TEST REPORT

FCC RULES Part 90, Part 2

Class II Permissive Change

Report File No.	: STROR-05-052
Date of Issue	: Dec. 15, 2005
Kind of Product	: FM Handheld Transceiver
Model Name	: IS100
Manufacturer	: E-TECH Co., Ltd.
Serial No.	: -
Test Result	: Complied

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VERIFICATION OF COMPLIANCE

Applicant :	E-TECH Co., Ltd.
Kind of Product :	FM Handheld Transceiver
Brand Name :	Iris
Model Name :	IS100
Model Difference :	-
Report File No. :	STROR-05-052
Date of test :	Nov. 28, 2005 ~ Dec. 15, 2005
Receiver EUT :	-

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
FCC RULES Part 90, Part2	Complied

The above equipment was tested by SGS Testing Korea Co., Ltd. for compliance with the requirements set forth in the FCC RULES PARTS Part90, Part2. The results of testing in this report apply to the product system that was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By: ***Date*** **Dec. 15, 2005**

Feel Jeong

Approved By ***Date*** **Dec. 15, 2005**

Albert Lim

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1. General Description of EUT

IS100 has a compact size with a various features in range of 136.025-173.975 MHz. IS100 has a various features shown as below

IS100 constructed with a microprocessor controlled, temperature compensated Phase Locked Loop (PLL) frequency synthesizer. A special integrated circuit provides supports to sub-audible signaling(CTCSS & DCS) and most of the receiving parts are switched off periodically in the power save mode to battery current drain standby.

2. General Information of EUT

Transceiver

Power Supply	DC 7.5V (lithium type of battery)
Operating Frequency	136.025 MHz –173.975 MHz
Transmit Power	1 W(low)/5 W(high)
Modulation of Channels	FM
Channel spacing	12.5 kHz and 25 kHz
Emission	8K5F3E/ 16K0F3E
Communication method	Simplex
Number of Channels	255channels
Antenna Type	External

3. Modifications to made

Following modifications are made from IP100 model(FCC ID: R72IP100).

- External button SW604 and SW606 was deleted.
- Enclosure structure was little bit changed because external function button is changed from 6 button to 4 button.
- PCB artwork of Button part of Logic board is changed to assist 4 button.
- Pull-up resistor R652 (390K) of Logic board was deleted.

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4. Test Procedure

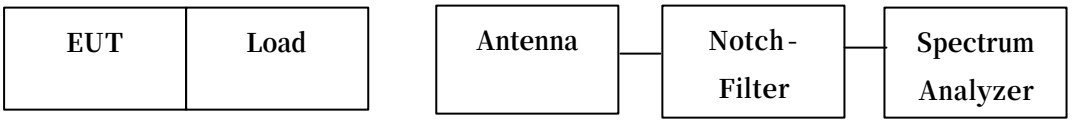
The test procedure are performed following the test stands ANSI/EIA-603, if applicable.

4.1 Radiated Spurious Emissions FCC 2.1053, FCC 90.210

Radiated spurious emissions are emissions from the EUT when transmitting in non-radiating load on frequencies outside the operating band.

ERP measurement of spurious emission the general substitution method as described at 2.4.2.

In order to suppress inter-modulation products in the spectrum analyzer a notch filter is used, if applicable.



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5. Radiated Spurious Emissions FCC 2.1053(a), FCC 90.210

TX FREQ=136.025 MHz Low Power Setting Channel Spacing 12.5 kHz

Frequency [MHz]	Polarization	Max. Power Value [dBm]	Specification Limit [dBm]	Margin [dB]
272.05	V	< -30	-20	>10
408.08	V	< -30	-20	>10
544.10	H	< -30	-20	>10
680.13	H	< -30	-20	>10
816.15	V	< -30	-20	>10
952.18	V	< -30	-20	>10
1088.2	V	< -30	-20	>10
1224.23	V	< -30	-20	>10
1360.25	V	< -30	-20	>10

Test Equipment Used

EQUIPMENT	MANUFACTURER	MODEL	CAL DUE.
Spectrum analyzer	H/P	8593E	Sep. 2006
Signal Generator	Agilent	8648D	May 2006
Dipole Antenna	Schwarzbeck Mess	VHAP	May 2006
Amplifier	Sonoma Instrument	305	Jun.2006
Dummy Load	BIRD	8404	Dec. 2006
Horn Antenna	Schwarzbeck	9120D	Sep. 2006
Horn Antenna	Electro-Metrics	RGA-60	Apr. 2006
Biconical Antenna	Schwarzbeck	VHA9103	Mar. 2006
Log-periodic Antenna	Schwarzbeck	UHALP9107	May 2006
Anechoic Chamber	Seo Young EMC	-	-

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408.08	H	< -30	-20	>10
544.10	V	< -30	-20	>10
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816.15	H	< -30	-20	>10
952.18	V	< -30	-20	>10
1088.2	H	< -30	-20	>10
1224.23	V	< -30	-20	>10
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TX FREQE =136.025 MHz Low Power Setting Channel Spacing 25 kHz

