

FCC CERTIFICATION  
On Behalf of  
J.B. INDUSTRIAL (SHENZHEN) CO. LTD

Wireless Remote Control Vibrator  
Model No.: F2K349T

Prepared for : J.B. INDUSTRIAL (SHENZHEN) CO. LTD  
Address : J.B. Industrial Center Beishandao Yantian Shenzhen City  
Guangdong P.R.C

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Report Number : ATE2004546  
Date of Test : Oct 11, 2004  
Date of Report : Oct 12, 2004

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## Test Report Certification

Applicant : J.B. INDUSTRIAL (SHENZHEN) CO. LTD  
 Manufacturer : STABLE\_ELECTRONING CO. LTD  
 EUT Description : Wireless Remote Control Vibrator  
     (A) MODEL NO.: F2K349T  
     (B) SERIAL NO.: N/A  
     (C) POWER SUPPLY: 12V DC ("23A" battery Type)

Measurement Procedure Used:

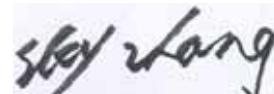
FCC Rules and Regulations Part 15 Subpart C Section 15.204,15.209,15.231: 2002  
 & ANSI C63.4: 2000

The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.209,15.231 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

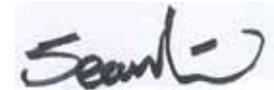
Date of Test : Oct 11, 2004

Prepared by :



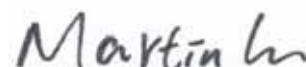
(Engineer)

Reviewer :



(Quality Manager)

Approved & Authorized Signer :



(Manager)

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

EUT : Wireless Remote Control Vibrator  
 Model Number : F2K349T  
 Power Supply : 12V DC ("23A" battery Type)  
 Applicant : J.B. INDUSTRIAL (SHENZHEN) CO. LTD  
 Address : J.B. Industrial Center Beishandao Yantian Shenzhen City  
 Guangdong P.R.C  
 Manufacturer : STABLE\_ELECTRONING CO. LTD  
 Address : 3/F Building Jinxuan Industrial Center West Side 2<sup>nd</sup> Road  
 of East Loop Longhua Town Shenzhen City Guangdong  
 P.R.C  
 Date of sample received : Oct 10, 2004  
 Date of Test : Oct 11, 2004

### 1.2. Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen, May 10, 2004  
 Accredited by FCC, May 10, 2004  
 The Certificate Registration Number is 253065  
 Accredited by Industry Canada, May 18, 2004  
 The Certificate Registration Number is IC 5077  
 Name of Firm : ACCURATE TECHNOLOGY CO. LTD  
 Site Location : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.  
 Science & Industry Park, Nanshan, Shenzhen, Guangdong  
 P.R. China

### 1.3. Measurement Uncertainty

Conducted Emission Uncertainty =  $\pm 2.66\text{dB}$

Radiated Emission Uncertainty =  $\pm 4.26\text{dB}$

## 2. MEASURING DEVICE AND TEST EQUIPMENT

**Table 1: List of Test and Measurement Equipment**

Kind of equipment	Manufacturer	Type	S/N	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESI26	838786/013	01.02.2005
Bilog Antenna	Chase	CBL6112B	2591	01.02.2005
Horn Antenna	Rohde&Schwarz	HF906	100013	01.02.2005

