CMA Testing and Certification Laboratories
廠商會檢定中心

TEST REPORT

Report No. : AE024762-003 Date : 2005 March 15

Applicant No. : LE203377(0)

Applicant : Suntree Holdings Company Limited
Unit 15-17, 16/F., Tower A, Regent Centre,
63 Wo Yi Hop Road,
Kwai Chung, N. T., Hong Kong.

Sample Description : Two(2) submitted sample(s) stated to be Weather Station – Clock
of Model No. ST-971 and ST-977
Rating : AC 120V / DC 6V adapter
No. of sample(s) : Two (2) piece(s)***

Date Received : 2004 November 30
2005 February 16

Test Period : 2004 November 30 – 2004 December 22
2005 February 16 – 2005 March 14

Test Requested : FCC Part 15 Certification

Test Method : FCC Rules and Regulations Part 15 – July 2004
ANSI C63.4 – 2003

Test Result : See attached sheet(s) from page 2 to 12.

Conclusion : The submitted sample was found to comply with requirement of FCC Part 15 Subpart B.

For and on behalf of
CMA Testing and Certification Laboratories

Authorized Signature : _____

Danny Chui
EMC Engineer - EL. Division

FCC ID : QZST98998

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1 General Information

1.1 General Description

The equipment under test (EUT) is a transmitter for Weather Station – Clock operating at 433.404 MHz which is controlled by a crystal. The EUT is powered by an AC / DC 6V adapter or 2 x 1.5V AA size batteries (Model: ST-971) / 4 x 1.5V AA size batteries (Model: ST-977). When "RF reset" button is pressed, it will receive data from the outdoor transmitter.

The brief circuit description is saved with filename: OpDes.pdf

1.2 Related Submittal Grants

This is a single application for certification of a receiver.

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1.3 Location of the test site

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003. An Open Area Testing Site is set up for investigation and located at :

Top of the Roof, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. A double shielded room is located at :

Roof Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

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1.4 List of measuring equipment

Equipment	Manufacturer	Model No.	Serial No.	Calibration Certification No.
EMI Test Receiver	R&S	ESCS30	100001	S43284
Broadband Antenna	Schaffner	CBL6112B	2718	AC1753
Signal Generator	IFR	2023B	202302/938	S43098
LISN	R&S	ESH3-Z5	100010	S43101
Pulse Limiter	R&S	ESH3-Z2	100001	S43325
Biconical Antenna	R&S	HK116	837414/004	4000.7752.02
Horn Antenna	EMCO	3115	9002-3351	9002-3351

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2 Description of the radiated emission test

2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2003.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

2.2 Test Result

The harmonic emissions meeting the requirement of section 15.109 are based on measurements employing the CISPR qusai-peak detector at frequencies below 1000 MHz and average detector for frequencies above 1000 MHz.

All other measurements were at least 20 dB below the permissible limits. Thus, those highest emissions are presented in next page (Section 2.3).

It was found that the EUT meet the FCC requirement.

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2.3 Radiated Emission Measurement Data

Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Mode: RX (ST-971)

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBμV/m)	Antenna and Cable factor (dB)	Field Strength (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
433.404	H	11.0	18.9	29.9	46.0	-16.1
433.404	V	11.5	18.9	30.4	46.0	-15.6
866.808	H	6.8	24.2	31.0	46.0	-15.0
866.808	V	7.5	24.2	31.7	46.0	-14.3
1300.210	H	4.9	24.3	29.2	54.0	-24.8
1733.621	H	3.2	25.5	28.7	54.0	-25.3

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Radiated emission

pursuant to

the requirement of FCC Part 15 subpart B

Mode: RX (ST-977)

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBμV/m)	Antenna and Cable factor (dB)	Field Strength (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
433.404	H	13.9	18.9	32.8	46.0	-13.2
433.404	V	16.6	18.9	35.5	46.0	-10.5
866.808	H	5.4	24.2	29.6	46.0	-16.4
866.808	V	4.1	24.2	28.3	46.0	-17.7
1300.214	H	9.8	24.3	34.1	54.0	-19.9
1733.620	H	7.9	25.5	33.4	54.0	-20.6

FCC ID : QZST98998

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3 Description of the Line-conducted Test

3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2003. The EUT was setup as described in the procedures, and both lines were measured.

3.2 Test Result

The result showed that the EUT met the FCC requirement.

3.3 Graph and Table of Conducted Emission Measurement Data

For electronic filing, the documents are saved with filename TestRpt2.pdf

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4 Photograph

4.1 Photographs of the Test Setup for Radiated Emission and Conduction Emission

For electronic filing, the photos are saved with filename TSup1.jpg to TSup5.jpg

4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename ExPho1.jpg to ExPho2.jpg and InPho1.jpg to InPho6.jpg.

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5 Supplementary document

The following document were submitted by applicant, and for electronic filing, the document are saved with the following filenames:

Document	Filename
ID Label/Location	LabelSmp.pdf
Block Diagram	BlkDia.pdf
Schematic Diagram	Schem.pdf
Users Manual	UserMan.pdf
Operational Description	OpDes.pdf

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6 Appendices

A1.	Photos of the set-up of Radiated Emissions	1 page
A2.	Photos of the set-up of Conducted Emissions	2 pages
A3.	Photos of External Configurations	1 page
A4.	Photos of Internal Configurations	3 pages
A5.	ID Label/Location	1 page
A6.	Conducted Emission Test Result	4 pages
A7.	Block Diagram	1 page
A8.	Schematics	1 page
A9.	User Manual	2 pages
A10.	Operation Description	1 page

***** End of Report *****

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