September 21, 2007

Elite Screens China Corp. Longxi Duimianling Industry Zone, Longcheng, Longgang District, Shenzhen, Guangdong, China

Dear Andy:

Enclosed you will find your file copy of a Part 15 Certification (FCC ID: VBXELITESCREENS).

For your reference, TCB will normally take another 20 days for reviewing the report. Approval will then be granted when no query is sorted.

Please contact me if you have any questions regarding the enclosed material.

Sincerely,

Shawn Xing

Assistant Manager

Enclosure

Elite Screens China Corp.

Application For Certification (FCC ID: VBXELITESCREENS)

Superheterodyne Receiver

JGZ0705093-2 Shawn Xing

September 21, 2007

- 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
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- For Terms And Conditions of the services, it can be provided upon request.
- The evaluation data of the report will be kept for 3 years from the date of issuance.

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

1~8th floor, Block E2, 11 Cai Pin Road, Science city, Guangzhou Economic Development Zone, Guangzhou, P.R.China

Telephone/Fax: 86-20-8213 9688/86-20-3205 7538

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MEASUREMENT/TECHNICAL REPORT

Elite Screens China Corp. - MODEL: Elitescreens

FCC ID: VBXELITESCREENS

This report concerns (check one:) Original	Grant X class II Change					
Equipment Type: Superheterodyne Receiver	(example: computer, printer, modem, etc.)					
Deferred grant requested per 47 CFR 0.45						
	If yes, defer until:					
	date					
Company Name agrees to notify the Comr	nission by:					
, , ,	date					
of the intended date of announcement of to on that date.	he product so that the grant can be issued					
Transition Rules Request per 15.37? Yes NoX If no, assumed Part 15, Subpart C for intentional radiator - the new 47 CFR [08-07-06 Edition] provision.						
Report prepared by:	Shawn Xing Intertek Testing Service Shenzhen Ltd. Guangzhou Branch 1~8th floor, Block E2, 11 Cai Pin Road, Science city, Guangzhou Economic Development Zone, Guangzhou, P.R.China Phone: 86-755-8614-0602 Fax: 86-755-8601-6751					

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List of attached file

Exhibit type	File Description	filename	
Test Report	Test Report	report.pdf	
Operation Description	Technical Description	descri.pdf	
Operation Description	Rx Module Specification	hc01.pdf	
Test Setup Photo	Radiated Emission	radiated photos.doc	
Test Setup Photo	Conducted Emission	conducted photos.doc	
Test Report	est Report Conducted Emission Test Result		
External Photo	External Photo External Photo		
Internal Photo	Internal Photo	internal photos.doc	
Block Diagram	Block Diagram	block.pdf	
Schematics	Circuit Diagram	circuit.pdf	
ID Label/Location	abel/Location Label Artwork and Location		
User Manual	User Manual	manual.pdf	

FCC ID: VBXELITESCREENS

EXHIBIT 1 GENERAL DESCRIPTION

1.0 **General Description**

1.1 Product Description

This Equipment Under Test (EUT) is the 434MHz wireless receiver that powered by 120V AC, 60Hz. The main function of the EUT is used to receive the 434MHz modulation signal from the specified transmitter that sold with this receiver, and then this receiver will demodulate the signal to power on/off the motor to move or stop the screen.

Antenna Type: Integral Antenna

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

1.2 Related Submittal(s) Grants

This is an application for Certification of a receiver. The transmitter, associated with this receiver, has FCC ID: VBXCINETENSION and has been filed at the same time.

1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003). All radiated measurements were performed in an Open Area Test Site. Preliminary scans were performed in the Semi-anechoic Chamber 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 Semi-Anechoic Chamber facility used to collect the radiated data is **SHENZHEN ACADEMY OF METROLOGY & QUALITY INSPECTION** located at Longzhu Road, Shenzhen. This test facility and site measurement data have been fully placed on file with the FCC.

FCC ID: VBXELITESCREENS

EXHIBIT 2 SYSTEM TEST CONFIGURATION

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 (2003).

The device was powered from 120V AC, 60Hz.

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. The step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was mounted to a cardboard box, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

2.2 EUT Exercising Software

There was no special software to exercise the device. Once the unit is powered up, it received continuously.

2.3 Special Accessories

There are no special accessories necessary for compliance of this product.

Equipment Modification 2.4

Any modifications installed previous to testing by Elite Screens China Corp. will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Intertek Testing Services.

2.5 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

2.6 Support Equipment List and Description

This product was tested in standalone configuration.

All the items listed under section 2.0 of this report are

Confirmed by:

Shawn Xing Assistant Manager Intertek Testing Service Shenzhen Ltd. Guangzhou Branch Agent for Elite Screens China Corp.

Signature

September 21, 2007 Date

EXHIBIT 3

EMISSION RESULTS

3.0 **Emission Results**

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

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 $FS = Field Strength in dB\mu V/m$

RA = Receiver Amplitude (including preamplifier) in dBµV

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 $FS = Field Strength in dB\mu V/m$

 $RR = RA - AG \text{ in } dB\mu V$ 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 are 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.