### 3. THE FIELD STRENGTH OF RADIATION EMISSION

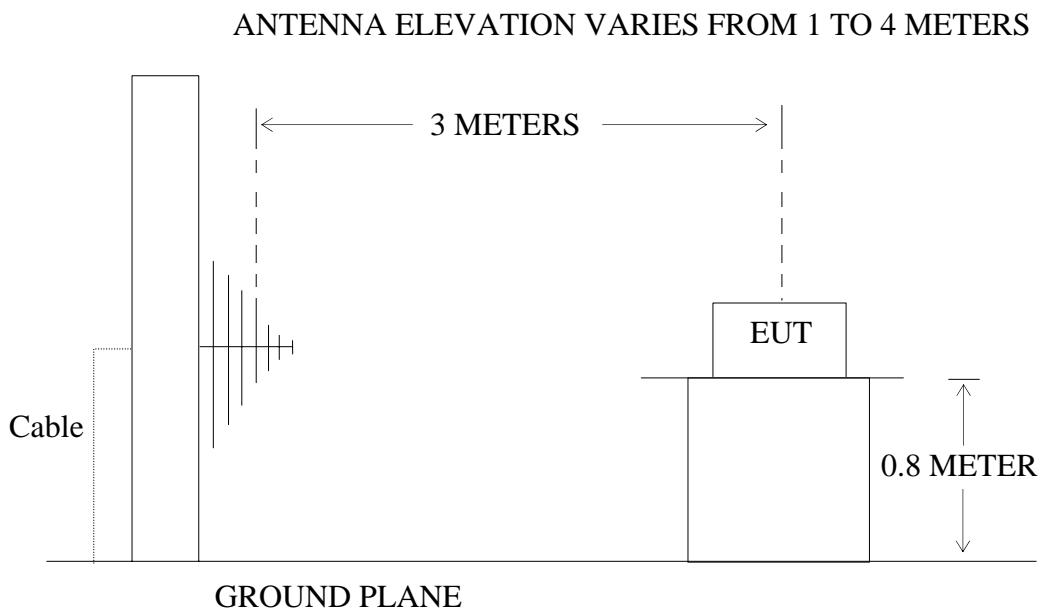
#### 3.1. Block Diagram of Test Setup

##### 3.1.1. Block diagram of connection between the EUT and simulators



(EUT: Wireless Remote Control Vibrator)

##### 3.1.2. Anechoic Chamber Test Setup Diagram



(EUT: Wireless Remote Control Vibrator)

#### 3.2. The Field Strength of Radiation Emission Measurement Limits

##### 3.2.1 Radiation Emission Measurement Limits According to Section 15.231

Frequency (MHz)	Limit,		
	Field Strength of Quasi-peak Value (dB $\mu$ V/m)	Field Strength of peak Value (dB $\mu$ V/m)	Field Strength of Average Value (dB $\mu$ V/m)
Fundamental : 315.0	75.62	-----	-----
Spurious, Under 1GHz Except restricted band	55.62	-----	-----
Spurious, Above 1GHz Except restricted band	-----	75.62	55.62

### 3.2.2 Restricted Band Radiation Emission Measurement Limits According to Section 15.209

Frequency (MHz)	Limit,		
	Field Strength of Quasi-peak Value (dB $\mu$ V/m)	Field Strength of peak Value (dB $\mu$ V/m)	Field Strength of Average Value (dB $\mu$ V/m)
1575.00	-----	74	54
2205.00	-----	74	54
2835.00	-----	74	54

### 3.3. Configuration of EUT on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 3.3.1. Wireless Remote Control Vibrator (EUT)

Model Number : F2K349T  
 Serial Number : N/A  
 Manufacturer : STABLE\_ELECTRONING CO. LTD

### 3.4. Operating Condition of EUT

3.4.1. Setup the EUT and simulator as shown as Section 3.1.

3.4.2. Turn on the power of all equipment.

3.4.3. Let the EUT work in measuring modes (On with stand, On with lie) measure it.

### 3.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to FCC Part 15 Subpart C on radiated emission measurement.

The bandwidth of test receiver (R&S ESI26) is set at 120KHz in 30-1000MHz, and 1MHz in 1000-4000MHz.

The frequency range from 30MHz to 4000MHz is checked.

### 3.6. The Field Strength of Radiation Emission Measurement Results

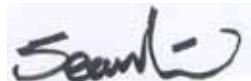
**PASS.**

The frequency range 315MHz to 3150MHz is investigated.

Date of Test:	Oct 11, 2004	Temperature:	22°C
EUT:	Wireless Remote Control Vibrator	Humidity:	50%
Model No.:	F2K349T	Power Supply:	12V DC ("23A" battery Type)
Test Mode:	On with stand	Test Engineer:	Andy

