## **Exhibit B**

Test Report Evermore Systems Smart Swing Golf Club Project Number: 05333-10

Prepared for: Evermore Systems 8140 North Mopac, Bldg 1 Ste 135 Austin, TX 75052

By

Professional Testing (EMI), Inc. 1601 FM 1460, Suite B Round Rock, Texas 78664

February 2005

CERTIFICATION
Electromagnetic Interference Test Report
Evermore Systems
Smart Swing Golf Club
(Intentional Radiator Portion)

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THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF PROFESSIONAL TESTING (EMI), INC.



## Certificate Of Compliance

Applicant: **Evermore Systems** 

Applicant's Address: 8140 North Mopac, Bldg 1, Ste 135

Austin, Texas 78759

SYBSSC1 FCC ID:

IC Number: 5714A-SSC1

Project Number: 05333-10

Test Dates: January 19-20, 2005

I, Michael A. Royer, for Professional Testing (EMI), Inc., being familiar with the FCC and IC rules and test procedures have reviewed the test setup, measured data and this report. I believe them to be true and accurate.

The Evermore Systems Smart Swing Golf Club was tested to and found to be in compliance with FCC Part 15 Subpart C and RSS-210 Issue 5 for an Intentional Radiator.

The highest emissions generated by the above equipment are listed below:

	Frequency (MHz)	Level (dBµV/m)	<u>Limit (dBµV/m)</u>	Margin (dB)
Fundamental	2432.1	85.1	103.5	-18.4
Spurious	464	45.4	46.0	-0.6
Conducted	0.15	55.1	66.0	-10.9
Occupied Bandwidtl	652 kHz		וואסון	മ ത്
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Michael A. Royer, BSEE, NCE

EMC Department Manager

This report has been reviewed and accepted by **Evermore Systems**. The undersigned is responsible for ensuring that Evermore Systems Smart Swing Golf Club will continue to comply with the FCC and IC rules.

Professional Testing (EMI), Inc. Report No. 05333-10

## 1.0 EUT Description

The **Evermore Systems Smart Swing Golf Club** (EUT) is a PC peripheral used to train athletes. After swinging the club data is gathered and stored within the Smart Swing Golf Club. When the user finishes play, the data can be transferred to the USB Link Box via a 2432 MHz signal. Both the club and the USB link box are transceivers so that confirmations of data transfer can be made. During the transfer of the swing analysis data the USB box sends the data to the PC for storage and analysis.

Guidelines	FCC Rule Parts	IC Rule Parts	
	Part 15	RSS-210 Issue 5	
Transmitter Characteristics	15.249	6.2.2(m2)	
Spurious Radiated Power	15.205, 15.209, 15.249	6.2.2(m2), 6.3	
Antenna Requirements	15.203	5.5	
Power line Conducted Limits	15.207	6.6	
Receiver Requirements	15.105, 15.107, 15.109	7.3, 7.4	

The system tested consisted of the following:

Manufacturer & Model	Description
Smart Swing Golf Club	Wireless Golf Club

## 1.1 EUT Operation

The Evermore Systems Smart Swing Golf Club was tested alone, but plugged into its charger. The frequency of the transmitting signal is 2432.1 MHz. This signal is normally transmitted intermittently as data transfer requires. For the purpose of tests for emission strength, the transmitter was forced to transmit continuously at maximum power.

## 2.0 Electromagnetic Emissions Testing

Professional Testing (EMI), Inc. (PTI), follows the guidelines of NIST for all uncertainty calculations, estimates and expressions thereof for EMC testing.

#### 2.1 Conducted Emissions Measurements

Conducted emissions measurements were made on the Class II Power Supply mains terminals of the **Evermore Systems Smart Swing Golf Club** to determine the line-to-ground radio noise emitted from each power-input terminal. Conducted emissions measurements on the mains terminals were performed at Professional Testing, located in Round Rock, Texas.

#### 2.1.1 Test Procedure

The EUT was configured and operated in a manner consistent with typical applications. The EUT power cord in excess of one meter was folded back and forth forming a bundle 30 to 40 cm long in the approximate center of the cable. Power supply cords for the peripheral equipment were powered from an auxiliary LISN. Excess interface cable lengths were separately bundled in a non-inductive arrangement at the approximate center of the cable with the bundle 30 to 40 centimeters in length. The conducted emissions were maximized, by varying the operating states and configuration of the EUT.

