



MEASUREMENT REPORT

(RSS-210 / ANSI C63.4-2003)

Product.....: Receiver
Trade Name.....: SKYTECH II
Model No.....: 3003TR / 3003TR RX
Applicant.....: Skytech II, Inc.
Applicant Address.....: 9230 Conservation Way, Ft. Wayne, IN
46809, U.S.A.

Report Number	MLT0704CS03003
Applicant	Skytech II, Inc.
Product	Receiver
Sample Received Date	2007/04/10

Report Prepared By	Jesse Tien
Signature	
Date Prepared	2007/04/11 ~ 2007/08/27

Report Authorized By	Roger Chen
Signature	
Date Authorized	2007/09/28

Test By

Max Light Technology Co., Ltd.
 Room 5, 8F, No.125, Section 3 Roosevelt Road,
 Taipei, Taiwan., R.O.C.
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CERTIFICATION


We here by verify that :


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: 2003. All test were conducted by MLT (Max Light Technology Co., Ltd) Room 5, 8F, No.125, Section 3 Roosevelt Road, Taipei, Taiwan, R.O.C Also, we attest to the accuracy of each.

We further submit that the energy emitted by the sample EUT tested as described in the report is in compliance with radiated and conducted emission limit of ICES-003 and RSS-210 Issue 5 Section 6.1 and 6.3.

Applicant Name	Skytech II, Inc.
Applicant Address	9230 Conservation Way,Ft. Wayne,IN 46809,U.S.A.
Manufacturer Name	FEGO Precision Industrial Co.,Ltd
Manufacturer Address	947 LIN SEN RD., WU-FENG SHIANG TAICHUNG HSIEN R.O.C.

Equipment	Receiver
Model No	3003TR / 3003TR RX
IC	2439A-3003TRRX

Report Prepared By	Jesse Tien
Signature	

Report Authorized By	Roger Chen
Signature	

I. GENERAL

1.1 Introduction

The following measurement report is submitted on behalf of Skytech II, Inc. In support of a Class B Digital Device certification in accordance with ICES-003 and RSS-210 of the Commission's and Regulations.

1.2 Customer Details

Applicant Name	Skytech II, Inc.
Applicant Address	9230 Conservation Way, Ft. Wayne, IN 46809, U.S.A.
Manufacturer Name	FEGO Precision Industrial Co., Ltd.
Manufacturer Address	947 LIN SEN RD., WU-FENG SHIANG TAICHUNG HSIEN R.O.C.

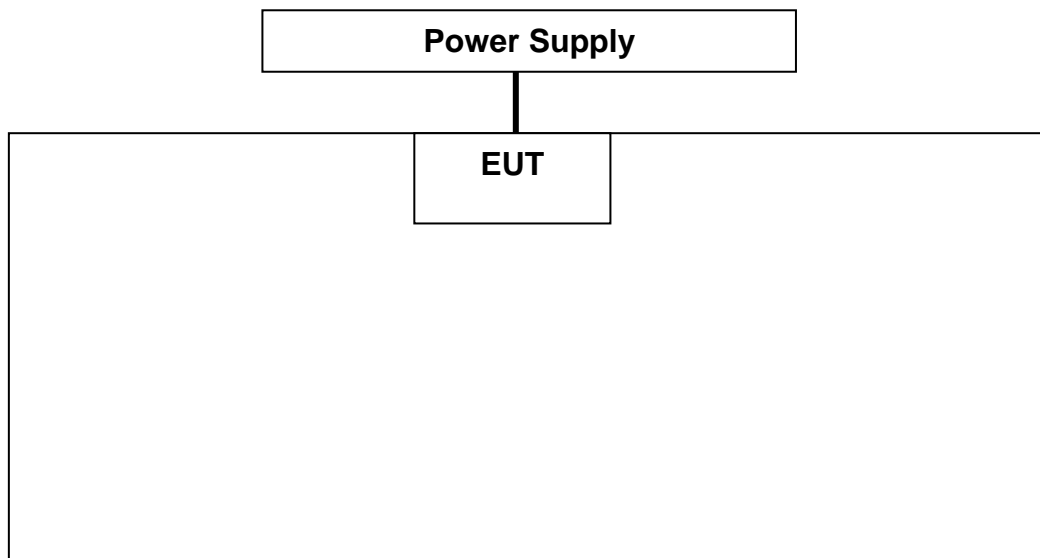
1.3 Technical data of EUT

Equipment	Receiver
Model No	3003TR / 3003TR RX
IC	2439A-3003TRRX
Power Type	Powered by AC 120V

1.4 Description of Support Equipment

The EUT itself forms a system. No support equipment is required for its normal operation.

1.5 Configuration of System Under Test



1.6 Test Procedure

All measurements contained in this report were performed according to the techniques described in Measurement procedure ANSI C63.4: 2003 "Measurement of Intentional Radiators."