Polarization	Frequency MHz	Emission Level dB $\mu$ V/m			Limits dB $\mu$ V/m	Margin dB $\mu$ V/m
		QP	PEAK	AV		
Horizontal	315.000	63.84	-----	-----	QP:75.62	QP:11.78
	630.000	45.76	-----	-----	QP:55.62	QP:9.86
	945.000	47.09	-----	-----	QP:55.62	QP:8.53
	1260.000	-----	63.10	43.70	PEAK:75.62 AV: 55.62	PEAK:12.52 AV:11.92
	1575.000	-----	61.92	42.82	PEAK:74 AV:54	PEAK:12.08 AV:11.18
	1890.000	-----	63.17	43.27	PEAK:75.62 AV: 55.62	PEAK:12.45 AV:12.35
	2205.000	-----	61.97	44.87	PEAK:74 AV:54	PEAK:12.03 AV:9.13
	2520.000	-----	62.73	45.82	PEAK:75.62 AV: 55.62	PEAK:12.89 AV:9.8
	2835.000	-----	61.31	42.21	PEAK:74 AV:54	PEAK:12.69 AV:11.79
	3150.000	-----	62.62	42.62	PEAK:75.62 AV: 55.62	PEAK:13.0 AV:13.0
Vertical	315.000	72.04	-----	-----	QP:75.62	QP:3.58
	630.000	50.63	-----	-----	QP:55.62	QP:4.99
	945.000	52.22	-----	-----	QP:55.62	QP:3.40
	1260.000	-----	68.64	50.84	PEAK:75.62 AV: 55.62	PEAK:6.98 AV:4.78
	1575.000	-----	67.71	49.01	PEAK:74 AV:54	PEAK:6.29 AV:4.99
	1890.000	-----	68.04	49.14	PEAK:75.62 AV: 55.62	PEAK:7.58 AV:6.48
	2205.000	-----	67.54	49.64	PEAK:74 AV:54	PEAK:6.46 AV:4.36
	2520.000	-----	67.21	49.11	PEAK:75.62 AV: 55.62	PEAK:8.41 AV:6.51
	2835.000	-----	67.33	49.03	PEAK:74 AV:54	PEAK:6.67 AV:4.97
	3150.000	-----	67.15	48.75	PEAK:75.62 AV: 55.62	PEAK:8.47 AV:6.87

Reviewer :



Date of Test: Oct 11, 2004 Temperature: 22 °C  
 EUT: Wireless Remote Control Vibrator Humidity: 50%  
 Model No.: F2K349T Power Supply: 12V DC ("23A" battery Type)  
 Test Mode: On with lie Test Engineer: Andy

Polarization	Frequency MHz	Emission Level dB $\mu$ V/m			Limits dB $\mu$ V/m	Margin dB $\mu$ V/m
		QP	PEAK	AV		
Horizontal	315.000	70.23	-----	-----	QP:75.62	QP:5.39
	630.000	50.06	-----	-----	QP:55.62	QP:5.56
	945.000	49.80	-----	-----	QP:55.62	QP:5.82
	1260.000	-----	65.90	49.50	PEAK:75.62 AV: 55.62	PEAK:9.72 AV:6.12
	1575.000	-----	62.72	48.71	PEAK:74 AV:54	PEAK:11.28 AV:5.29
	1890.000	-----	66.47	49.47	PEAK:75.62 AV: 55.62	PEAK:9.15 AV:6.15
	2205.000	-----	65.87	49.04	PEAK:74 AV:54	PEAK:8.13 AV:4.96
	2520.000	-----	65.63	49.32	PEAK:75.62 AV: 55.62	PEAK:9.99 AV:6.3
	<b>2835.000</b>	-----	<b>65.31</b>	<b>49.62</b>	<b>PEAK:74 AV:54</b>	<b>PEAK:8.69 AV:4.38</b>
	3150.000	-----	65.62	49.23	PEAK:75.62 AV: 55.62	PEAK:10.0 AV:6.39
Vertical	315.000	53.34	-----	-----	QP:75.62	QP:22.28
	630.000	48.76	-----	-----	QP:55.62	QP:6.86
	945.000	49.20	-----	-----	QP:55.62	QP:6.42
	1260.000	-----	62.60	43.10	PEAK:75.62 AV: 55.62	PEAK:13.02 AV:12.52
	1575.000	-----	61.72	42.82	PEAK:74 AV:54	PEAK:12.28 AV:11.18
	1890.000	-----	62.07	41.97	PEAK:75.62 AV: 55.62	PEAK:13.55 AV:13.65
	2205.000	-----	60.55	40.87	PEAK:74 AV:54	PEAK:13.45 AV:13.13
	2520.000	-----	61.23	41.33	PEAK:75.62 AV: 55.62	PEAK:14.39 AV:14.29
	2835.000	-----	60.27	40.63	PEAK:74 AV:54	PEAK:13.73 AV:13.37
	3150.000	-----	61.12	41.22	PEAK:75.62 AV: 55.62	PEAK:14.5 AV:14.4

