Exhibit B: Test Report
Evermore Systems
Smart Swing USB Golf Club

Project Number: 05049-10

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

May 2004

CERTIFICATION
Electromagnetic Interference Test Report
Evermore Systems
Smart Swing USB Golf Club

(Intentional Radiator Portion)

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Certificate Of Compliance

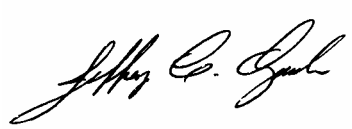
Applicant:	Evermore Systems
Applicant's Address:	8140 North Mopac, Bldg 1, Ste 135 Austin, Texas 78759
FCC ID:	SYBSSC1
Project Number:	05049-10
Test Dates:	July 1, 2004

I, Jeffrey A. Lenk, for Professional Testing (EMI), Inc., being familiar with the FCC 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 USB Golf Club** was tested to and found to be in compliance with FCC Part 15 Subpart C for an Intentional Radiator.

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

	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Fundamental	2432	93.1	103.5	-10.4
Spurious	288	44.9	46	-1.1
Conducted	0.154	33.6	55.8	-22.2
Occupied Bandwidth	1.74			



NVLAP

Lab Code 200062-0

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Jeffrey A. Lenk
President

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

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1.0 EUT Description

The **Evermore Systems Smart Swing USB 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.

47 CFR 15.249	Fundamental Transmit Power
47 CFR 15.205 & 15.249	Spurious Radiated Power
47 CFR 15.203	Antenna Requirement
47 CFR 15.207	Conducted Emissions

The system tested consisted of the following:

Manufacturer & Model	**Serial #**	**FCC ID #**	**Description**
Smart Swing USB Box	E5		USB Golf Club
Panasonic KX-P2123			Printer
APC-21			External keyboard
Dell I3700 (Inspiron 3700)			Laptop computer

1.1 EUT Operation

The **Evermore Systems Smart Swing USB 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.

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 USB 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 10 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 (MHz)	Limits (dBµV) Average
0.15 – .50	56 - 46
.50 - 5	46
5 – 30	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 USB Golf Club** as measured on the Class II Power Supply mains terminals of the Dell Laptop 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 USB 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 USB 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 higher than 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.

	Test Distance	Field Strength	
Signal Type	(Meters)	(μV/m)	(dBμV/m)
Fundamental 2432.1 MHz	3	50,000	94
Harmonics (2nd through 10th)	3	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 17000 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 USB 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 USB 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 USB 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 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 USB 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

The following modifications were made to the **Evermore Systems Smart Swing USB Golf Club:**

1) Added ferrite (Steward P/N 25B0562-200) to cable nearest plug that mates with the golf club in order to pass Radiated Emissions – 207 MHz through 288 MHz.

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
EMCO 3146	Log Periodic Antenna	December 2004
HP 85650A	Quasi Peak Adapter	November 2004
HP 8566B	Spectrum Analyzer	November 2004
HP 8447D	Preamplifier	November 2004
Compliance Design B-100	Biconical Antenna	December 2004
Cond. EMI Cable	RG-223	November 2004
Tektronix 2706	RF Preselctor	January 2005
MITEQ	18GHz 20dB Preamplifier	July 2005
SOLAR 8012-50-R-24-	LISN	October 2004
EMCO 3115	Ridge Guide Antenna	July 2005
Microwave horn	18 – 26.4 GHz	June 2005
HP 11971T option C43	External Harmonic Mixer kit	June 2005

