TESTING
CERT #803.01, 803.02, 803.05, 803.06

EXPRESSO FITNESS TEST REPORT

FOR THE

RECUMBENT EXERCISE BIKE, S3R

FCC PART 15 SUBPART C SECTIONS 15.207 & 15.209, 15.247 AND RSS-210 ISSUE 7

TESTING

DATE OF ISSUE: NOVEMBER 21, 2008

PREPARED FOR:

Expresso Fitness
435 Lakeside Drive
Sunnyvale, CA 94085

PREPARED BY:

Mary Ellen Clayton
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

P.O. No.: P100230
W.O. No.: 88645

Date of test: September 22 – November 13, 2008

Report No.: FC08-109

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ADMINISTRATIVE INFORMATION

DATE OF TEST: September 22 - November 13, 2008

DATE OF RECEIPT: September 22, 2008

REPRESENTATIVE: Ernesto Castaneda

MANUFACTURER:
Expresso Fitness
435 Lakeside Drive
Sunnyvale, CA 94085

TEST LOCATION:
CKC Laboratories, Inc.
1120 Fulton Place
Fremont, CA 94539

TEST METHOD: ANSI C63.4 (2003), RSS-210 Issue 7 and RSS GEN Issue 2

PURPOSE OF TEST: To perform the testing of the Recumbent Exercise Bike, S3r with the requirements for FCC Part 15 Subpart C Sections 15.207 & 15.209,15.247 and RSS-210 devices.

APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

Amrinder Brar, EMC Engineer/Lab Manager

TEST PERSONNEL:

Norberto Gamez Jr., Test Technologist

Art Rice, Senior EMC Engineer

SUMMARY OF RESULTS

Test	Specification	Results
Conducted Emissions	FCC Part 15 Subpart B Section 15.207	Pass
Radiated Emissions	FCC Part 15 Subpart B Section 15.209	Pass
Band Edge	FCC Part 15 Subpart C Section 15.247(d)	Pass
99% Bandwidth	RSS-210 Issue 7 and RSS GEN Issue 2	Pass
Site File No.	FCC Site No. 958979	

CONDITIONS DURING TESTING
2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic.

FCC 15.31(m) Number Of Channels
This device was tested on three channels.

FCC 15.33(a) Frequency Ranges Tested
15.207 Conducted Emissions: 150 kHz – 30 MHz
15.209 Radiated Emissions: 30 MHz – 25 GHz

FCC 15.203 Antenna Requirements
The antenna jack is a unique reverse SMA connector; therefore the EUT complies with Section 15.203 of the FCC rules.

EUT Operating Frequency
The EUT was operating at 2412 MHz – 2462 MHz

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

EQUIPMENT UNDER TEST

Recumbent Exercise Bike
Manuf: Expresso Fitness
Model: S3r
Serial: Beta FCC

Wireless PCI Adapter
Manuf: Linksys
Model: WMP54G PCI Adapter
Serial: MD140H106094

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

AC Adapter
Manuf: Linksys
Model: AD12V/1A-SW
Serial: 07120053860

Game PC
Manuf: Expresso Fitness
Model: S2UP
Serial: 000578-628

LCD
Manuf: AOC
Model: 177S-1
Serial: 97975CA006841

Mouse
Manuf: Microsoft
Model: Wheel Mouse Optical USB & PS2 Compatible
Serial: 576-8329625-7

Wireless Router
Manuf: Linksys
Model: WRT300n V1
Serial: CNP11GC12476

REPORT OF EMISSIONS MEASUREMENTS

TESTING PARAMETERS

TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dBµV/m, the spectrum analyzer reading in dBµV was corrected by using the following formula. This reading was then compared to the applicable specification limit.

SAMPLE CALCULATIONS		
	Meter reading	(dBµV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBµV/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. The following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. When conducted emissions testing was performed, a 10 dB external attenuator was used with internal offset correction in the analyzer.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the highest readings, this is indicated as a "QP" or an "Ave" on the appropriate rows of the data sheets. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the spectrum analyzer/receiver readings were recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the measuring device called "peak hold," the measuring device had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the quasi-peak detector.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer/receiver. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.

FCC 15.207 AC CONDUCTED EMISSIONS

Test Setup Photos

Test Data Sheets

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**Expresso Fitness**		
Specification:	**FCC 15.207 COND [AVE]**		
Work Order #:	**88187**	Date:	11/5/2008
Test Type:	**Conducted Emissions**	Time:	17:23:58
Equipment:	**Recumbent Exercise Bike**	Sequence#:	37
Manufacturer:	Expresso Fitness	Tested By:	Art Rice
Model:	S3r		120V 60Hz
S/N:	Beta FCC		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Cable	None	05/13/2008	05/13/2010	00880
S.A., RF Section HP-8568B	2601A02492	11/20/2007	11/20/2009	02663
S.A., Display HP-85662A	2542A12169	11/20/2007	11/20/2009	02662
QP Adapter HP-85650A	2521A00909	11/20/2007	11/20/2009	00683
10 dB Pad		08/27/2007	08/27/2009	02223
LISN, Emco 3816/2	9408-1006	04/02/2007	04/02/2009	00493
TTE High Pass Filter	H4120	01/17/2007	01/17/2009	05258

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Recumbent Exercise Bike*	Expresso Fitness	S3r	Beta FCC
Wireless PCI adapter	Linksys	WMP54G PCI Adapter	MD140H106094

Support Devices:

Function	Manufacturer	Model #	S/N
Wireless Router	Linksys	WRT300n V1	CNP11GC12476
AC Adapter	Linksys	AD12V/1A-SW	07120053860
Game PC	Expresso Fitness	S2UP	000578-628
LCD	AOC	177S-1	97975CA006841
Mouse	Microsoft	Wheel Mouse Optical USB & PS2 Compatible	576-8329625-7

Test Conditions / Notes:

F-CB Conducted emissions 0.15-30 MHz. The EUT is an exercise bike with a computer, display, and wireless transceiver. It is connected via wireless connection to the Game PC through a wireless router placed outside the chamber. A loop probe is placed near the router. A coax cable is routed from the loop probe into the chamber under the ground plane, then up to the center of the turntable to a small antenna placed at the base of the bike. The EUT is running in previously determined worst case mode-wireless connection. The CPU in this bike's computer is an AMD 5200 running at 2.6 GHz. The wireless card is a Linksys WMP54G PCI adapter. Low ch 1=2412 MHz, Mid ch 6=2437 MHz, High ch 11=2462 MHz. NOTE: 1) Bike is in rider mode. 2) 2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic. 3) Transmit on Mid ch=2437 MHz, 802.11b mode. 4) Antenna gain is specified as 5 dBi, but a cable is installed between the card and the antenna.