Reviewer :



## 4. THE BANDWIDTH OF EMISSION

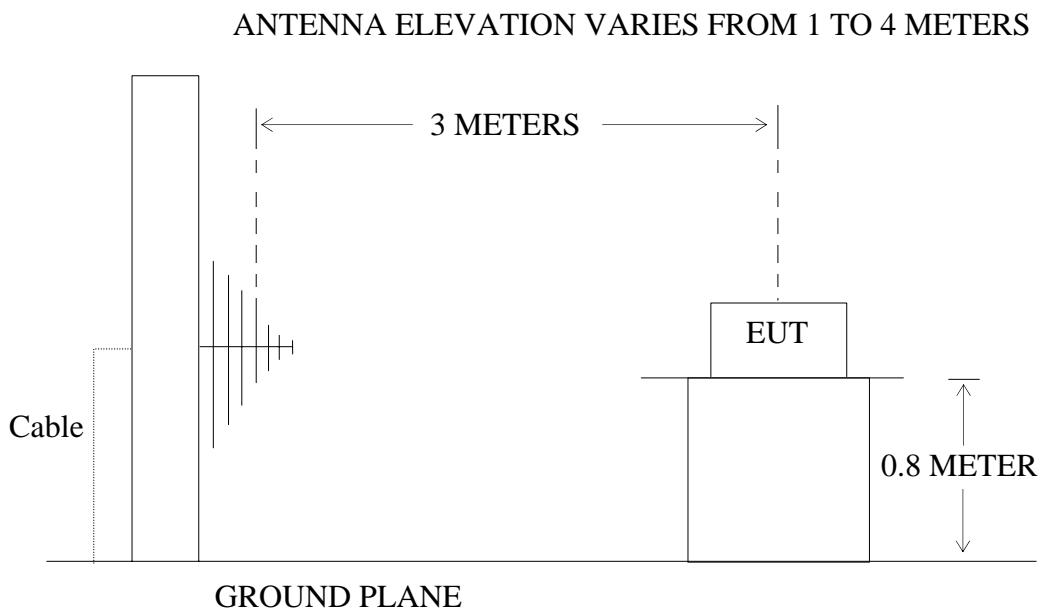
### 4.1. Block Diagram of Test Setup

#### 4.1.1. Block diagram of connection between the EUT and simulators



(EUT: Wireless Remote Control Vibrator)

#### 4.1.2. Anechoic Chamber Test Setup Diagram



(EUT: Wireless Remote Control Vibrator)

### 4.2. The Bandwidth of Emission Limit

The bandwidth of emission shall be no wider than 0.25% of the center frequency. Therefore, the bandwidth of the emission limit is  $315\text{MHz} \times 0.25\% = 787.5\text{KHz}$ . Bandwidth is determined at the two points 20 dB down from the top of modulated carrier.

### 4.3.EUT Configuration on Measurement

The following equipment are installed on the bandwidth of emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 4.3.1.Wireless Remote Control Vibrator (EUT)

Model Number : F2K349T  
Serial Number : N/A  
Manufacturer : STABLE\_ELECTRONING CO. LTD

### 4.4.Operating Condition of EUT

4.4.1.Setup the EUT and simulator as shown as Section 4.1.

4.4.2.Turn on the power of all equipment.

4.4.3.Let the EUT work in measuring mode (On) measure it.

### 4.5.Test Procedure

In order to find the maximum emission levels, all of the interface cables must be manipulated according to FCC Part 15 Subpart C on the bandwidth of emission measurement.

#### 4.6. The Bandwidth of Emission Measurement Result

**PASS.**

The frequency range from 313MHz to 317MHz is investigated.

The test bandwidth = 315.208MHz - 314.728MHz = 480KHz < 787.5KHz.

Reviewer :