 $RA = 52.0 dB\mu V/m$

 $AF = 7.4 \text{ dB} \qquad \qquad RR = 23.0 \text{ dB}\mu\text{V}$ $CF = 1.6 \text{ dB} \qquad \qquad LF = 9.0 \text{ dB}$

AG = 29.0 dBFS = RR + LF

 $FS = 23 + 9 = 32 \, dB\mu V/m$

Level in μ V/m = Common Antilogarithm [(32 dB μ V/m)/20] = 39.8 μ V/m

3.2 Radiated Emission Configuration Photograph

Worst Case Radiated Emission at 434.085 MHz

For electronic filing, the worst case radiated emission configuration photographs are saved with filename: radiated photos.pdf.

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 14.2 dB

TEST PERSONNEL:

Signature

<u>Sam Dong, Compliance Engineer</u> *Typed/Printed Name*

<u>September 21, 2007</u>

Applicant: Elite Screens China Corp. Date of Test: July 25, 2007

Model: Elitescreens

Table 1

Radiated Emissions

Polarization	Frequency	Reading	Antenna	Pre-	Net	Limit	Margin
	(MHz)	(dBµV)	Factor	Amp	at 3m	at 3m	(dB)
			(dB)	Gain	(dBµV/m)	(dBµV/m)	
				(dB)			
V	434.085	38.1	28.1	35.2	31.0	46.0	-15.0
Н	434.085	36.3	28.6	33.1	31.8	46.0	-14.2

Notes: 1. Peak Detector Data unless otherwise stated.

- 2. All measurements were made at 3 meter. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
- 3. Negative value in the margin column shows emission below limit.
- 4. Horn antenna and average detector are used for the emission over 1000MHz.

Test Engineer: Sam Dong

3.4 Conducted Emission Configuration Photograph

Worst Case Conducted Emission At 0.391 MHz

For electronic filing, the worst case conducted emission configuration photographs are saved with filename: conducted photos.pdf.

3.5 Conducted Emission Data

For electronic filing, the graph and data table of conducted emission is saved with filename: conducted.pdf.

Judgement: Passed by more than 20.0 dB margin

TEST PERSONNEL:

Signature

Sam Dong, Compliance Engineer
Typed/Printed Name

September 21, 2007 Date

EXHIBIT 4 EQUIPMENT PHOTOGRAPHS

4.0 **Equipment Photographs**

For electronic filing, the photographs are saved with filename: external photos.pdf and internal photos.pdf.

EXHIBIT 5 PRODUCT LABELLING

5.0 **Product Labelling**

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

EXHIBIT 6 TECHNICAL SPECIFICATIONS

6.0 <u>Technical Specifications</u>

For electronic filing, the block diagram and schematic of the tested EUT are saved with filename: block.pdf and circuit.pdf respectively.

EXHIBIT 7

INSTRUCTION MANUAL

7.0 **Instruction Manual**

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

This manual will be provided to the end-user with each unit sold/leased in the United States.

EXHIBIT 8

MISCELLANEOUS INFORMATION

8.0 <u>Miscellaneous Information</u>

This miscellaneous information includes the test procedure and calculation of factors such as pulse desensitization and averaging factor.

8.1 Discussion of Pulse Desensitization

The determination of pulse desensitivity was made in accordance with Hewlett Packard Application Note 150-2, *Spectrum Analysis ... Pulsed RF.*

This device is a superheterodyne receiver. The stabilized signals are continuous, and no desensitization of the measurement equipment occurs.

8.2 Calculation of Average Factor

The emission limits are specified using spectrum analyzers or receivers which incorporate quasi-peak detectors. Typical measurements are made using peak detectors, however, emissions which approach the respective emission limit are measured using a quasi-peak detector.

For measurements above 1 GHz, spectrum analyzers or receivers using average detectors are employed, or the appropriate average factor can be applied.

Measurements using spectrum analyzers with filters other than peak detectors are recorded in the data table section of this report.

This device is a superheterodyne receiver.

It is not necessary to apply average factor to the measurement results.

8.3 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services. in the measurements of superheterodyne receivers operating under the Part 15, Subpart B rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.4 - 2003. A typical or an unmodulated CW signal at the operating frequency of the EUT has been supplied to the EUT for all measurements. Such a signal is supplied by a signal generator and an antenna in close proximity to the EUT. The signal level is sufficient to stabilize the local oscillator of the EUT.

The equipment under test (EUT) is placed on a wooden turntable which is four feet in diameter and approximately one meter in height above the groundplane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjusted through all three orthogonal axis to obtain maximum emission levels. The antenna height and polarization are also varied during the testing to search for maximum signal levels. The height of the antenna is varied from one to four meters.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in Exhibit 8.3.

The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower. For line conducted emissions, the range scanned is 150 kHz to 30 MHz.

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8.4 Emissions Test Procedures (cont'd)

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements were made as described in ANSI C63.4 - 2003.

The IF bandwidth used for measurement of radiated signal strength was 100 kHz or greater when frequency is below 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. A discussion of whether pulse desensitivity is applicable to this unit is included in this report (See Exhibit 8.2). Above 1000 MHz, a resolution bandwidth of 1 MHz is used.

Measurements are normally conducted at a measurement distance of three meters. All measurements are extrapolated to three meters using inverse scaling, unless otherwise reported. Measurements taken at a closer distance are so marked.

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