The tests were performed in a 12' x 16' RayProof modular shielded room. The EUT was placed on a non-metallic table 0.4 meters from a vertical metal reference plane and 0.8 meters from a horizontal metal reference plane.

The measurements were taken using a Line Impedance Stabilization Network (LISN). A Spectrum Analyzer with a measurement bandwidth of 9 kHz was used to record the conducted emissions measurements. The configuration of the shielded room showing the location of the EUT and the measurement equipment is given as Figure 1.

## 2.1.2 Test Criteria

The FCC Part 15.207 B conducted emissions limits are given below.

Frequency	Conducted Limits (dBuV)				
(MHz)	Average	Quasi-Peak			
0.1550	66-56	56 - 46			
.50 - 5	56	46			
5 – 30	60	50			

The lower limit shall apply at the transition frequency.

## 2.1.3 Test Results

The conducted emissions data is included as Appendix A. The conducted emissions generated by the **Evermore Systems Smart Swing Golf Club** as measured on the Class II Power Supply mains terminals of the charger were found to be below FCC 15.207 maximum emissions criteria.

## 2.2 Radiated Emissions Measurements

Radiated emission measurements were made of the Fundamental and Spurious Emission levels for the **Evermore Systems Smart Swing Golf Club.** Measurements of the occupied bandwidth were also made.

Measurements of the maximum emission levels for the fundamental and the spurious/harmonic emissions of the **Evermore Systems Smart Swing Golf Club** were made at the Professional Testing "Open Field" Site 3, located in Round Rock, Texas to determine the radio noise radiated from the EUT. A "Description of Measurement Facilities" has been submitted to the FCC and approved pursuant to Section 2.948 of CFR 47 of the FCC rules.

Tests of the fundamental for the device were performed to determine the worst-case polarization of the devices. The fundamental emissions of the device were measured with the antennas of the device in the three orthogonal axes.

### 2.2.1 Test Procedure

The EUT was placed on a non-conductive table 0.8 meters above the ground plane. The table was centered on a motorized turntable, which allows 360-degree rotation. For measurements of the fundamental signal, a measurement antenna was positioned at a distance of 3 meters as measured from the closest point of the EUT. For spurious/harmonic measurements above 1 GHz, the measurement antenna was placed 1 meter from the EUT. Rotating the EUT maximized the radiated emissions.

A Spectrum Analyzer with peak detection was used to find the maximums of the radiated emissions during the variability testing. A drawing showing the test setup is given as Figure 2.

## 2.2.2 Test Criteria

The table below shows FCC Part 15.249 radiated limits for an intentional radiator operating at 2400-2483.5 MHz band. FCC Part 15.249 allows the use of its spurious limit, which is the same as the 15.209 limits normally associated with the restricted bands outlined in 15.205. The transmitter transmitting in the band of 2400-2483.5 MHz is limited to fundamental field strength of 50 millivolts per meter for the fundamental emission and 500 microvolts per meter for the strength of harmonics. The spurious measurements of the harmonic were performed to the 10th harmonic of the fundamental. The reference distance for each limit is also shown in this table.

Frequency	Field Strength Limit@3m				
(MHz)	uV/m	dBuV/m			
2432.1 MHz	50000	94			
Harmonics	500	54			

Note: Radiated emissions above 1000 MHz were measured at 1 meter and the limit was increased by 9.5 dB. Radiated emissions above 18000 MHz were measured at 10 cm distance, and the limit was increased 29.5 dB.

#### 2.2.3 Test Results

The radiated test data for the fundamental is included in Appendix A. Peak detection was used during the test. The radiated emission test data for the harmonics is included in Appendix A. The emissions were maximized at each frequency and the highest emissions identified were measured using peak detection. The radiated emissions generated by the **Evermore Systems Smart Swing Golf Club** are below the FCC Part 15.249 maximum emission criteria.

## 3.0 Occupied Bandwidth Measurements

Measurements of the occupied bandwidth for the fundamental signals were made at Professional Testing's Round Rock, Texas site. All measurements were made in a controlled indoor environment in a configuration which did not present measurement distortion or ambient interference.

## 4.0 Antenna Requirement

An analysis of the **Evermore Systems Smart Swing Golf Club** was performed to determine compliance with Section 15.203 of the Rules. This section requires specific handling and control of antennas used for devices subject to regulations under the Intentional Radiator portions of Part 15.