FIGURE 1: Conducted Emissions Mains Terminal Measurements

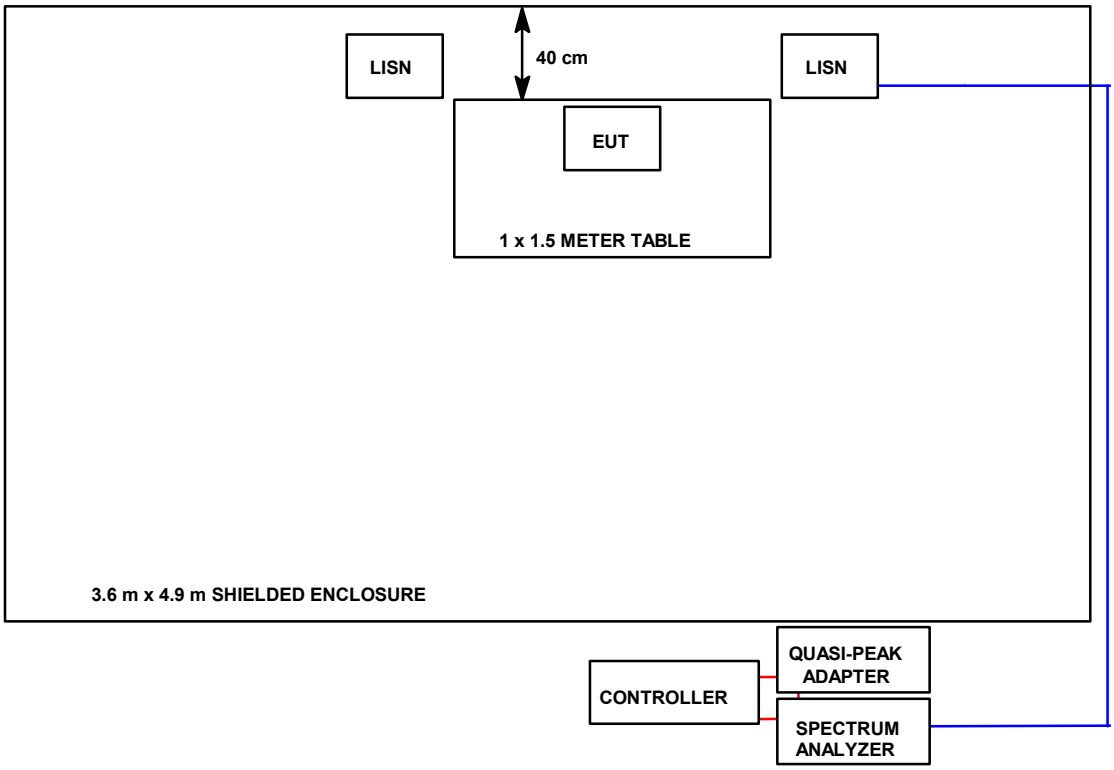
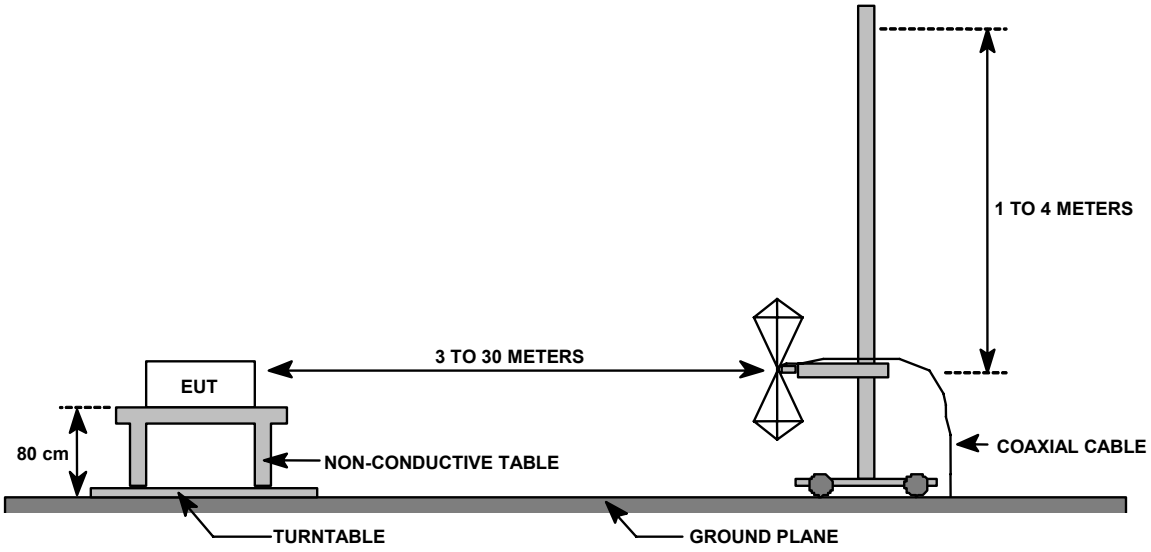