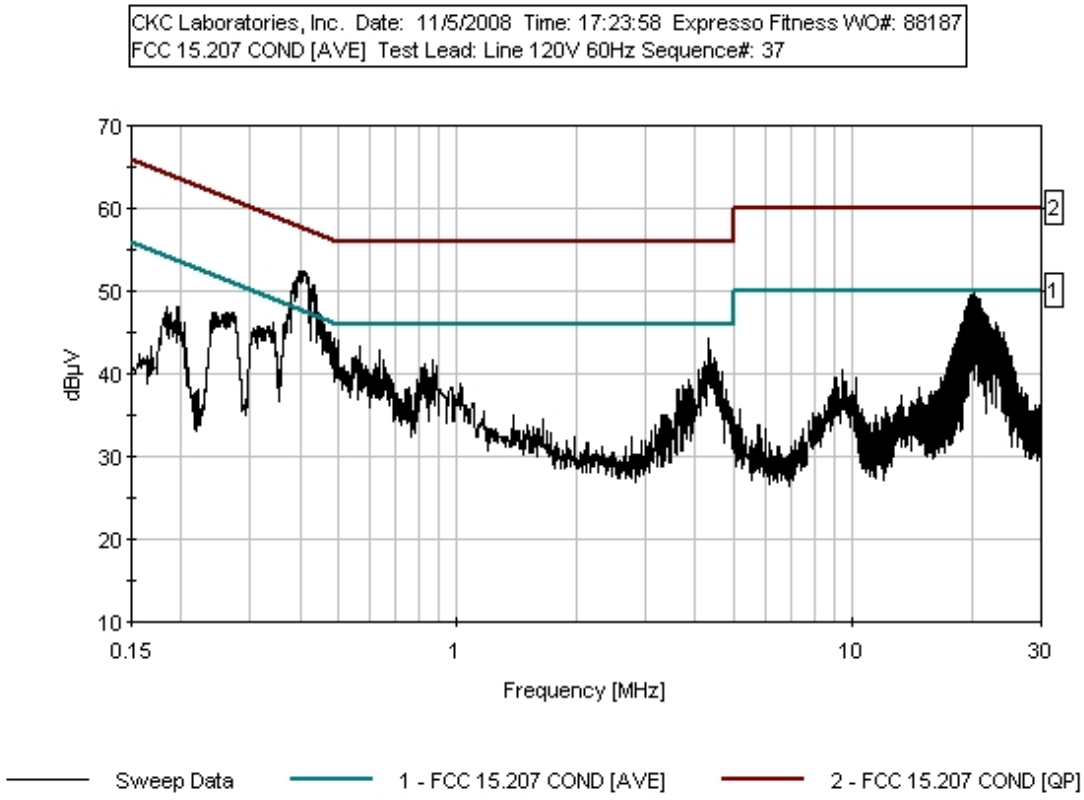
Transducer Legend:

T1=ANP02223-082707	T2=LISN - AN00493 - Black - ELC "OUT"
T3=TTE HP Filter	T4=Cable Calibration ANP00880

Measurement Data: Reading listed by margin. Test Lead: Line

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1 Ave	20.245M	26.2	+10.0	+0.3	+0.2	+0.4	+0.0	37.1	50.0	-12.9	Line
^	20.245M	38.8	+10.0	+0.3	+0.2	+0.4	+0.0	49.7	50.0	-0.3	Line
3 Ave	19.995M	25.4	+10.0	+0.3	+0.2	+0.3	+0.0	36.2	50.0	-13.8	Line
^	19.995M	38.5	+10.0	+0.3	+0.2	+0.3	+0.0	49.3	50.0	-0.7	Line
5 Ave	20.335M	25.1	+10.0	+0.3	+0.2	+0.4	+0.0	36.0	50.0	-14.0	Line
^	20.335M	38.6	+10.0	+0.3	+0.2	+0.4	+0.0	49.5	50.0	-0.5	Line
7 Ave	20.105M	25.1	+10.0	+0.3	+0.2	+0.3	+0.0	35.9	50.0	-14.1	Line
^	20.105M	38.7	+10.0	+0.3	+0.2	+0.3	+0.0	49.5	50.0	-0.5	Line
9 Ave	19.875M	25.1	+10.0	+0.3	+0.2	+0.3	+0.0	35.9	50.0	-14.1	Line
^	19.875M	38.8	+10.0	+0.3	+0.2	+0.3	+0.0	49.6	50.0	-0.4	Line
11 Ave	456.900k	21.4	+10.1	+0.1	+0.1	+0.0	+0.0	31.7	46.7	-15.0	Line
^	456.878k	36.7	+10.1	+0.1	+0.1	+0.0	+0.0	47.0	46.7	+0.3	Line
^	461.242k	35.7	+10.1	+0.1	+0.1	+0.0	+0.0	46.0	46.7	-0.7	Line
14 Ave	435.800k	21.0	+10.0	+0.1	+0.1	+0.0	+0.0	31.2	47.1	-15.9	Line
^	435.790k	40.5	+10.0	+0.1	+0.1	+0.0	+0.0	50.7	47.1	+3.6	Line
16 Ave	443.800k	20.7	+10.0	+0.1	+0.1	+0.0	+0.0	30.9	47.0	-16.1	Line
^	443.789k	37.1	+10.0	+0.1	+0.1	+0.0	+0.0	47.3	47.0	+0.3	Line
18 Ave	425.600k	20.1	+10.0	+0.1	+0.1	+0.0	+0.0	30.3	47.3	-17.0	Line
^	425.609k	40.1	+10.0	+0.1	+0.1	+0.0	+0.0	50.3	47.3	+3.0	Line
20 Ave	272.200k	23.5	+10.0	+0.0	+0.1	+0.0	+0.0	33.6	51.1	-17.5	Line
^	272.170k	37.4	+10.0	+0.0	+0.1	+0.0	+0.0	47.5	51.1	-3.6	Line

22	20.445M Ave	21.1	+10.0	+0.3	+0.2	+0.4	+0.0	32.0	50.0	-18.0	Line
^	20.445M	38.3	+10.0	+0.3	+0.2	+0.4	+0.0	49.2	50.0	-0.8	Line
24	497.600k Ave	17.5	+10.1	+0.1	+0.1	+0.1	+0.0	27.9	46.0	-18.1	Line
^	497.602k	33.7	+10.1	+0.1	+0.1	+0.1	+0.0	44.1	46.0	-1.9	Line
26	411.100k Ave	19.2	+10.0	+0.1	+0.0	+0.1	+0.0	29.4	47.6	-18.2	Line
^	411.065k	42.3	+10.0	+0.1	+0.0	+0.1	+0.0	52.5	47.6	+4.9	Line
28	341.300k Ave	20.3	+10.0	+0.0	+0.0	+0.0	+0.0	30.3	49.2	-18.9	Line
^	341.254k	36.3	+10.0	+0.0	+0.0	+0.0	+0.0	46.3	49.2	-2.9	Line
30	634.300k Ave	15.1	+10.1	+0.0	+0.1	+0.1	+0.0	25.4	46.0	-20.6	Line
^	634.315k	32.6	+10.1	+0.0	+0.1	+0.1	+0.0	42.9	46.0	-3.1	Line
32	569.600k Ave	14.7	+10.1	+0.0	+0.1	+0.1	+0.0	25.0	46.0	-21.0	Line
^	569.594k	33.0	+10.1	+0.0	+0.1	+0.1	+0.0	43.3	46.0	-2.7	Line


CKC Laboratories, Inc. Date: 11/5/2008 Time: 17:23:58 Expresso Fitness WO#: 88187
FCC 15.207 COND [AVE] Test Lead: Line 120V 60Hz Sequence#: 37
70
60
50
40
30
20
10
dBµV
0.15
1
10
30
Frequency [MHz]
2
1
Sweep Data
1 - FCC 15.207 COND [AVE]
2 - FCC 15.207 COND [QP]