## 4.1 Evaluation Procedure

The structure and application of the **Evermore Systems Smart Swing Golf Club** were analyzed with respect to the rules. The antenna for the transmitter is an internal antenna, which is etched into the PCB and is not accessible to the user. An auxiliary antenna port is not present.

## 4.2 Evaluation Criteria

Section 15.203 of the rules states that the subject device must meet at least one of the following criteria:

- (a) Antenna must be permanently attached to the unit.
- (b) Antenna must use a unique type of connector to attach to the EUT.
- (c) Unit must be professionally installed. Installer shall be responsible for verifying that the correct antenna is employed with the unit.

### 4.3 Evaluation Results

The **Evermore Systems Smart Swing Golf Club** meets the criteria of this rule by virtue of having an internal antenna etched in the PCB not accessible to the user. The EUT is therefore compliant with §15.203.

## 5.0 Modifications to Equipment

No modifications were made.

## 6.0 List of Test Equipment

A list of the test equipment utilized to perform the testing is given below. The date of calibration is given for each.

## **Electromagnetic Emissions Test Equipment**

Device	Description	Calibration Due
Compliance Design B-100	Biconical Antenna	January 2006
EMCO 3115	Ridge Guide Antenna	July 2005
EMCO 3146	Log Periodic Antenna	July 2005
HP 8447D	Preamplifier	January 2006
HP 85650A	Quasi Peak Adapter	February 2005
HP 8566B	Spectrum Analyzer	April 2005
HP 85685A	RF preselector	February 2005
HP 8568B	Spectrum Analyzer	November 2005
HP 8568B	Spectrum Analyzer	December 2005
MITEQ	20 dB Preamp	May 2005
PTI CISPR16 HPF	HPF	January 2006
PTI EMI Cable		January 2006`
PTI Limiter/Attenuator		January 2006
SOLAR 8012-50-R-24-	LISN	January 2006

**FIGURE 1: Conducted Emissions Mains Terminal Measurements** 

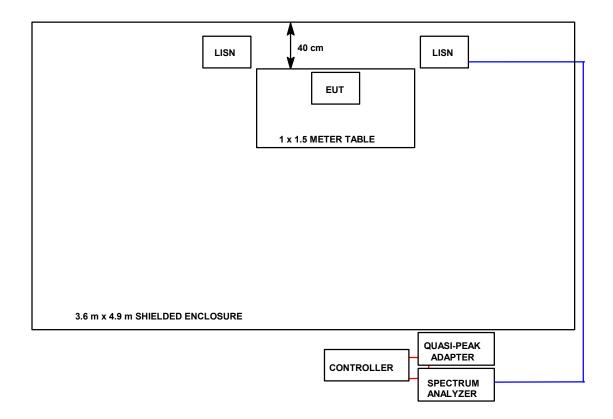
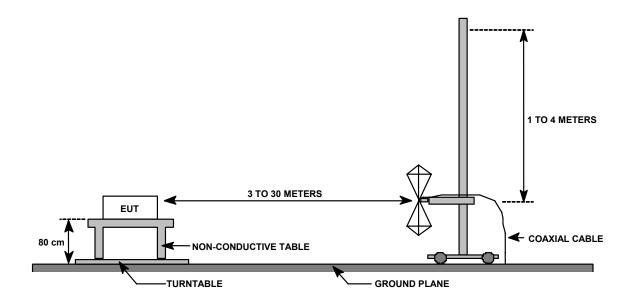


FIGURE 2: Radiated Emissions Test Setup



Appendix A	Ap	pen	dix	A
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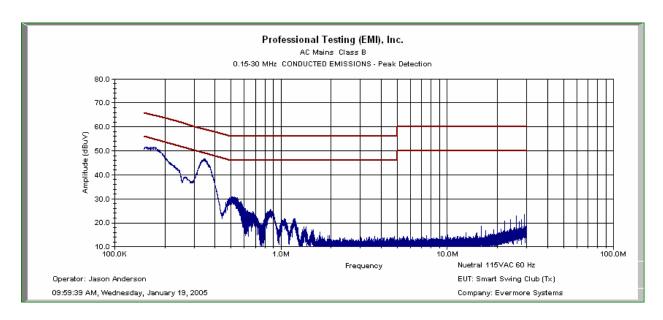
## **Emissions Data Sheet**