1.7 General Test Condition

The conditions under which the EUT operates were varied to determine their effect on the equipment's emission characteristics. The final configuration of the test system and the mode of operation used during these tests were chosen as that which produced the highest emission levels. However, only those conditions which the EUT was considered likely to encounter in normal use were investigated.

II. Conducted Emissions Requirements

2.1 General & Setup :

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was assembled on a wooden table which is 80 centimeters high, was placed 40 centimeters from the back wall and at least 1 meter from the sidewall.

Power was fed to the EUT from the public utility power grid through a line filter and EMCO Model 3825/2 Line Impedance Stabilization Networks (LISN). The LISN housing, measuring instrumentation case, ground plane, etc., were electrically bonded together at the same RF potential. The Spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the LISN was connected to the spectrum analyzer directly. Conducted emission levels were in the CISPER quasi-peak detection mode. The analyzer's 6 dB bandwidth was set to 9 KHz. No post-detector video filter was used.

The spectrum was scanned from 150 KHz to 30 MHz. The physical arrangement of the test system and associated cabling was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude and frequency. All spurious emission frequencies were observed. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in paragraph 2.6.

2.2 Test Equipment List:

Item	Mfr/Brand	Instruments	Serial No.	Model/Type No.	Calibrated Date	Next Cali. Date
1.	Agilent	Spectrum Analyzer	US40240137	E7403A	2007/01/19	2008/01/19
2.	AFJ	EMI Receiver	55090002141	ER 55C	2007/04/12	2008/04/12
3.	EMCO	LISN	2654	3825/2	2007/03/22	2008/03/22
4.	SCHAFFNER	ISN	16831	ISN T400	2007/04/23	2008/04/23

2.4 Test condition:

EUT tested in accordance with the specifications given by the manufacturer, and exercised in the most unfavorable manner.

2.5 Conducted Emissions Limits:

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.0	56	46
5.0 to 30	60	50

2.6 Measurement Data Of Conducted Emissions:

2.6.1 Conducted Emissions (Subpart B)

The following table show a summary of the highest emissions of power line conducted emissions to the HOT and NEUTRAL conductor of the EUT power.

Test Mode : Power on

Conducted Emissions (Class B)					
Conductor	Frequency (MHz)	Quasi-Peak (dBuV)	Limits (dBuV)	Average (dBuV)	Limits (dBuV)
L1	0.16	54.28	65.30	--	55.30
	0.19	50.80	64.20	--	54.20
	0.21	48.07	63.14	--	53.14
	0.72	51.08	56	41.50	46
	1.44	39.81	56	--	46
	2.66	45.33	56	--	46
	3.66	44.36	56	--	46
L2	0.17	53.35	65.12	--	55.12
	0.19	51.95	64.20	--	54.20
	0.24	46.94	62.04	--	52.04
	0.72	50.08	56	40.80	46
	2.66	44.66	56	--	46
	3.66	44.58	56	--	46
	4.01	39.67	56	47.91	46

- Notes :**
- 1.L1: One end & Ground L2: The other end & Ground
 - 2.Height of table on which the EUT was placed : 0.8 m.
 - 3.The Quasi-Peak Value have already met the Average Value Limit showed on above limits.
 - 4.The above test results are obtained under the normal condition.

III. Radiated Emissions Requirements

3.1 General & Setup:

Prior to open-field testing, the EUT was placed in a shielded enclosure and scanned at a close distance to determine its emission characteristics. The physical arrangement of the EUT was varied (within the scope of arrangements likely to be encountered in actual use) to determine the effect on the unit's emanations in amplitude, directivity, and frequency. The exact system configuration which produced the highest emissions was noted so it could be reproduced later during the open-field tests. This was done to ensure that the final measurements would demonstrate the worst-case interference potential of the EUT. Final radiation measurements were made on a 3-meter, open-field test site. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 30 MHz to 1000 MHz using an Hewlett Packard 8591EM Spectrum Analyzer, EMCO Biconilog Antenna (Model 3142C) for 30-1000MHz. At each frequency, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization. Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post-detector video filters were used in the test. The spectrum analyzer's 6 dB bandwidth was set to 120 KHz, and the analyzer was operated in the quasi-peak detection mode. The highest emission amplitudes relative to the appropriate limit were measured and recorded in paragraph 3.3.