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**Expresso Fitness**		
Specification:	**FCC 15.207 COND [AVE]**		
Work Order #:	**88187**	Date:	11/5/2008
Test Type:	**Conducted Emissions**	Time:	17:45:06
Equipment:	**Recumbent Exercise Bike**	Sequence#:	38
Manufacturer:	Expresso Fitness	Tested By:	Art Rice
Model:	S3r		120V 60Hz
S/N:	Beta FCC		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Cable	None	05/13/2008	05/13/2010	00880
S.A., RF Section HP-8568B	2601A02492	11/20/2007	11/20/2009	02663
S.A., Display HP-85662A	2542A12169	11/20/2007	11/20/2009	02662
QP Adapter HP-85650A	2521A00909	11/20/2007	11/20/2009	00683
10 dB Pad		08/27/2007	08/27/2009	02223
LISN, Emco 3816/2	9408-1006	04/02/2007	04/02/2009	00493
TTE High Pass Filter	H4120	01/17/2007	01/17/2009	05258

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Recumbent Exercise Bike*	Expresso Fitness	S3r	Beta FCC
Wireless PCI adapter	Linksys	WMP54G PCI Adapter	MD140H106094

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Function	Manufacturer	Model #	S/N
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Game PC	Expresso Fitness	S2UP	000578-628
LCD	AOC	177S-1	97975CA006841
Mouse	Microsoft	Wheel Mouse Optical USB & PS2 Compatible	576-8329625-7

Test Conditions / Notes:

F-CB Conducted emissions 0.15-30 MHz. The EUT is an exercise bike with a computer, display, and wireless transceiver. It is connected via wireless connection to the Game PC through a wireless router placed outside the chamber. A loop probe is placed near the router. A coax cable is routed from the loop probe into the chamber under the ground plane, then up to the center of the turntable to a small antenna placed at the base of the bike. The EUT is running in previously determined worst case mode-wireless connection. The CPU in this bike's computer is an AMD 5200 running at 2.6 GHz. The wireless card is a Linksys WMP54G PCI adapter. Low ch 1=2412 MHz, Mid ch 6=2437 MHz, High ch 11=2462 MHz. NOTE: 1) Bike is in rider mode. 2) 2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic. 3) Transmit on Mid ch=2437 MHz, 802.11b mode. 4) Antenna gain is specified as 5 dBi, but a cable is installed between the card and the antenna.

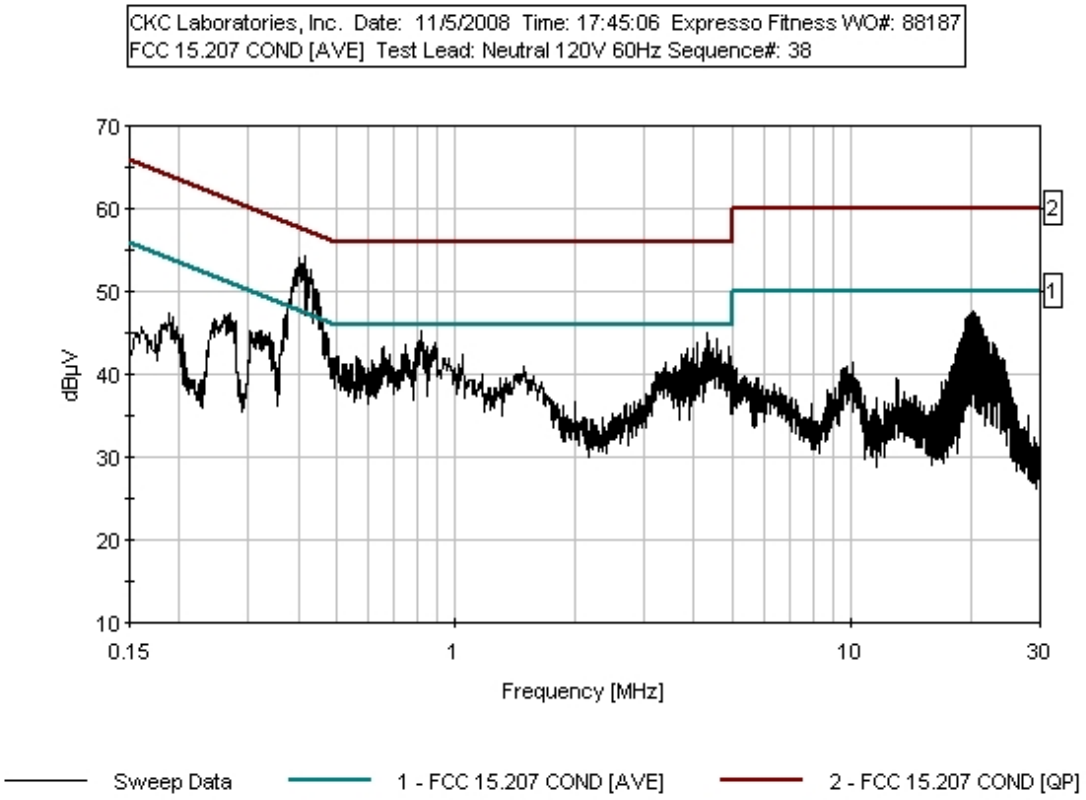
Transducer Legend:

T1=ANP02223-082707	T2=LISN - AN00493 - White - ELC "OUT"
T3=TTE HP Filter	T4=Cable Calibration ANP00880

Measurement Data: Reading listed by margin. Test Lead: Neutral

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1 Ave	469.000k	22.2	+10.1	+0.0	+0.1	+0.1	+0.0	32.5	46.5	-14.0	Neutr
^	468.514k	34.8	+10.1	+0.0	+0.1	+0.1	+0.0	45.1	46.5	-1.4	Neutr
3 Ave	4.080M	20.7	+10.0	+0.1	+0.1	+0.2	+0.0	31.1	46.0	-14.9	Neutr
^	4.080M	33.4	+10.0	+0.1	+0.1	+0.2	+0.0	43.8	46.0	-2.2	Neutr
5 Ave	812.000k	19.6	+10.1	+0.0	+0.2	+0.1	+0.0	30.0	46.0	-16.0	Neutr
6 Ave	820.000k	19.5	+10.1	+0.0	+0.2	+0.1	+0.0	29.9	46.0	-16.1	Neutr
^	820.478k	34.8	+10.1	+0.0	+0.2	+0.1	+0.0	45.2	46.0	-0.8	Neutr
8 Ave	658.000k	18.1	+10.1	+0.0	+0.1	+0.1	+0.0	28.4	46.0	-17.6	Neutr
^	657.586k	33.1	+10.1	+0.0	+0.1	+0.1	+0.0	43.4	46.0	-2.6	Neutr
10 Ave	20.245M	21.5	+10.0	+0.3	+0.2	+0.4	+0.0	32.4	50.0	-17.6	Neutr
^	20.245M	36.8	+10.0	+0.3	+0.2	+0.4	+0.0	47.7	50.0	-2.3	Neutr
12 Ave	403.100k	19.9	+10.0	+0.1	+0.0	+0.1	+0.0	30.1	47.8	-17.7	Neutr
^	403.066k	43.8	+10.0	+0.1	+0.0	+0.1	+0.0	54.0	47.8	+6.2	Neutr
14 Ave	437.000k	19.2	+10.0	+0.0	+0.1	+0.0	+0.0	29.3	47.1	-17.8	Neutr
^	436.517k	40.7	+10.0	+0.0	+0.1	+0.0	+0.0	50.8	47.1	+3.7	Neutr
^	437.971k	40.3	+10.0	+0.0	+0.1	+0.0	+0.0	50.4	47.1	+3.3	Neutr
17 Ave	429.000k	19.3	+10.0	+0.0	+0.1	+0.0	+0.0	29.4	47.3	-17.9	Neutr
^	430.699k	42.5	+10.0	+0.0	+0.1	+0.0	+0.0	52.6	47.2	+5.4	Neutr
19 Ave	20.035M	20.9	+10.0	+0.3	+0.2	+0.3	+0.0	31.7	50.0	-18.3	Neutr
^	20.035M	36.7	+10.0	+0.3	+0.2	+0.3	+0.0	47.5	50.0	-2.5	Neutr