# Conducted Emissions (Transmitter) Evermore Systems Smart Swing Golf Club Quasi-Peak Detection, RBW = 9 kHz

Test Date: January 19, 2005

**Line Selection: Neutral** 

Line Scientish: Weath at						
FREQ INPUT (MHz)	READING INPUT (dBuV)	CORR FACTOR (dB)	CORR READING (dBuV)	Limit (dBuV)	Margin (dB)	Detector Function
0.15	38.4	3.1	41.5	66.0	-24.5	Quasi-peak
0.15	22.3	3.1	25.4	56.0	-30.6	Average
0.347	33.2	3.1	36.3	59.0	-22.7	Quasi-peak
0.347	7.3	3.1	10.4	49.0	-38.6	Average
0.85	11	3.2	14.2	56.0	-41.8	Quasi-peak
0.85	2.6	3.2	5.8	46.0	-40.2	Average
10	7.8	3.8	11.6	60.0	-48.4	Quasi-peak
10	3.9	3.8	7.7	50.0	-42.3	Average
20	9.6	4.1	13.7	60.0	-46.3	Quasi-peak
20	6.2	4.1	10.3	50.0	-39.7	Average
29	15.6	4.5	20.1	60.0	-39.9	Quasi-peak
29	12.9	4.5	17.4	50.0	-32.6	Average



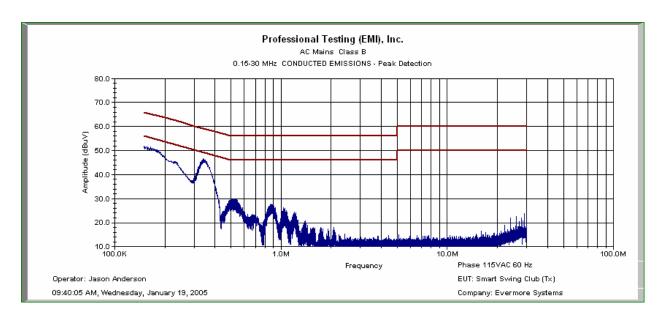
The data presented here in graphical form is for overview only. Detailed and precise data is in the table above.

# Conducted Emissions (Transmitter) Evermore Systems Smart Swing Golf Club Quasi-Peak Detection, RBW = 9 kHz

Test Date: January 19, 2005

**Line Selection: Phase** 

Line Selection. I have						
FREQ INPUT (MHz)	READING INPUT (dBuV)	CORR FACTOR (dB)	CORR READING (dBuV)	Limit (dBuV)	Margin (dB)	Detector Function
0.15	37.7	3.1	40.8	66.0	-25.2	Quasi-peak
0.15	22.5	3.1	25.6	56.0	-30.4	Average
0.34	32.6	3.1	35.7	59.2	-23.5	Quasi-peak
0.34	7.2	3.1	10.3	49.2	-38.9	Average
0.855	11.9	3.2	15.1	56.0	-40.9	Quasi-peak
0.855	2.8	3.2	6.0	46.0	-40.0	Average
10	7.8	3.8	11.6	60.0	-48.4	Quasi-peak
10	3.9	3.8	7.7	50.0	-42.3	Average
20	8.6	4.2	12.8	60.0	-47.2	Quasi-peak
20	4.9	4.2	9.1	50.0	-40.9	Average
29	15.7	4.6	20.3	60.0	-39.8	Quasi-peak
29	12.9	4.6	17.5	50.0	-32.6	Average



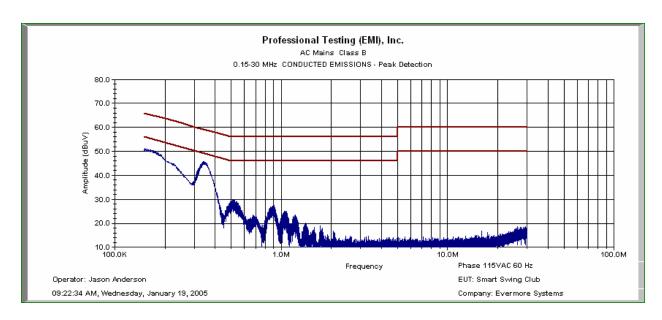
The data presented here in graphical form is for overview only. Detailed and precise data is in the table above.