Frequency [MHz]	Polarization	Max. Power Value [dBm]	Specification Limit [dBm]	Margin [dB]
272.05	V	< -30	-13	>17
408.08	V	< -30	-13	>17
544.10	V	< -30	-13	>17
680.13	H	< -30	-13	>17
816.15	V	< -30	-13	>17
952.18	V	< -30	-13	>17
1088.2	V	< -30	-13	>17
1224.23	V	< -30	-13	>17
1360.25	V	< -30	-13	>17

Test Equipment Used

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Anechoic Chamber	Seo Young EMC	-	-

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408.08	V	< -30	-13	>17
544.10	V	< -30	-13	>17
680.13	H	< -30	-13	>17
816.15	H	< -30	-13	>17
952.18	V	< -30	-13	>17
1088.2	V	< -30	-13	>17
1224.23	V	< -30	-13	>17
1360.25	V	< -30	-13	>17

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Anechoic Chamber	Seo Young EMC	-	-

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TX FREQE = 155.025 MHz Low Power Setting Channel Spacing 12.5 kHz

Frequency [MHz]	Polarization	Max. Power Value [dBm]	Specification Limit [dBm]	Margin [dB]
310.05	H	< -30	-20	>10
465.08	V	< -30	-20	>10
620.10	V	< -30	-20	>10
775.13	H	< -30	-20	>10
930.15	V	< -30	-20	>10
1085.18	V	< -30	-20	>10
1240.20	V	< -30	-20	>10
1395.23	V	< -30	-20	>10
1550.25	V	< -30	-20	>10

Test Equipment Used

EQUIPMENT	MANUFACTURER	MODEL	CAL DUE.
Spectrum analyzer	H/P	8593E	Sep. 2006
Signal Generator	Agilent	8648D	May 2006
Dipole Antenna	Schwarzbeck Mess	VHAP	May 2006
Amplifier	Sonoma Instrument	305	Jun.2006
Dummy Load	BIRD	8404	Dec. 2006
Horn Antenna	Schwarzbeck	9120D	Sep. 2006
Horn Antenna	Electro-Metrics	RGA-60	Apr. 2006
Biconical Antenna	Schwarzbeck	VHA9103	Mar. 2006
Log-periodic Antenna	Schwarzbeck	UHALP9107	May 2006
Anechoic Chamber	Seo Young EMC	-	-

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TX FREQE = 155.025 MHz High Power Setting Channel Spacing 12.5 kHz

Frequency [MHz]	Polarization	Max. Power Value [dBm]	Specification Limit [dBm]	Margin [dB]
310.05	H	< -30	-20	>10
465.08	V	< -30	-20	>10
620.10	V	< -30	-20	>10
775.13	H	< -30	-20	>10
930.15	V	< -30	-20	>10
1085.18	V	< -30	-20	>10
1240.20	V	< -30	-20	>10
1395.23	V	< -30	-20	>10
1550.25	V	< -30	-20	>10

Test Equipment Used

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Anechoic Chamber	Seo Young EMC	-	-

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TX FREQE = 155.025 MHz Low Power Setting Channel Spacing 25 kHz

Frequency [MHz]	Polarization	Max. Power Value [dBm]	Specification Limit [dBm]	Margin [dB]
310.05	V	< -30	-13	>17
465.08	V	< -30	-13	>17
620.10	H	< -30	-13	>17
775.13	H	< -30	-13	>17
930.15	V	< -30	-13	>17
1085.18	V	< -30	-13	>17
1240.20	V	< -30	-13	>17
1395.23	V	< -30	-13	>17
1550.25	H	< -30	-13	>17

Test Equipment Used

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310.05	H	< -30	-13	>17
465.08	V	< -30	-13	>17
620.10	V	< -30	-13	>17
775.13	H	< -30	-13	>17
930.15	V	< -30	-13	>17
1085.18	V	< -30	-13	>17
1240.20	V	< -30	-13	>17
1395.23	V	< -30	-13	>17
1550.25	V	< -30	-13	>17

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Anechoic Chamber	Seo Young EMC	-	-

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TX FREQE = 173.975 MHz Low Power Setting Channel Spacing 12.5 kHz

Frequency [MHz]	Polarization	Max. Power Value [dBm]	Specification Limit [dBm]	Margin [dB]
347.95	H	< -30	-20	>10
521.93	H	< -30	-20	>10
695.90	H	< -30	-20	>10
869.88	V	< -30	-20	>10
1043.85	V	< -30	-20	>10
1217.83	V	< -30	-20	>10
1391.80	V	< -30	-20	>10
1565.78	V	< -30	-20	>10
1739.75	V	< -30	-20	>10

Test Equipment Used

EQUIPMENT	MANUFACTURER	MODEL	CAL DUE.
Spectrum analyzer	H/P	8593E	Sep. 2006
Signal Generator	Agilent	8648D	May 2006
Dipole Antenna	Schwarzbeck Mess	VHAP	May 2006
Amplifier	Sonoma Instrument	305	Jun.2006
Dummy Load	BIRD	8404	Dec. 2006
Horn Antenna	Schwarzbeck	9120D	Sep. 2006
Horn Antenna	Electro-Metrics	RGA-60	Apr. 2006
Biconical Antenna	Schwarzbeck	VHA9103	Mar. 2006
Log-periodic Antenna	Schwarzbeck	UHALP9107	May 2006
Anechoic Chamber	Seo Young EMC	-	-