21 Ave	416.200k	19.0	+10.0	+0.1	+0.0	+0.1	+0.0	29.2	47.5	-18.3	Neutr
^	416.155k	44.1	+10.0	+0.1	+0.0	+0.1	+0.0	54.3	47.5	+6.8	Neutr
^	417.610k	42.5	+10.0	+0.1	+0.0	+0.1	+0.0	52.7	47.5	+5.2	Neutr
24 Ave	4.556M	16.4	+10.1	+0.0	+0.1	+0.2	+0.0	26.8	46.0	-19.2	Neutr
^	4.556M	34.0	+10.1	+0.0	+0.1	+0.2	+0.0	44.4	46.0	-1.6	Neutr
26 Ave	4.369M	15.9	+10.0	+0.1	+0.1	+0.2	+0.0	26.3	46.0	-19.7	Neutr
^	4.369M	33.6	+10.0	+0.1	+0.1	+0.2	+0.0	44.0	46.0	-2.0	Neutr
28 Ave	743.000k	15.9	+10.1	+0.0	+0.1	+0.0	+0.0	26.1	46.0	-19.9	Neutr
^	743.395k	33.4	+10.1	+0.0	+0.1	+0.0	+0.0	43.6	46.0	-2.4	Neutr
30 Ave	886.000k	15.7	+10.0	+0.0	+0.2	+0.1	+0.0	26.0	46.0	-20.0	Neutr
^	885.506k	33.5	+10.0	+0.0	+0.2	+0.1	+0.0	43.8	46.0	-2.2	Neutr
32 Ave	4.326M	15.4	+10.0	+0.1	+0.1	+0.2	+0.0	25.8	46.0	-20.2	Neutr
^	4.326M	34.7	+10.0	+0.1	+0.1	+0.2	+0.0	45.1	46.0	-0.9	Neutr


CKC Laboratories, Inc. Date: 11/5/2008 Time: 17:45:06 Expresso Fitness WO#: 88187
FCC 15.207 COND [AVE] Test Lead: Neutral 120V 60Hz Sequence#: 38
70
60
50
40
30
20
10
dBµV
0.15
1
10
30
Frequency [MHz]
2
1
Sweep Data
1 - FCC 15.207 COND [AVE]
2 - FCC 15.207 COND [QP]

FCC 15.209 RADIATED EMISSIONS

Test Setup Photos

Test Data Sheets

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**Expresso Fitness**		
Specification:	**FCC 15.209 30MHz to 100 GHz**		
Work Order #:	**88187**	Date:	9/23/2008
Test Type:	**Maximized Emissions**	Time:	15:51:22
Equipment:	**Recumbent Exercise Bike**	Sequence#:	11
Manufacturer:	Expresso Fitness	Tested By:	Art Rice
Model:	S3r		
S/N:	Beta FCC		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA - Agilent E4446A	US44300408	03/05/2007	03/05/2009	02668
Preamp, HP8447D	2443A03707	02/05/2007	02/05/2009	00730
Cable	None	04/05/2007	04/05/2009	P05300
Cable	None	04/02/2007	04/02/2009	P05299
Antenna, Bilog	2630	12/30/2006	12/30/2008	00852
Cable	None	04/21/2008	04/21/2010	P05440

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Recumbent Exercise Bike*	Expresso Fitness	S3r	Beta FCC
Wireless PCI adapter	Linksys	WMP54G PCI Adapter	MD140H106094

Support Devices:

Function	Manufacturer	Model #	S/N
Headphones	Koss	n/a	none
Wireless Router	Linksys	WRT300n V1	CNP11GC12476
AC Adapter	Linksys	AD12V/1A-SW	07120053860
RF Modulator	Monster	161095-00	38618803
DVD Player	Sony	DVP-NS325	1247416
Game PC	Expresso Fitness	S2UP	000578-628
LCD	AOC	177S-1	97975CA006841
Mouse	Microsoft	Wheel Mouse Optical USB & PS2 Compatible	576-8329625-7

Test Conditions / Notes:

F-C3 Radiated emissions 30-1000 MHz. The EUT is an exercise bike with a computer, display, and wireless transceiver. It is connected via wireless connection to the Game PC through a wireless router placed in the corner of the chamber. It is also connected via RG6 coaxial cable to a modulator and DVD player located outside the chamber. It is running in previously determined worst case mode-wireless connection. The CPU in this bike's computer is an AMD 5200 running at 2.6 GHz. NOTE: 1) Bike is in riding mode with rider. 2) 2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic. 3) Signals determined to be from the digital section and not from the wireless card are not listed, since the digital section is 15.109 class A.

Transducer Legend:

T1=ANT AN00852 25-1000MHz	T2=Cable Calibration ANP05299
T3=Cable Calibration ANP05300	T4=AMP-AN00730-020507
T5=Cable Calibration ANP05440	

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	50.280M	55.7	+8.9	+0.0	+0.2	-27.3	+0.0	37.9	40.0	-2.1	Vert
QP			+0.4				-1				100
^	50.183M	63.2	+8.9	+0.0	+0.2	-27.3	+0.0	45.4	40.0	+5.4	Vert
			+0.4				-1				100
3	48.045M	54.5	+9.9	+0.0	+0.2	-27.3	+0.0	37.7	40.0	-2.3	Vert
QP			+0.4				11				102
^	48.050M	63.7	+9.9	+0.0	+0.2	-27.3	+0.0	46.9	40.0	+6.9	Vert
			+0.4				11				102
5	30.015M	45.2	+18.4	+0.0	+0.1	-27.3	+0.0	36.7	40.0	-3.3	Vert
QP			+0.3				361				102
^	30.034M	54.9	+18.4	+0.0	+0.1	-27.3	+0.0	46.4	40.0	+6.4	Vert
			+0.3				361				102
7	49.888M	53.6	+9.1	+0.0	+0.2	-27.3	+0.0	36.0	40.0	-4.0	Vert
QP			+0.4				359				100
^	49.843M	63.4	+9.1	+0.0	+0.2	-27.3	+0.0	45.8	40.0	+5.8	Vert
			+0.4				359				100
9	34.074M	44.6	+17.7	+0.0	+0.2	-27.2	+0.0	35.7	40.0	-4.3	Vert
QP			+0.4				49				100
^	34.049M	52.6	+17.7	+0.0	+0.2	-27.2	+0.0	43.7	40.0	+3.7	Vert
			+0.4				48				100
11	44.932M	50.1	+11.5	+0.1	+0.1	-27.3	+0.0	34.8	40.0	-5.2	Vert
QP			+0.3				53				100
^	44.907M	58.9	+11.6	+0.1	+0.1	-27.3	+0.0	43.7	40.0	+3.7	Vert
			+0.3				53				100
13	45.682M	50.1	+11.1	+0.1	+0.1	-27.3	+0.0	34.5	40.0	-5.5	Vert
QP			+0.4				-3				100
^	45.662M	59.0	+11.2	+0.1	+0.1	-27.3	+0.0	43.5	40.0	+3.5	Vert
			+0.4				-3				100
15	32.909M	43.2	+17.9	+0.0	+0.2	-27.2	+0.0	34.4	40.0	-5.6	Vert
QP			+0.3				320				100
^	32.848M	53.6	+17.9	+0.0	+0.2	-27.2	+0.0	44.8	40.0	+4.8	Vert
			+0.3				320				100
17	84.095M	51.2	+8.6	+0.1	+0.2	-27.2	+0.0	33.4	40.0	-6.6	Vert
QP			+0.5				26				100
^	84.113M	62.1	+8.6	+0.1	+0.2	-27.2	+0.0	44.3	40.0	+4.3	Vert
			+0.5				26				100
19	42.056M	46.7	+13.2	+0.1	+0.1	-27.3	+0.0	33.2	40.0	-6.8	Vert
QP			+0.4				-5				100
^	42.045M	57.1	+13.2	+0.1	+0.1	-27.3	+0.0	43.6	40.0	+3.6	Vert
			+0.4				-5				100
21	998.992M	46.8	+23.7	+0.2	+0.8	-27.8	+0.0	45.7	54.0	-8.3	Horiz
QP			+2.0				345				106
^	998.974M	55.2	+23.7	+0.2	+0.8	-27.8	+0.0	54.1	54.0	+0.1	Horiz
			+2.0				345				106