# Conducted Emissions (Receiver) Evermore Systems Smart Swing Golf Club Quasi-Peak Detection, RBW = 9 kHz

Test Date: January 19, 2005

**Line Selection: Phase** 

FREQ INPUT (MHz)	READING INPUT (dBuV)	CORR FACTOR (dB)	CORR READING (dBuV)	Limit (dBuV)	Margin (dB)	Detector Function
0.15	52	3.1	55.1	66.0	-10.9	Quasi-peak
0.15	35.9	3.1	39.0	56.0	-17.0	Average
0.342	39.2	3.1	42.3	59.2	-16.8	Quasi-peak
0.342	9.9	3.1	13.0	49.2	-36.1	Average
0.875	18	3.2	21.2	56.0	-34.8	Quasi-peak
0.875	9.5	3.2	12.7	46.0	-33.3	Average
10	15.6	3.8	19.4	60.0	-40.6	Quasi-peak
10	9.4	3.8	13.2	50.0	-36.8	Average
20	16	4.2	20.2	60.0	-39.8	Quasi-peak
20	9.3	4.2	13.5	50.0	-36.5	Average
29	20.1	4.6	24.7	60.0	-35.4	Quasi-peak
29	9.9	4.6	14.5	50.0	-35.6	Average



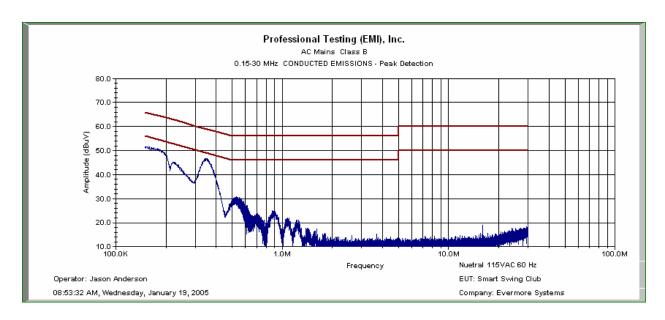
The data presented here in graphical form is for overview only. Detailed and precise data is in the table above.

# Conducted Emissions (Receiver) Evermore Systems Smart Swing Golf Club Quasi-Peak Detection, RBW = 9 kHz

Test Date: January 19, 2005

**Line Selection: Neutral** 

Line Selection, 1 (cut) at						
FREQ INPUT (MHz)	READING INPUT (dBuV)	CORR FACTOR (dB)	CORR READING (dBuV)	Limit (dBuV)	Margin (dB)	Detector Function
0.15	52	3.1	55.1	66.0	-10.9	Quasi-peak
0.15	35.9	3.1	39.0	56.0	-17.0	Average
0.342	39.2	3.1	42.3	59.2	-16.8	Quasi-peak
0.342	9.9	3.1	13.0	49.2	-36.1	Average
0.875	18	3.2	21.2	56.0	-34.8	Quasi-peak
0.875	9.5	3.2	12.7	46.0	-33.3	Average
10	15.6	3.8	19.4	60.0	-40.6	Quasi-peak
10	9.4	3.8	13.2	50.0	-36.8	Average
20	16	4.2	20.2	60.0	-39.8	Quasi-peak
20	9.3	4.2	13.5	50.0	-36.5	Average
29	20.1	4.6	24.7	60.0	-35.4	Quasi-peak
29	9.9	4.6	14.5	50.0	-35.6	Average



The data presented here in graphical form is for overview only. Detailed and precise data is in the table above.

# Spurious Radiated Emissions (Transmitter) Evermore Systems Smart Swing Golf Club Quasi-Peak Detection, RBW = 120 kHz Test Distance 3 meters

Test Date: January 19, 2005

## Horizontal

Corrected Level = Recorded Level - Amplifier Gain + Antenna Factor + Cable Loss

Freq. (MHz)	EUT Dir (Deg.)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
112	max	3.5	39.6	26.7	12.6	2.9	28.4	43.5	-15.1
208	max	1.5	46.7	26.9	11.6	4.0	35.4	43.5	-8.1
224	max	1.5	46.5	26.8	11.2	4.2	35.1	46	-10.9
240	max	1.5	51.6	27.0	11.8	4.3	40.8	46	-5.2
256	max	1	50.6	27.1	12.5	4.5	40.5	46	-5.5
288	max	1	48.3	27.0	14.1	4.9	40.3	46	-5.7
352	max	1	46.1	27.3	15.0	5.5	39.3	46	-6.7
384	max	1	47.7	27.3	15.5	5.8	41.8	46	-4.2
432	max	2.5	46.7	27.4	16.3	6.3	41.8	46	-4.2
464	max	2.5	49.5	27.5	16.8	6.5	45.4	46	-0.6
528	max	2.5	46.2	27.1	18.2	7.1	44.4	46	-1.6
560	max	2	44.6	27.2	18.5	7.3	43.2	46	-2.8