FIGURE 2: Radiated Emissions Test Setup



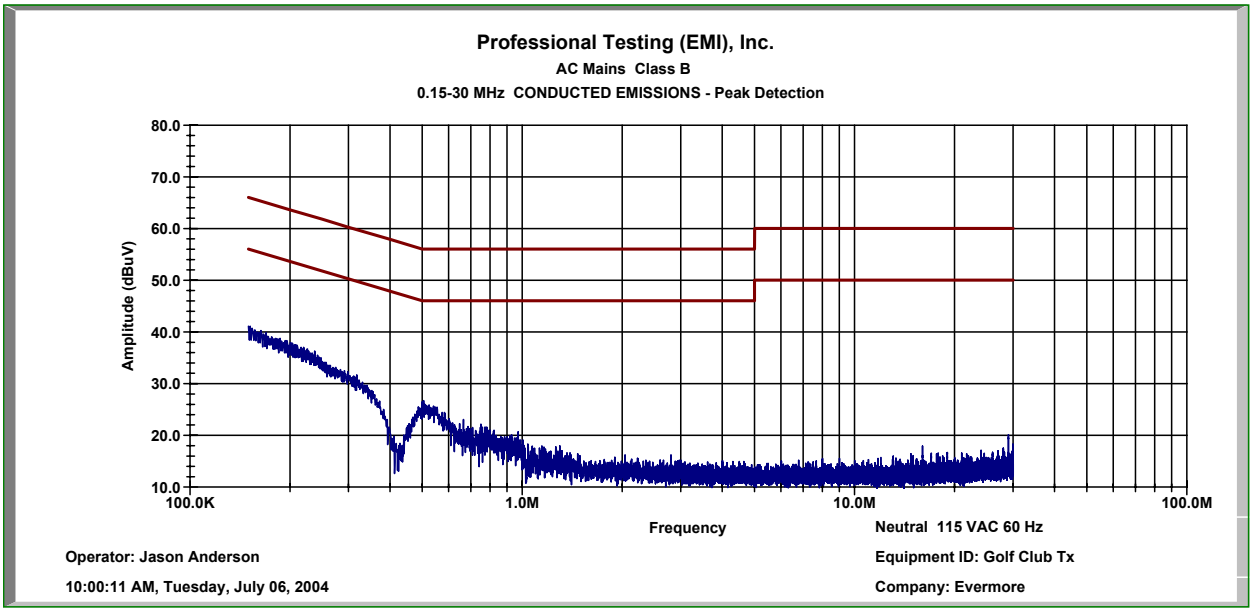
Appendix A Emissions Data Sheet

Conducted Data Sheet
AC Mains Class B
Evermore Systems Smart Swing USB Golf Club

Test Date: July 6, 2004

Line Selection: Neutral

FREQ INPUT MHz	READING INPUT dBuV	CORR FACTOR dB	CORR READING dBuV	Limit dBuV	Margin dB	Detector Function
0.152	25.73	3.1	28.8	65.9	-37.1	Quasi-peak
0.152	21	3.1	24.1	55.9	-31.8	Average
0.505	4.3	3.2	7.5	56.0	-48.5	Quasi-peak
0.505	2.7	3.2	5.9	46.0	-40.1	Average
0.972	7.87	3.3	11.1	56.0	-44.9	Quasi-peak
0.972	3.7	3.3	7.0	46.0	-39.0	Average
1.29	7.3	3.3	10.6	56.0	-45.4	Quasi-peak
1.29	3.3	3.3	6.6	46.0	-39.4	Average
16	11.35	4.0	15.4	60.0	-44.7	Quasi-peak
16	3.5	4.0	7.5	50.0	-42.5	Average
29	12.04	4.5	16.5	60.0	-43.5	Quasi-peak
29	3.9	4.5	8.4	50.0	-41.6	Average