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TX FREQE = 173.975 MHz High Power Setting Channel Spacing 12.5 kHz

Frequency [MHz]	Polarization	Max. Power Value [dBm]	Specification Limit [dBm]	Margin [dB]
347.95	V	< -30	-20	>10
521.93	V	-27.9	-20	7.9
695.90	V	-29.6	-20	9.6
869.88	V	< -30	-20	>10
1043.85	V	< -30	-20	>10
1217.83	V	< -30	-20	>10
1391.80	V	< -30	-20	>10
1565.78	V	< -30	-20	>10
1739.75	V	< -30	-20	>10

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Log-periodic Antenna	Schwarzbeck	UHALP9107	May 2006
Anechoic Chamber	Seo Young EMC	-	-

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TX FREQE = 173.975 MHz Low Power Setting Channel Spacing 25 kHz

Frequency [MHz]	Polarization	Max. Power Value [dBm]	Specification Limit [dBm]	Margin [dB]
347.95	V	< -30	-13	>17
521.93	V	< -30	-13	>17
695.90	V	< -30	-13	>17
869.88	V	< -30	-13	>17
1043.85	H	< -30	-13	>17
1217.83	H	< -30	-13	>17
1391.80	V	< -30	-13	>17
1565.78	V	< -30	-13	>17
1739.75	V	< -30	-13	>17

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347.95	V	< -30	-13	>17
521.93	V	-28.4	-13	15.4
695.90	H	-28.9	-13	15.9
869.88	V	< -30	-13	>17
1043.85	V	< -30	-13	>17
1217.83	H	< -30	-13	>17
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1565.78	V	< -30	-13	>17
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Anechoic Chamber	Seo Young EMC	-	-

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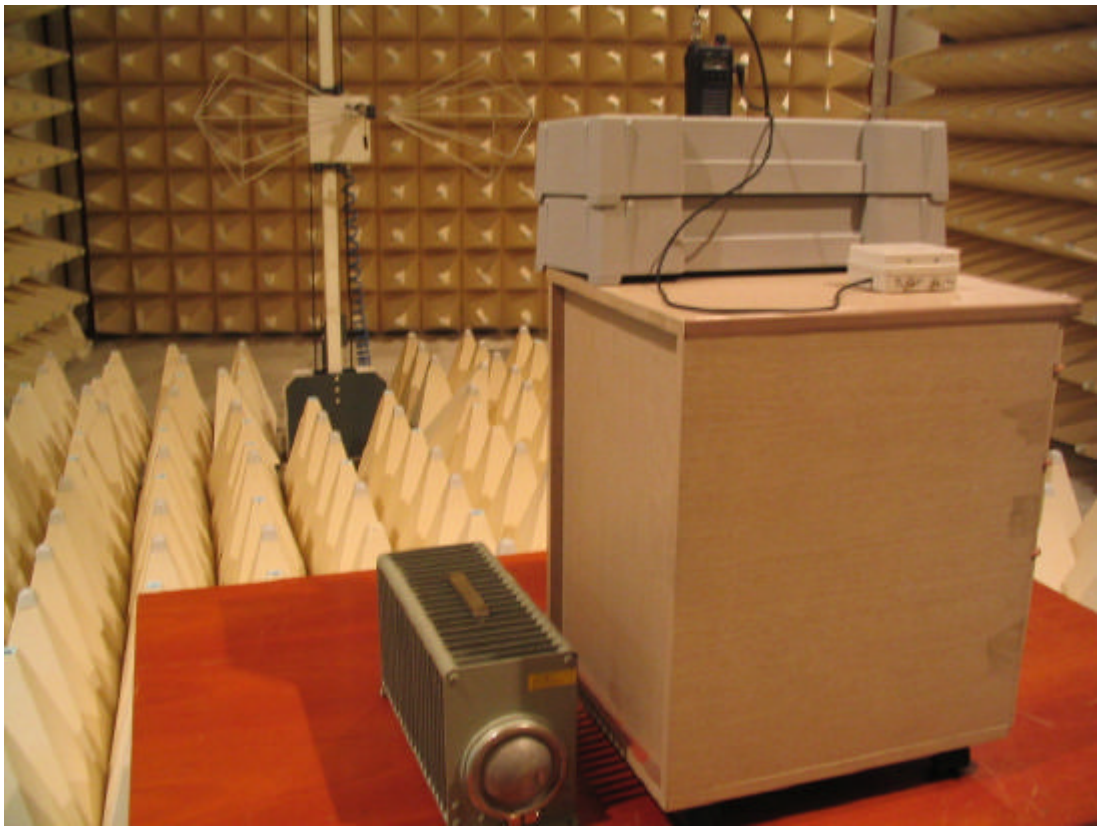
6. Attachment A – Photos of the test setup



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