

Same Time Electronics Ltd.

Application
For
Certification
(FCC ID: HTWSTA100-300)

Digital Camera

WO# 0105214
Ben W. K. Ho/Sandy
May 14, 2001

- The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.
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MEASUREMENT/TECHNICAL REPORT

Same Time Electronics Ltd. - MODEL: Clever Cam SSP08/SSP08A

Timeye A100/A300

Timeye A1001/A3001

Timeye A1002/A3002

Timeye A1003/A3003

FCC ID: HTWSTA100-300

May 14, 2001

This report concerns (check one:) Original Grant X Class II Change _____

Equipment Type: Computer Peripheral (example: computer, printer, modem, etc.)

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes _____ No X

If yes, defer until: _____
date

Company Name agrees to notify the Commission by: _____
date

of the intended date of announcement of the product so that the grant can be issued on that date.

Transition Rules Request per 15.37? Yes _____ No X

If no, assumed Part 15, Subpart C for intentional radiator - the new 47 CFR [10-1-96 Edition] provision.

Report prepared by:

Wilson Loke
Intertek Testing Services
2/F., Garment Center,
576, Castle Peak Road,
HONG KONG
Phone: 852-2713-8575

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Fax: 852-2741-1693

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List of attached file

Exhibit type	File Description	filename
Test Report	Test Report	report.doc
Operation Description	Technical Description	descri.pdf
Test Setup Photo	Radiated Emission	radiated1.jpg to radiated2.jpg
External Photo	External Photo	ophoto1.jpg to ophoto2.jpg
Internal Photo	Internal Photo	iphoto1.jpg to iphoto4.jpg
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
ID Label/Location	Label Artwork and Location	label.pdf
User Manual	User Manual	manual.pdf

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EXHIBIT 1

GENERAL DESCRIPTION

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1.0 **General Description**

1.1 Product Description

The Equipment Under Test (EUT) is a Computer Peripheral. The EUT is powered by 3V d.c. (2 x 1.5V “AAA” battery). It is a digital camera which stores picture in digital format. Pictures can be downloaded to personal computer through USB Link and by applicable software.

The Model: Clever Cam SSP08A, Timeye A100, Timeye A300, Timeye A1001, Timeye A3001, Timeye A1002, Timeye A3002, Timeye A1003 and Timeye A3003 are the same as the Model: Clever Cam SSP08 in hardware aspect. The difference in model number serves as marketing strategy.

For electronic filing, the brief circuit description is saved a filename: descri.pdf.

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1.2 Related Submittal(s) Grants

This is a single Application for Certification of computer peripheral.

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1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (1992). All measurements were performed in Open Area Test Sites. Preliminary scans were performed in the Open Area Test Sites only to determine worst case modes. For each scan, the procedure for maximizing emissions in Appendices D and E were followed. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the emission data is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC.

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EXHIBIT 2

SYSTEM TEST CONFIGURATION

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2.0 **System Test Configuration**

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (1992).

The EUT was powered from 2 x fully charged 1.5V “AAA” battery.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

2.2 EUT Exercising Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. The software, contained on a CD, was inserted into CD Drive and was installed into the harddisk.

Once the program was loaded, the camera can be controlled by using the mouse. For simplicity of testing, the unit was setted to move continuously.

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2.3 Special Accessories

One USB cable with ferrite is used.

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2.4 Equipment Modification

Any modifications installed previous to testing by Same Time Electronics Ltd. will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Intertek Testing Services.

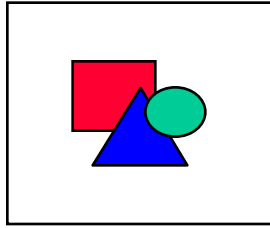
2.5 Support Equipment List & Description