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

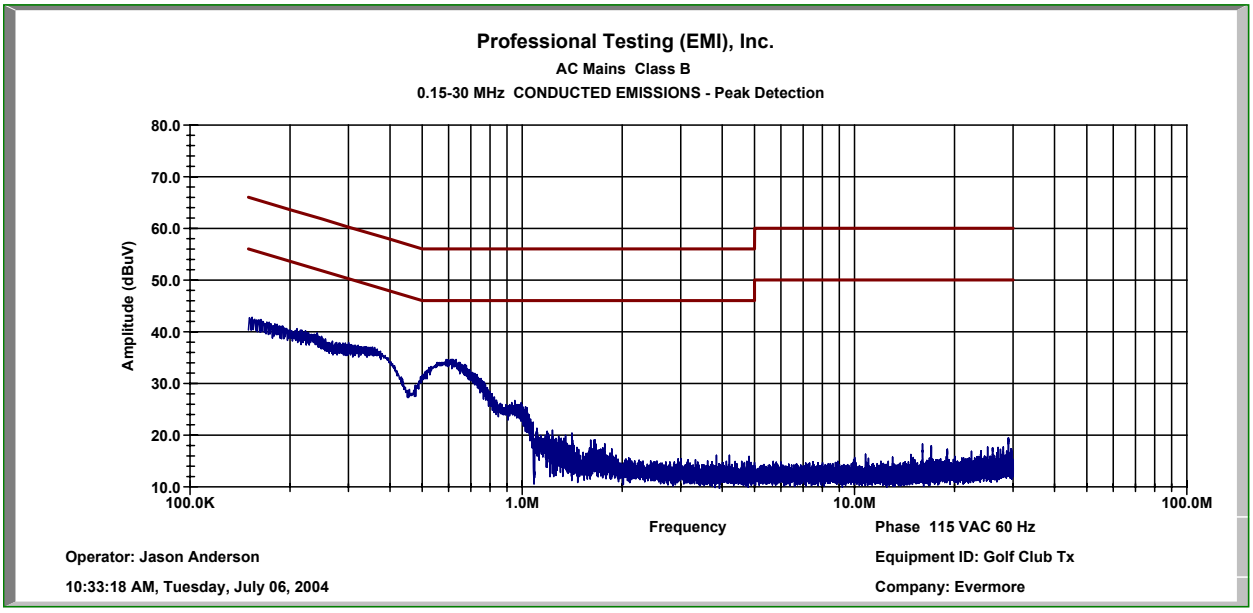
TEST ENGINEER: Jason Anderson

Conducted Data Sheet
AC Mains Class B
Evermore Systems Smart Swing USB Golf Club

Test Date: July 6, 2004

Line Selection: Phase

FREQ INPUT MHz	READING INPUT dBuV	CORR FACTOR dB	CORR READING dBuV	Limit dBuV	Margin dB	Detector Function
0.154	30.73	3.1	33.8	65.8	-32.0	Quasi-peak
0.154	30.5	3.1	33.6	55.8	-22.2	Average
0.241	23.4	3.1	26.5	62.1	-35.6	Quasi-peak
0.241	20	3.1	23.1	52.1	-29.0	Average
0.605	22.2	3.2	25.4	56.0	-30.6	Quasi-peak
0.605	12.2	3.2	15.4	46.0	-30.6	Average
0.993	16.9	3.3	20.2	56.0	-35.8	Quasi-peak
0.993	11.8	3.3	15.1	46.0	-30.9	Average
1.65	16.4	3.3	19.7	56.0	-36.3	Quasi-peak
1.65	12.2	3.3	15.5	46.0	-30.5	Average
28.9	17.8	4.5	22.3	60.0	-37.7	Quasi-peak
28.9	12.4	4.5	16.9	50.0	-33.1	Average



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

TEST ENGINEER: Jason Anderson

Radiated Data Sheet
Fundamental, Harmonics and Spurious
Evermore Systems Smart Swing USB Golf Club
Peak Detection, RBW = 1 MHz, VBW = 3MHz

Test Date: July 5, 2004
Measurement Distance (Meters): 1

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)	
2432.1	0	1	74.6	22.5	28.2	2.8	83.1	103.5	-20.4	horizontal
2432.1	180	1	84.6	22.5	28.2	2.8	93.1	103.5	-10.4	horizontal
2432.1	180	1	75.1	22.5	28.2	2.8	83.6	103.5	-19.9	vertical
2432.1	90	1	75.6	22.5	28.2	2.8	84.1	103.5	-19.4	horizontal
2432.1	270	1	77.6	22.5	28.2	2.8	86.1	103.5	-17.4	horizontal
4864.2	MAX	1	44.5	23.2	34.2	4.2	59.6	63.5	-3.9	
7296	noise	floor	36.2	21.3	36.9	5.4	57.1	63.5	-6.4	
9278.6	noise	floor	35.3	21.0	37.5	5.7	57.5	63.5	-6.0	
12158.6	noise	floor	35.2	21.9	39.3	6.8	59.4	63.5	-4.1	
14588	noise	floor	36	22.6	40.7	7.4	61.5	63.5	-2.0	
17018	noise	floor	40	20.5	42.3	8.2	70.0	83.5	-13.5	at 10cm
19447.6	noise	floor	37	0.0	42.0	0.0	79.0	83.5	-4.5	at 10cm
21877.3	noise	floor	39	0.0	42.0	0.0	81.0	83.5	-2.5	at 10cm
24307	noise	floor	37	0.0	42.0	0.0	79.0	83.5	-4.5	at 10cm