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**Expresso Fitness**		
Specification:	**FCC 15.209 30MHz to 100 GHz**		
Work Order #:	**88187**	Date:	11/5/2008
Test Type:	**Spurious Emissions**	Time:	14:54:54
Equipment:	**Recumbent Exercise Bike**	Sequence#:	32
Manufacturer:	Expresso Fitness	Tested By:	Art Rice
Model:	S3r		
S/N:	Beta FCC		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA - Agilent E4446A	US44300408	03/05/2007	03/05/2009	02668
Cable HF FSJ1P-50A-4	HOL-HF-025-06	05/06/2008	05/06/2010	P05138
Cable, HF	n/a	05/06/2008	05/06/2010	P04241
Preamp, HP83017A	3123A00283	05/16/2007	05/16/2009	00785
Antenna, Horn 1-18 GHz	1064	03/19/2007	03/19/2009	02061
HF Cable		03/27/2007	03/27/2009	01952
3.5GHz HP Filter	PN 84300-80038	04/01/2008	04/01/2010	P01416

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Recumbent Exercise Bike*	Expresso Fitness	S3r	Beta FCC
Wireless PCI adapter	Linksys	WMP54G PCI Adapter	MD140H106094

Support Devices:

Function	Manufacturer	Model #	S/N
Wireless Router	Linksys	WRT300n V1	CNP11GC12476
AC Adapter	Linksys	AD12V/1A-SW	07120053860
Game PC	Expresso Fitness	S2UP	000578-628
LCD	AOC	177S-1	97975CA006841
Mouse	Microsoft	Wheel Mouse Optical USB & PS2 Compatible	576-8329625-7

Test Conditions / Notes:

F-C3 Radiated emissions 1-25 GHz. The EUT is an exercise bike with a computer, display, and wireless transceiver. It is connected via wireless connection to the Game PC through a wireless router placed outside the chamber. A loop probe is placed near the router. A coax cable is routed from the loop probe into the chamber under the ground plane, then up to the center of the turntable to a small antenna placed at the base of the bike. The EUT is running in previously determined worst case mode-wireless connection. The CPU in this bike's computer is an AMD 5200 running at 2.6 GHz. The wireless card is a Linksys WMP54G PCI adapter. Low ch 1=2412 MHz, Mid ch 6=2437 MHz, High ch 11=2462 MHz. NOTE: 1) Bike is in rider mode. 2) 2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic. 3) Transmit on low ch 1=2412 MHz, 802.11b mode. 4) Antenna gain is specified as 5 dBi, but a cable is installed between the card and the antenna.

Transducer Legend:

T1=ANT AN02061 900MHz-18.5GHz	T2=Cable P01952 2'
T3=CAB-ANP04241-050608	T4=AMP-AN00785-051607
T5=CAB-ANP05138-050608	T6=HPF 3.5 GHz High Pass

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	4823.988M	30.4	+33.2	+0.5	+1.1	-34.9	+0.0	34.3	54.0	-19.7	Vert
	Ave		+3.6	+0.4			157		Low ch, 802.11b		169
^	4823.916M	58.9	+33.2	+0.5	+1.1	-34.9	+0.0	62.8	54.0	+8.8	Vert
			+3.6	+0.4			157		Low ch, 802.11b		169
3	4823.824M	30.1	+33.2	+0.5	+1.1	-34.9	+0.0	34.0	54.0	-20.0	Horiz
	Ave		+3.6	+0.4			168		Low ch, 802.11b		169
^	4823.835M	52.4	+33.2	+0.5	+1.1	-34.9	+0.0	56.3	54.0	+2.3	Horiz
			+3.6	+0.4			168		Low ch, 802.11b		169

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**Expresso Fitness**		
Specification:	**FCC 15.209 30MHz to 100 GHz**		
Work Order #:	**88187**	Date:	11/5/2008
Test Type:	**Spurious Emissions**	Time:	15:13:32
Equipment:	**Recumbent Exercise Bike**	Sequence#:	33
Manufacturer:	Expresso Fitness	Tested By:	Art Rice
Model:	S3r		
S/N:	Beta FCC		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA - Agilent E4446A	US44300408	03/05/2007	03/05/2009	02668
Cable HF FSJ1P-50A-4	HOL-HF-025-06	05/06/2008	05/06/2010	P05138
Cable, HF	n/a	05/06/2008	05/06/2010	P04241
Preamp, HP83017A	3123A00283	05/16/2007	05/16/2009	00785
Antenna, Horn 1-18 GHz	1064	03/19/2007	03/19/2009	02061
HF Cable		03/27/2007	03/27/2009	01952
3.5GHz HP Filter	PN 84300-80038	04/01/2008	04/01/2010	P01416

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Recumbent Exercise Bike*	Expresso Fitness	S3r	Beta FCC
Wireless PCI adapter	Linksys	WMP54G PCI Adapter	MD140H106094

Support Devices:

Function	Manufacturer	Model #	S/N
Wireless Router	Linksys	WRT300n V1	CNP11GC12476
AC Adapter	Linksys	AD12V/1A-SW	07120053860
Game PC	Expresso Fitness	S2UP	000578-628
LCD	AOC	177S-1	97975CA006841
Mouse	Microsoft	Wheel Mouse Optical USB & PS2 Compatible	576-8329625-7

Test Conditions / Notes:

F-C3 Radiated emissions 1-25 GHz. The EUT is an exercise bike with a computer, display, and wireless transceiver. It is connected via wireless connection to the Game PC through a wireless router placed outside the chamber. A loop probe is placed near the router. A coax cable is routed from the loop probe into the chamber under the ground plane, then up to the center of the turntable to a small antenna placed at the base of the bike. The EUT is running in previously determined worst case mode-wireless connection. The CPU in this bike's computer is an AMD 5200 running at 2.6 GHz. The wireless card is a Linksys WMP54G PCI adapter. Low ch 1=2412 MHz, Mid ch 6=2437 MHz, High ch 11=2462 MHz. NOTE: 1) Bike is in rider mode. 2) 2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic. 3) Transmit on mid ch 1=2437 MHz, 802.11b mode. 4) Antenna gain is specified as 5 dBi, but a cable is installed between the card and the antenna.