## Vertical

Corrected Level = Recorded Level - Amplifier Gain + Antenna Factor + Cable Loss

Freq. (MHz)	EUT Dir (Deg.)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
208	max	1.5	41.9	26.9	11.6	4.0	30.6	43.5	-12.9
224	max	1.5	42.2	26.8	11.2	4.2	30.8	46	-15.2
240	max	3	43.6	27.0	11.8	4.3	32.8	46	-13.2
256	max	2.5	43.1	27.1	12.5	4.5	33.0	46	-13.0
288	max	1.5	46	27.0	14.1	4.9	38.0	46	-8.0
384	max	2	46.5	27.3	15.5	5.8	40.6	46	-5.4
416	max	1.5	43.1	27.5	16.0	6.2	37.8	46	-8.2
432	max	1.5	44.6	27.4	16.3	6.3	39.7	46	-6.3
464	max	2.5	48.3	27.5	16.8	6.5	44.2	46	-1.8
528	max	2	41.2	27.1	18.2	7.1	39.4	46	-6.6
560	max	2	43.8	27.2	18.5	7.3	42.4	46	-3.6

# Spurious Radiated Emissions (Receiver) Evermore Systems Smart Swing Golf Club Quasi-Peak Detection, RBW = 120 kHz Test Distance 3 meters

Test Date: January 19, 2005

## Horizontal

Corrected Level = Recorded Level - Amplifier Gain + Antenna Factor + Cable Loss

Freq. (MHz)	EUT Dir (Deg.)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
112	max	3	43.7	26.7	12.6	2.9	32.5	43.5	-11.0
208	max	1.5	45.5	26.9	11.6	4.0	34.2	43.5	-9.3
224	max	1.5	49.3	26.8	11.2	4.2	37.9	46	-8.1
240	max	1.5	49.2	27.0	11.8	4.3	38.4	46	-7.6
256	max	1.5	46	27.1	12.5	4.5	35.9	46	-10.1
288	max	1	45.4	27.0	14.1	4.9	37.4	46	-8.6
352	max	1	45	27.3	15.0	5.5	38.2	46	-7.8
416	max	3	42.5	27.5	16.0	6.2	37.2	46	-8.8
432	max	1	48.3	27.4	16.3	6.3	43.4	46	-2.6
464	max	1	49.5	27.5	16.8	6.5	45.4	46	-0.6
528	max	2	47.2	27.1	18.2	7.1	45.4	46	-0.6
560	max	2	46.2	27.2	18.5	7.3	44.8	46	-1.2

## Vertical

 $Corrected\ Level = Recorded\ Level - Amplifier\ Gain + Antenna\ Factor + Cable\ Loss$ 

Freq. (MHz)	EUT Dir (Deg.)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
208	max	1.5	42.2	26.9	11.6	4.0	30.9	43.5	-12.6
224	max	1.5	45.4	26.8	11.2	4.2	34.0	46	-12.0
240	max	2	42.5	27.0	11.8	4.3	31.7	46	-14.3
256	max	1.5	43.5	27.1	12.5	4.5	33.4	46	-12.6
288	max	1	48.1	27.0	14.1	4.9	40.1	46	-5.9
352	max	1	41.1	27.3	15.0	5.5	34.3	46	-11.7
416	max	1	41.8	27.5	16.0	6.2	36.5	46	-9.5
432	max	1	41.3	27.4	16.3	6.3	36.4	46	-9.6
464	max	1	47	27.5	16.8	6.5	42.9	46	-3.1
528	max	1	42.8	27.1	18.2	7.1	41.0	46	-5.0
560	max	1	43.7	27.2	18.5	7.3	42.3	46	-3.7