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)	
2432.1	90	1	69.7	22.5	28.2	2.8	78.2	103.5	-25.3	horiz
2432.1	270	1	77	22.5	28.2	2.8	85.5	103.5	-18.0	horiz
2432.1	90	1	73	22.5	28.2	2.8	81.5	103.5	-22.0	vert
2432.1	90	1	71.2	22.5	28.2	2.8	79.7	103.5	-23.8	vert
2432.1	90	1	75.8	22.5	28.2	2.8	84.3	103.5	-19.2	hori
4864.2	0	1	43	23.2	34.2	4.2	58.1	63.5	-5.4	
7296	noise	floor	33	21.3	36.9	5.4	53.9	63.5	-9.6	
9278.6	noise	floor	33.7	21.0	37.5	5.7	55.9	63.5	-7.6	
12158.6	noise	floor	34.8	21.9	39.3	6.8	59.0	63.5	-4.5	
14588	noise	floor	35	22.6	40.7	7.4	60.5	63.5	-3.0	
17018	noise	floor	36	20.5	42.3	8.2	66.0	83.5	-17.5	at 10cm
19447.6	noise	floor	37	0.0	42.0	0.0	79.0	83.5	-4.5	at 10cm
21877.3	noise	floor	39	0.0	42.0	0.0	81.0	83.5	-2.5	at 10cm
24307	noise	floor	37	0.0	42.0	0.0	79.0	83.5	-4.5	at 10cm

TEST ENGINEER: Jason Anderson

Radiated Data Sheet
Spurious Emissions
Evermore Systems Smart Swing USB Golf Club
QuasiPeak Detection, BW = 120 kHz

Test Date: July 5, 2004

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)
49.8	180	2	37.8	26.4	11.2	3.4	25.9	40	-14.1
80	197	2	34.9	26.4	7.3	4.1	19.9	40	-20.1
86	207	2	33	26.3	9.0	4.3	20.0	40	-20.0
110.9	360	2	33.1	26.3	12.7	5.0	24.5	43.5	-19.0
113	360	2	33.8	26.3	12.7	5.0	25.2	43.5	-18.3
184	0	2	35.4	26.5	17.4	6.8	33.2	43.5	-10.3
189	345	1	37.8	26.4	17.3	6.8	35.4	43.5	-8.1
193	237	1	43.1	26.5	17.5	6.7	40.8	43.5	-2.7
200	270	1	42.4	26.5	11.7	6.8	34.5	43.5	-9.0
159	239	1.5	38.8	26.6	13.7	6.7	32.6	43.5	-10.9
207	180	1.5	47	26.6	11.6	7.0	39.0	43.5	-4.5
225	187	1.5	43.7	26.8	11.2	7.5	35.6	46	-10.4
232	187	1.5	44.5	26.8	11.5	7.6	36.7	46	-9.3
239	193	1.5	49.1	26.8	11.8	7.7	41.7	46	-4.3
272	180	1.5	47.3	26.5	13.2	8.0	41.9	46	-4.1
288	203	1.5	49.4	26.7	14.1	8.1	44.9	46	-1.1
432	200	1.5	33.4	27.2	16.3	9.5	31.9	46	-14.1

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)
49.8	260	1	43.9	26.4	11.2	3.4	32.0	40	-8.0
113	297	1	36.5	26.3	12.7	5.0	27.9	43.5	-15.6
118	270	1	39.2	26.4	12.6	5.1	30.6	43.5	-12.9
120	273	1	38.4	26.4	12.6	5.2	29.8	43.5	-13.7
127	283	1	39.1	26.4	12.2	5.7	30.7	43.5	-12.8
136	0	1	44.1	26.5	11.7	6.1	35.4	43.5	-8.1
145	0	1	46.1	26.6	11.7	6.2	37.5	43.5	-6.0
191	270	1	36.4	26.4	17.3	6.7	34.0	43.5	-9.5
207	241	1.5	40.2	26.6	11.6	7.0	32.2	43.5	-11.3
239	170	1.5	41.8	26.8	11.8	7.7	34.4	46	-11.6
255	183	1.5	36.9	26.8	12.4	7.9	30.4	46	-15.6
288	206	1.5	38.4	26.7	14.1	8.1	33.9	46	-12.1
400	161	1.5	36.1	27.0	15.9	9.1	34.0	46	-12.0

TEST ENGINEER: Jason Anderson

Appendix B Occupied Bandwidth Data Sheets

Occupied Bandwidth Datasheet

Golf Club - Evermore July 7, 2004