3.2 Test Equipment List:

Item	Mfr/Brand	Instruments	Serial No.	Model/Type No.	Calibrated Date	Next Cali. Date
1.	HP	Spectrum Analyzer	73412A00110	8591EM	2007/03/28	2008/03/28
2.	HP	Pre Amplifier	2944A08954	8447D	2007/03/28	2008/03/28
3.	HP	Pre Amplifier	3113A05475	8447F	2007/03/28	2008/03/28
4.	EMCO	Biconilog Antenna	00044568	3142C	2007/07/27	2008/07/27
5.	Agilent	Spectrum Analyzer	US44300422	E4446A	2007/04/23	2008/04/23
6.	HP	Pre Amplifier	3008A01463	8449B	2007/03/22	2008/03/22
7.	EMCO	Horn Antenna	6492	3115	2007/06/21	2008/06/21
8.	EMCO	Biconilog Antenna	00059739	3142C	2006/11/01	2007/11/01

3.3 Measurement Data Of Radiated Emissions:

3.3.1 Open Field Radiated Emissions

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation , etc. are recorded on the following

Test Mode : Power on

Radiated Emissions (HORIZONTAL)					
Frequency (MHz)	Amplitude (dBuV/m)	Ant. (m)	Table (Degree)	Limits(Class B) (dBuV/m)	Margin (dB)
57.50	27.35	1.5	250	40	-12.65
89.54	28.60	2	270	40	-11.40
211.69	27.14	1	80	43.5	-16.36
310.02	32.69	2.5	100	46	-13.31
487.95	36.15	2	230	46	-9.85
519.10	30.80	1	320	46	-15.20
561.50	31.95	1	330	46	-14.05
649.75	34.12	1	120	46	-11.88
723.50	33.48	1	210	46	-12.52
849.50	36.00	1	260	46	-10.00
951.20	36.71	1	350	46	-9.29

- Notes :**
- 1.Margin= Amplitude - Limits
 - 2.Distance of Measurement : 3 Meter (30-1000MHz)
 - 3.Height of table for EUT placed: 0.8 Meter.
 - 4.Amplitude= Reading Amplitude –Amplifier gain+ Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)

3.3.2 Open Field Radiated Emissions

The highest peak values of radiated emissions from the EUT at various antenna heights, antenna polarization, EUT orientation , etc. are recorded on the following

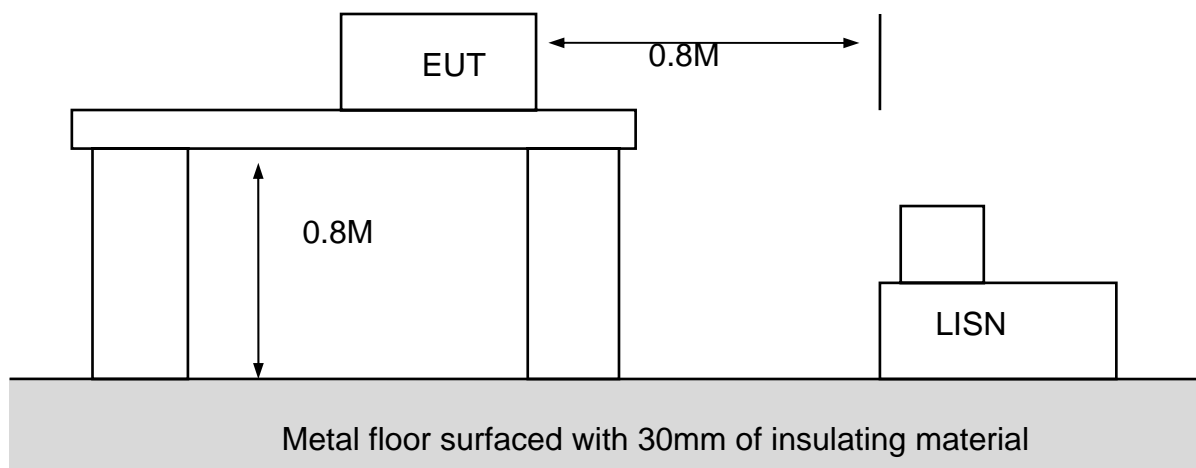
Test Mode : Power on

Radiated Emissions (VERTICAL)					
Frequency (MHz)	Amplitude (dBuV/m)	Ant. (m)	Table (Degree)	Limits(Class B) (dBuV/m)	Margin (dB)
31.25	30.08	1	300	40	-9.92
56.76	28.96	1	210	40	-11.04
118.75	28.78	1	240	43.5	-14.72
142.55	31.57	1	90	43.5	-11.93
306.05	32.79	1	70	46	-13.21
331.30	31.47	1.5	300	46	-14.53
513.50	31.53	1.5	330	46	-14.47
645.28	34.56	1	240	46	-11.44
715.10	32.93	2	280	46	-13.07
759.20	34.65	1	290	46	-11.35
797.00	35.08	1	220	46	-10.92

- Notes :**
- 1.Margin= Amplitude - Limits
 - 2.Distance of Measurement : 3 Meter (30-1000MHz)
 - 3.Height of table for EUT placed: 0.8 Meter.
 - 4.Amplitude= Reading Amplitude –Amplifier gain+ Cable loss + Antenna factor
(Auto calculate in spectrum analyzer)

Appendix I- EUT Test SETUP

MEASUREMENT OF POWER LINE CONDUCTED RFI VOLTAGE



MEASUREMENT OF RADIATED EMISSION