Transducer Legend:

T1=ANT AN02061 900MHz-18.5GHz	T2=Cable P01952 2'
T3=CAB-ANP04241-050608	T4=AMP-AN00785-051607
T5=CAB-ANP05138-050608	T6=HPF 3.5 GHz High Pass

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	4873.938M	30.6	+33.3	+0.6	+1.2	-35.0	+0.0	34.8	54.0	-19.2	Horiz
	Ave		+3.7	+0.4			171		Mid ch, 802.11b		169
^	4873.928M	50.8	+33.3	+0.6	+1.2	-35.0	+0.0	55.0	54.0	+1.0	Horiz
			+3.7	+0.4			171		Mid ch, 802.11b		169
3	4873.976M	30.0	+33.3	+0.6	+1.2	-35.0	+0.0	34.2	54.0	-19.8	Vert
	Ave		+3.7	+0.4			157		Mid ch, 802.11b		169
^	4873.916M	57.9	+33.3	+0.6	+1.2	-35.0	+0.0	62.1	54.0	+8.1	Vert
			+3.7	+0.4			157		Mid ch, 802.11b		169

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**Expresso Fitness**		
Specification:	**FCC 15.209 30MHz to 100 GHz**		
Work Order #:	**88187**	Date:	11/5/2008
Test Type:	**Spurious Emissions**	Time:	16:25:03
Equipment:	**Recumbent Exercise Bike**	Sequence#:	36
Manufacturer:	Expresso Fitness	Tested By:	Art Rice
Model:	S3r		
S/N:	Beta FCC		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA - Agilent E4446A	US44300408	03/05/2007	03/05/2009	02668
Cable HF FSJ1P-50A-4	HOL-HF-025-06	05/06/2008	05/06/2010	P05138
Cable, HF	n/a	05/06/2008	05/06/2010	P04241
Preamp, HP83017A	3123A00283	05/16/2007	05/16/2009	00785
Antenna, Horn 1-18 GHz	1064	03/19/2007	03/19/2009	02061
HF Cable		03/27/2007	03/27/2009	01952
3.5GHz HP Filter	PN 84300-80038	04/01/2008	04/01/2010	P01416

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Recumbent Exercise Bike*	Expresso Fitness	S3r	Beta FCC
Wireless PCI adapter	Linksys	WMP54G PCI Adapter	MD140H106094

Support Devices:

Function	Manufacturer	Model #	S/N
Wireless Router	Linksys	WRT300n V1	CNP11GC12476
AC Adapter	Linksys	AD12V/1A-SW	07120053860
Game PC	Expresso Fitness	S2UP	000578-628
LCD	AOC	177S-1	97975CA006841
Mouse	Microsoft	Wheel Mouse Optical USB & PS2 Compatible	576-8329625-7

Test Conditions / Notes:

F-C3 Radiated emissions 1-25 GHz. The EUT is an exercise bike with a computer, display, and wireless transceiver. It is connected via wireless connection to the Game PC through a wireless router placed outside the chamber. A loop probe is placed near the router. A coax cable is routed from the loop probe into the chamber under the ground plane, then up to the center of the turntable to a small antenna placed at the base of the bike. The EUT is running in previously determined worst case mode-wireless connection. The CPU in this bike's computer is an AMD 5200 running at 2.6 GHz. The wireless card is a Linksys WMP54G PCI adapter. Low ch 1=2412 MHz, Mid ch 6=2437 MHz, High ch 11=2462 MHz. NOTE: 1) Bike is in rider mode. 2) 2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic. 3) Transmit on High ch 1=2462 MHz, 802.11b mode. 4) Antenna gain is specified as 5 dBi, but a cable is installed between the card and the antenna.

Transducer Legend:

T1=ANT AN02061 900MHz-18.5GHz	T2=Cable P01952 2'
T3=CAB-ANP04241-050608	T4=AMP-AN00785-051607
T5=CAB-ANP05138-050608	T6=HPF 3.5 GHz High Pass

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	4924.056M	29.9	+33.4	+0.7	+1.2	-35.0	+0.0	34.3	54.0	-19.7	Vert
	Ave		+3.7	+0.4			187		High ch 802.11b		169
^	4923.986M	59.2	+33.4	+0.7	+1.2	-35.0	+0.0	63.6	54.0	+9.6	Vert
			+3.7	+0.4			187		High ch 802.11b		169
3	4923.914M	29.5	+33.4	+0.7	+1.2	-35.0	+0.0	33.9	54.0	-20.1	Horiz
	Ave		+3.7	+0.4			160		High ch 802.11b		169
^	4923.920M	52.8	+33.4	+0.7	+1.2	-35.0	+0.0	57.2	54.0	+3.2	Horiz
			+3.7	+0.4			160		High ch 802.11b		169

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**Expresso Fitness**		
Specification:	**FCC 15.209 30MHz to 100 GHz**		
Work Order #:	**88187**	Date:	11/5/2008
Test Type:	**Spurious Emissions**	Time:	14:31:06
Equipment:	**Recumbent Exercise Bike**	Sequence#:	31
Manufacturer:	Expresso Fitness	Tested By:	Art Rice
Model:	S3r		
S/N:	Beta FCC		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA - Agilent E4446A	US44300408	03/05/2007	03/05/2009	02668
Cable HF FSJ1P-50A-4	HOL-HF-025-06	05/06/2008	05/06/2010	P05138
Cable, HF	n/a	05/06/2008	05/06/2010	P04241
Preamp, HP83017A	3123A00283	05/16/2007	05/16/2009	00785
Antenna, Horn 1-18 GHz	1064	03/19/2007	03/19/2009	02061
HF Cable		03/27/2007	03/27/2009	01952
3.5GHz HP Filter	PN 84300-80038	04/01/2008	04/01/2010	P01416

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Recumbent Exercise Bike*	Expresso Fitness	S3r	Beta FCC
Wireless PCI adapter	Linksys	WMP54G PCI Adapter	MD140H106094

Support Devices:

Function	Manufacturer	Model #	S/N
Wireless Router	Linksys	WRT300n V1	CNP11GC12476
AC Adapter	Linksys	AD12V/1A-SW	07120053860
Game PC	Expresso Fitness	S2UP	000578-628
LCD	AOC	177S-1	97975CA006841
Mouse	Microsoft	Wheel Mouse Optical USB & PS2 Compatible	576-8329625-7

Test Conditions / Notes:

F-C3 Radiated emissions 1-25 GHz. The EUT is an exercise bike with a computer, display, and wireless transceiver. It is connected via wireless connection to the Game PC through a wireless router placed outside the chamber. A loop probe is placed near the router. A coax cable is routed from the loop probe into the chamber under the ground plane, then up to the center of the turntable to a small antenna placed at the base of the bike. The EUT is running in previously determined worst case mode-wireless connection. The CPU in this bike's computer is an AMD 5200 running at 2.6 GHz. The wireless card is a Linksys WMP54G PCI adapter. Low ch 1=2412 MHz, Mid ch 6=2437 MHz, High ch 11=2462 MHz. NOTE: 1) Bike is in rider mode. 2) 2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic. 3) Transmit on low ch 1=2412 MHz, 802.11g mode. 4) Antenna gain is specified as 5 dBi, but a cable is installed between the card and the antenna.

