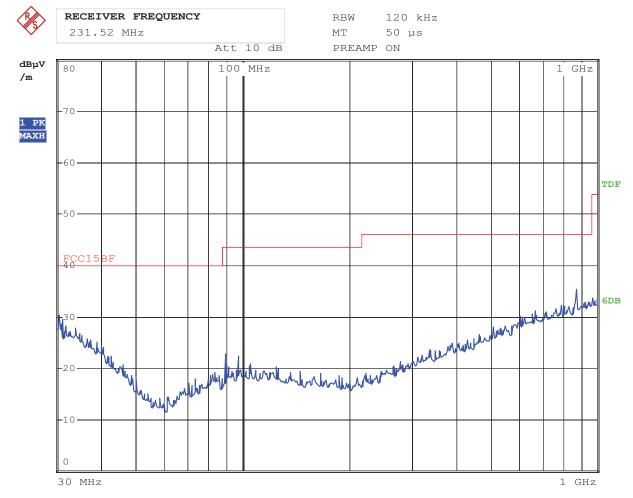


## B Radiated Emission In Vertical (30MHz----1000MHz)

**EUT set Condition:** Communication with **PC** 

Results: Pass

Please refer to following diagram for individual



Date: 27.NOV.2013 10:12:45 Remark: The curve as above is scanned by Peak detector. Report No: 1311053-02 Page 15 of 22

Date: 2013-11-29



# C. General Radiated Emission Data Radiated Emission In Horizontal (1000MHz----18000MHz)

**EUT set Condition:** Communication with **PC** 

**Results:** Pass

Please refer to following diagram for individual



Remark: The curve as above is scanned by Peak detector.

Note: The radiated emission level less than the limit for more than 20dB, no necessary to take down the record

Date: 2013-11-29

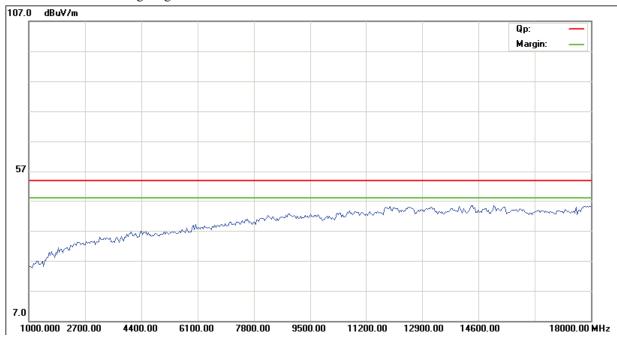


# D. General Radiated Emission Data Radiated Emission In Vertical (1000MHz----6000MHz)

**EUT set Condition:** Communication with **PC** 

**Results:** Pass

Please refer to following diagram for individual



Remark: The curve as above is scanned by Peak detector.

Note: The radiated emission level less than the limit for more than 20dB, no necessary to take down the record

Report No: 1311053-02 Page 17 of 22

Date: 2013-11-29

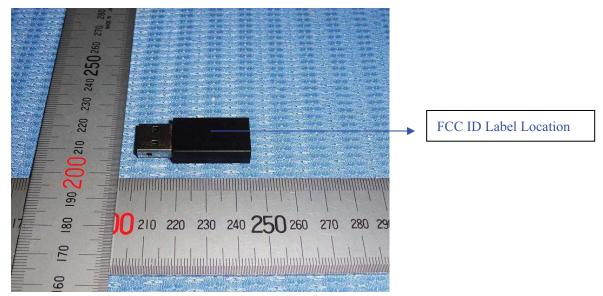


#### 6.0 FCC ID Label

# **FCC ID: XQLSD1115101**

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:**



Report No: 1311053-02 Page 18 of 22

Date: 2013-11-29



## 7.0 Photo of testing

#### Conducted test View--7.1



Report No: 1311053-02 Date: 2013-11-29



#### 7.2 Radiated emission test view--





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

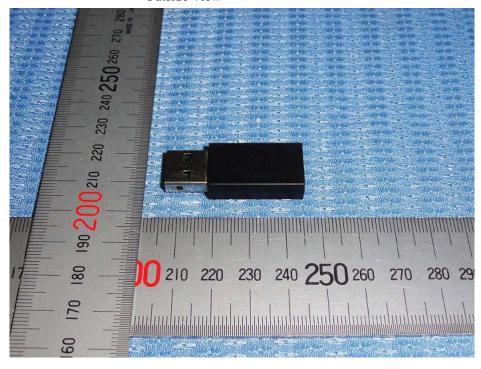
This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

Date: 2013-11-29



Outside View





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

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

Date: 2013-11-29



#### Photo for the EUT

#### Outside View



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

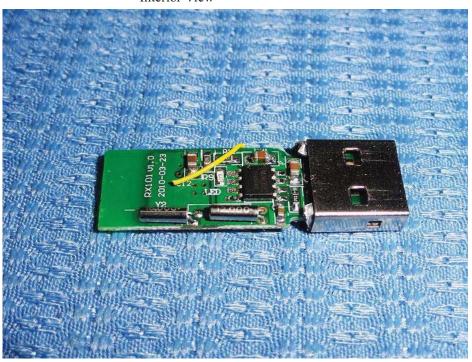
This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

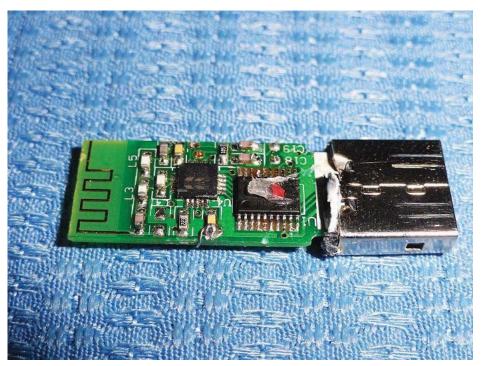
In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

Date: 2013-11-29



Interior View





-End of the report-

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

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.