- Refer List:
1. HP COMPUTER: Model: D3397A
S/N: SG54500246
FCCID: K4UVECTRAVL5
 2. HP MONITOR: Model: D2804A
S/N: KR53185780
FCCID: CSYSC-428VSP
 3. HP MOUSE: Model: M-S34
S/N: LCA53438640
FCCID: DZL210582
 4. HP KEYBOARD: Model: E03633QLUS
FCCID: CIGE03614
 5. HP PRINTER: Model: C2642A
S/N: SG67B131RY
FCCID: B94C2642X
 6. MODEM: Model: 6800CN
FCCID: BFJ9D907-00038
 7. One 1m monitor cable with ferrite
 8. One 1m parallel cable
 9. Two 1m telephone line with termination
 10. One 1m serial cable
 11. One USB cable with ferrite (provided by client)

Confirmed by:

*Wilson Loke
Manager
Intertek Testing Services
Agent for Same Time Electronics Ltd.*

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Signature

____ May 14, 2001 ____ Date

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EXHIBIT 3

EMISSION RESULTS

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3.0 Emission Results

Data included were result from worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs, data tables and graphical representations of the emissions are included.

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3.1 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

where FS = Field Strength in dB μ V/m

RA = Receiver Amplitude (including preamplifier) in dB μ V

CF = Cable Attenuation Factor in dB

AF = Antenna Factor in dB

AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows:

$$FS = RR + LF$$

where FS = Field Strength in dB μ V/m

RR = RA - AG in dB μ V

LF = CF + AF in dB

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

$$RA = 52.0 \text{ dB}\mu\text{V/m}$$

$$AF = 7.4 \text{ dB} \quad RR = 23.0 \text{ dB}\mu\text{V}$$

$$CF = 1.6 \text{ dB} \quad LF = 9.0 \text{ dB}$$

$$AG = 29.0 \text{ dB}$$

$$FS = RR + LF$$

$$FS = 23 + 9 = 32 \text{ dB}\mu\text{V/m}$$

$$\text{Level in mV/m} = \text{Common Antilogarithm} [(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$$

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3.2 Radiated Emission Configuration Photograph

Worst Case Radiated Emission

288.391 MHz

For electronic filing, test configuration photographs are saved with filename:
radiated1.jpg & radiated2.jpg

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3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 1.5 dB

TEST PERSONNEL:



Tester Signature

Ben W. K. Ho, Compliance Engineer
Typed/Printed Name

May 14, 2001
Date

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Company: Same Time Electronics Ltd.
Model: Clever Cam SSP08

Date of Test: May 11, 2001

Table 1

Radiated Emissions

Polarity	Frequency (M H z)	Reading (dB μ V)	Antenna Factor (dB)	Pre- Am p Gain (dB)	Net at 3m (dB μ V /m)	Limit at 3m (dB μ V /m)	M argin (dB)
V	48.071	42.1	11.9	16	38.0	40.0	-2.0
H	144.209	37.9	11.7	16	33.6	43.5	-9.9
H	192.281	35.7	17.1	16	36.8	43.5	-6.7
H	288.391	47.2	13.3	16	44.5	46.0	-1.5
H	336.490	44.4	14.6	16	43.0	46.0	-3.0
H	384.562	42.9	15.4	16	42.3	46.0	-3.7
H	480.701	36.7	17.3	16	38.0	46.0	-8.0
H	576.835	38.0	18.6	16	40.6	46.0	-5.4
H	624.905	35.1	18.9	16	38.0	46.0	-8.0

Notes: 1. Peak Detector Data

2. No other harmonic or spurious were detected at a test distance of 3 meter.

3. Negative value in the margin column shows emission below limit.

Test Engineer: Ben W. K. Ho

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EXHIBIT 4

EQUIPMENT PHOTOGRAPHS

4.0 **Equipment Photographs**

For electronic filing, photographs of the tested EUT are saved with filename: ophoto1.jpg to ophoto2.jpg for external photo, and iphoto1.jpg to iphoto4.jpg for internal photo.

EXHIBIT 5

PRODUCT LABELLING

5.0 **Product Labelling**

For electronic filing, the FCC ID label and label location are saved with filename: label.pdf.

EXHIBIT 6
TECHNICAL SPECIFICATIONS

6.0 **Technical Specifications**

For electronic filing, block diagram and schematics of the camera control unit are saved with filename: circuit.pdf and block.pdf respectively.

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EXHIBIT 7

INSTRUCTION MANUAL

7.0 **Instruction Manual**

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.