Transducer Legend:

T1=ANT AN02061 900MHz-18.5GHz	T2=Cable P01952 2'
T3=CAB-ANP04241-050608	T4=AMP-AN00785-051607
T5=CAB-ANP05138-050608	T6=HPF 3.5 GHz High Pass

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	4823.740M	30.3	+33.2	+0.5	+1.1	-34.9	+0.0	34.2	54.0	-19.8	Vert
	Ave		+3.6	+0.4			191		Low ch 802.11g		162
^	4823.780M	48.6	+33.2	+0.6	+1.1	-34.9	+0.0	52.6	54.0	-1.4	Vert
			+3.6	+0.4			191		Low ch 802.11g		162
3	4823.365M	30.2	+33.2	+0.5	+1.1	-34.9	+0.0	34.1	54.0	-19.9	Horiz
	Ave		+3.6	+0.4			168		Low ch 802.11g		169
^	4823.360M	43.2	+33.2	+0.5	+1.1	-34.9	+0.0	47.1	54.0	-6.9	Horiz
			+3.6	+0.4			168		Low ch 802.11g		169

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**Expresso Fitness**		
Specification:	**FCC 15.209 30MHz to 100 GHz**		
Work Order #:	**88187**	Date:	11/5/2008
Test Type:	**Spurious Emissions**	Time:	15:42:49
Equipment:	**Recumbent Exercise Bike**	Sequence#:	34
Manufacturer:	Expresso Fitness	Tested By:	Art Rice
Model:	S3r		
S/N:	Beta FCC		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA - Agilent E4446A	US44300408	03/05/2007	03/05/2009	02668
Cable HF FSJ1P-50A-4	HOL-HF-025-06	05/06/2008	05/06/2010	P05138
Cable, HF	n/a	05/06/2008	05/06/2010	P04241
Preamp, HP83017A	3123A00283	05/16/2007	05/16/2009	00785
Antenna, Horn 1-18 GHz	1064	03/19/2007	03/19/2009	02061
HF Cable		03/27/2007	03/27/2009	01952
3.5GHz HP Filter	PN 84300-80038	04/01/2008	04/01/2010	P01416

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Recumbent Exercise Bike*	Expresso Fitness	S3r	Beta FCC
Wireless PCI adapter	Linksys	WMP54G PCI Adapter	MD140H106094

Support Devices:

Function	Manufacturer	Model #	S/N
Wireless Router	Linksys	WRT300n V1	CNP11GC12476
AC Adapter	Linksys	AD12V/1A-SW	07120053860
Game PC	Expresso Fitness	S2UP	000578-628
LCD	AOC	177S-1	97975CA006841
Mouse	Microsoft	Wheel Mouse Optical USB & PS2 Compatible	576-8329625-7

Test Conditions / Notes:

F-C3 Radiated emissions 1-25 GHz. The EUT is an exercise bike with a computer, display, and wireless transceiver. It is connected via wireless connection to the Game PC through a wireless router placed outside the chamber. A loop probe is placed near the router. A coax cable is routed from the loop probe into the chamber under the ground plane, then up to the center of the turntable to a small antenna placed at the base of the bike. The EUT is running in previously determined worst case mode-wireless connection. The CPU in this bike's computer is an AMD 5200 running at 2.6 GHz. The wireless card is a Linksys WMP54G PCI adapter. Low ch 1=2412 MHz, Mid ch 6=2437 MHz, High ch 11=2462 MHz. NOTE: 1) Bike is in rider mode. 2) 2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic. 3) Transmit on mid ch 1=2437 MHz, 802.11g mode. 4) Antenna gain is specified as 5 dBi, but a cable is installed between the card and the antenna.

Transducer Legend:

T1=ANT AN02061 900MHz-18.5GHz	T2=Cable P01952 2'
T3=CAB-ANP04241-050608	T4=AMP-AN00785-051607
T5=CAB-ANP05138-050608	T6=HPF 3.5 GHz High Pass

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	4873.230M	29.7	+33.3	+0.6	+1.2	-35.0	+0.0	33.9	54.0	-20.1	Horiz
	Ave		+3.7	+0.4			171		Mid ch, 802.11g		169
^	4873.175M	45.4	+33.3	+0.6	+1.2	-35.0	+0.0	49.6	54.0	-4.4	Horiz
			+3.7	+0.4			171		Mid ch, 802.11g		169
3	4873.878M	29.6	+33.3	+0.6	+1.2	-35.0	+0.0	33.8	54.0	-20.2	Vert
	Ave		+3.7	+0.4			164		Mid ch, 802.11g		169
^	4873.925M	47.7	+33.3	+0.6	+1.2	-35.0	+0.0	51.9	54.0	-2.1	Vert
			+3.7	+0.4			164		Mid ch, 802.11g		169

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**Expresso Fitness**		
Specification:	**FCC 15.209 30MHz to 100 GHz**		
Work Order #:	**88187**	Date:	11/5/2008
Test Type:	**Spurious Emissions**	Time:	15:52:14
Equipment:	**Recumbent Exercise Bike**	Sequence#:	35
Manufacturer:	Expresso Fitness	Tested By:	Art Rice
Model:	S3r		
S/N:	Beta FCC		

***Test Equipment*:**

Function	S/N	Calibration Date	Cal Due Date	Asset #
SA - Agilent E4446A	US44300408	03/05/2007	03/05/2009	02668
Cable HF FSJ1P-50A-4	HOL-HF-025-06	05/06/2008	05/06/2010	P05138
Cable, HF	n/a	05/06/2008	05/06/2010	P04241
Preamp, HP83017A	3123A00283	05/16/2007	05/16/2009	00785
Antenna, Horn 1-18 GHz	1064	03/19/2007	03/19/2009	02061
HF Cable		03/27/2007	03/27/2009	01952
3.5GHz HP Filter	PN 84300-80038	04/01/2008	04/01/2010	P01416

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Recumbent Exercise Bike*	Expresso Fitness	S3r	Beta FCC
Wireless PCI adapter	Linksys	WMP54G PCI Adapter	MD140H106094

Support Devices:

Function	Manufacturer	Model #	S/N
Wireless Router	Linksys	WRT300n V1	CNP11GC12476
AC Adapter	Linksys	AD12V/1A-SW	07120053860
Game PC	Expresso Fitness	S2UP	000578-628
LCD	AOC	177S-1	97975CA006841
Mouse	Microsoft	Wheel Mouse Optical USB & PS2 Compatible	576-8329625-7

Test Conditions / Notes:

F-C3 Radiated emissions 1-25 GHz. The EUT is an exercise bike with a computer, display, and wireless transceiver. It is connected via wireless connection to the Game PC through a wireless router placed outside the chamber. A loop probe is placed near the router. A coax cable is routed from the loop probe into the chamber under the ground plane, then up to the center of the turntable to a small antenna placed at the base of the bike. The EUT is running in previously determined worst case mode-wireless connection. The CPU in this bike's computer is an AMD 5200 running at 2.6 GHz. The wireless card is a Linksys WMP54G PCI adapter. Low ch 1=2412 MHz, Mid ch 6=2437 MHz, High ch 11=2462 MHz. NOTE: 1) Bike is in rider mode. 2) 2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic. 3) Transmit on High ch 1=2462 MHz, 802.11g mode. 4) Antenna gain is specified as 5 dBi, but a cable is installed between the card and the antenna.