## Microwave Radiated Emissions (Transmitter) Evermore Systems Smart Swing Golf Club Peak Detection, RBW = 1 MHz

Test Date: January 19, 2005

## Horizontal

Corrected Level = Recorded Level - Amplifier Gain + Antenna Factor + Cable Loss

Freq. (MHz)	EUT Dir (Deg.)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2431	max	1	90.6	34.8	28.2	0.6	84.6	103.5	-18.9
4862	max	1	49.2	31.2	34.2	0.8	53.0	63.5	-10.5
7293	max	1	39.5	30.9	36.9	1.4	46.8	63.5	-16.7
9724	max	1	40.6	30.9	37.9	1.5	49.1	63.5	-14.4
12155	noise	floor	36.5	30.4	39.3	2.0	47.4	63.5	-16.1
14586	noise	floor	39.2	29.3	40.7	1.8	52.5	63.5	-11.0
17017	noise	floor	38.1	31.2	42.3	2.2	51.4	63.5	-12.1
19448	noise	floor	41.6	0.0	37.0	0.0	78.6	83.5	-4.9
21879	noise	floor	41.4	0.0	37.0	0.0	78.4	83.5	-5.1
24310	noise	floor	41.3	0.0	37.0	0.0	78.3	83.5	-5.2

## Vertical

Corrected Level = Recorded Level - Amplifier Gain + Antenna Factor + Cable Loss

Freq. (MHz)	EUT Dir (Deg.)	Antenna Elevation (Meters)	Recorded Level (dBuV)	Amplifier Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Corrected Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2431	max	1	91.1	34.8	28.2	0.6	85.1	103.5	-18.4
4862	max	1	52.8	31.2	34.2	0.8	56.6	63.5	-6.9
7293	max	1	38.1	30.9	36.9	1.4	45.4	63.5	-18.1
9724	max	1	40.8	30.9	37.9	1.5	49.3	63.5	-14.2
12155	noise	floor	36.5	30.4	39.3	2.0	47.4	63.5	-16.1
14586	noise	floor	39.2	29.3	40.7	1.8	52.5	63.5	-11.0
17017	noise	floor	38.1	31.2	42.3	2.2	51.4	63.5	-32.1
19448	noise	floor	41.6	0.0	37.0	0.0	78.6	83.5	-4.9
21879	noise	floor	41.4	0.0	37.0	0.0	78.4	83.5	-5.1
24310	noise	floor	41.3	0.0	37.0	0.0	78.3	83.5	-5.2

## Microwave Radiated Emissions (Receiver) Evermore Systems Smart Swing Golf Club Peak Detection, RBW = 1 MHz

Test Date: January 19, 2005

## Horizontal

Corrected Level = Recorded Level - Amplifier Gain + Antenna Factor + Cable Loss

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Freq.	EUT	Antenna	Recorded	Amplifier	Antenna	Cable	Corrected	Limit	Margin
	Dir	Elevation	Level	Gain	Factor	Loss	Level		
(MHz)	(Deg.)	(Meters)	(dBuV)	(dB)	(dB/M)	(dB)	(dBuV/M)	(dBuV/M)	(dB)
1216	noise	floor	28.4	28.9	24.3	0.5	24.3	63.5	-39.2
2432	noise	floor	32.5	34.8	28.2	0.6	26.5	63.5	-37.0
4864	noise	floor	25.6	31.2	34.2	0.8	29.4	63.5	-34.1
7296	noise	floor	27.2	30.9	36.9	1.4	34.5	63.5	-29.0
9728	noise	floor	26.3	30.9	37.9	1.5	34.8	63.5	-28.7
12160	noise	floor	26.2	30.4	39.3	2.0	37.1	63.5	-26.4

## Vertical

 $Corrected\ Level = Recorded\ Level - Amplifier\ Gain + Antenna\ Factor + Cable\ Loss$ 

Freq.	EUT	Antenna	Recorded	Amplifier	Antenna	Cable	Corrected	Limit	Margin
	Dir	Elevation	Level	Gain	Factor	Loss	Level		
(MHz)	(Deg.)	(Meters)	(dBuV)	(dB)	(dB/M)	(dB)	(dBuV/M)	(dBuV/M)	(dB)
1216	noise	floor	28.4	28.9	24.3	0.5	24.3	63.5	-39.2
2432	noise	floor	32.5	34.8	28.2	0.6	26.5	63.5	-37.0
4864	noise	floor	25.6	31.2	34.2	0.8	29.4	63.5	-34.1
7296	noise	floor	27.2	30.9	36.9	1.4	34.5	63.5	-29.0
9728	noise	floor	26.3	30.9	37.9	1.5	34.8	63.5	-28.7
12160	noise	floor	26.2	30.4	39.3	2.0	37.1	63.5	-26.4

# Appendix B Occupied Bandwidth Data Sheets

## **Occupied Bandwidth Datasheet**