Transducer Legend:

T1=ANT AN02061 900MHz-18.5GHz	T2=Cable P01952 2'
T3=CAB-ANP04241-050608	T4=AMP-AN00785-051607
T5=CAB-ANP05138-050608	T6=HPF 3.5 GHz High Pass

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	4922.645M	29.6	+33.4	+0.7	+1.2	-35.0	+0.0	34.0	54.0	-20.0	Horiz
	Ave		+3.7	+0.4			169		High ch 802.11g		169
^	4922.620M	44.6	+33.4	+0.7	+1.2	-35.0	+0.0	49.0	54.0	-5.0	Horiz
			+3.7	+0.4			169		High ch 802.11g		169
3	4925.905M	29.4	+33.4	+0.7	+1.2	-35.0	+0.0	33.8	54.0	-20.2	Vert
	Ave		+3.7	+0.4			160		High ch 802.11g		169
^	4925.900M	51.5	+33.4	+0.7	+1.2	-35.0	+0.0	55.9	54.0	+1.9	Vert
			+3.7	+0.4			160		High ch 802.11g		169

FCC Part 15.247(d) BAND EDGE

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer:	**Expresso Fitness**		
Specification:	**FCC 15.247d+15.209 Band Edge**		
Work Order #:	**88187**	Date:	11/5/2008
Test Type:	**Band Edge Measurements**	Time:	11:17:11
Equipment:	**Recumbent Exercise Bike**	Sequence#:	30
Manufacturer:	Expresso Fitness	Tested By:	Art Rice
Model:	S3r		
S/N:	Beta FCC		

***Test Equipment*:**

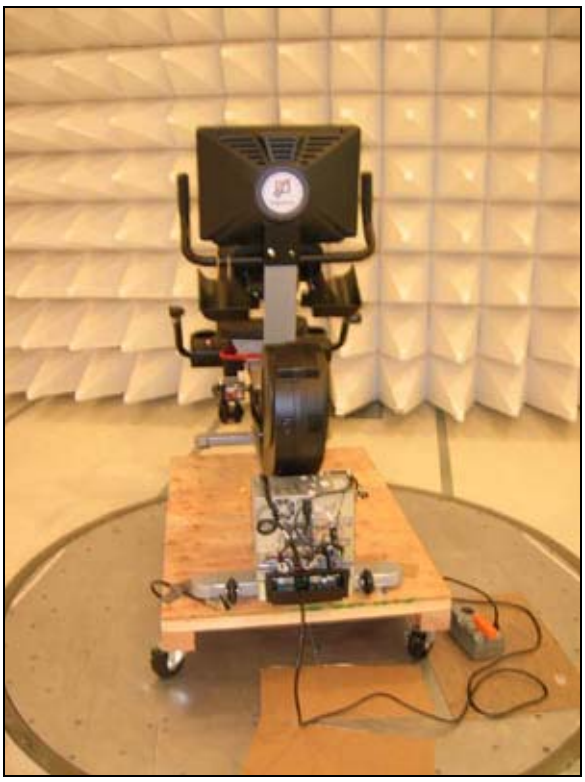
Function	S/N	Calibration Date	Cal Due Date	Asset #
SA - Agilent E4446A	US44300408	03/05/2007	03/05/2009	02668
Cable HF FSJ1P-50A-4	HOL-HF-025-06	05/06/2008	05/06/2010	P05138
Cable, HF	n/a	05/06/2008	05/06/2010	P04241
Preamp, HP83017A	3123A00283	05/16/2007	05/16/2009	00785
Antenna, Horn 1-18 GHz	1064	03/19/2007	03/19/2009	02061
HF Cable		03/27/2007	03/27/2009	01952

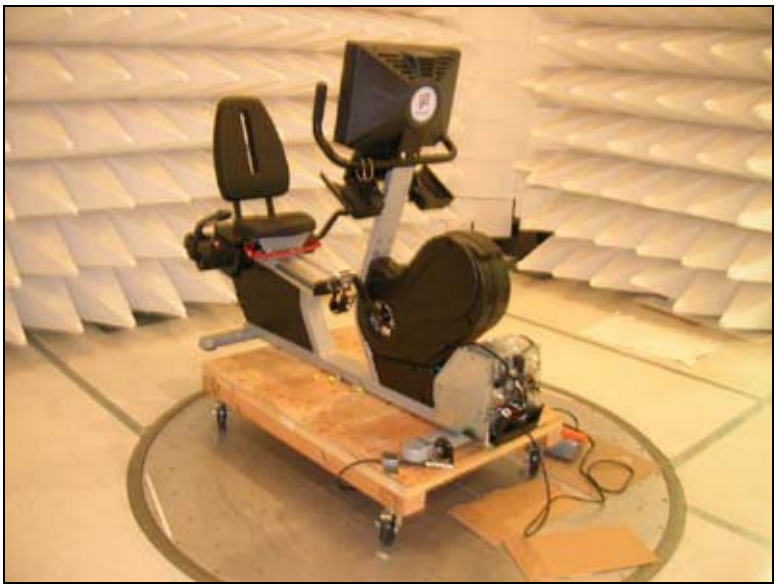
Test Conditions

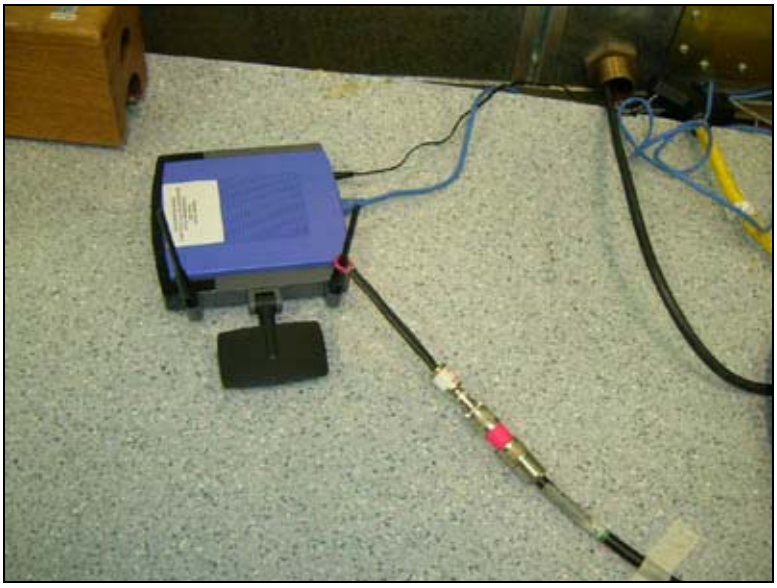
The EUT is an exercise bike with a computer, display, and wireless transceiver. It is connected via wireless connection to the Game PC through a wireless router placed outside the chamber. A loop probe is placed near the router. A coax cable is routed from the loop probe into the chamber under the ground plane, then up to the center of the turntable to a small antenna placed at the base of the bike. The EUT is running in previously determined worst case mode-wireless connection. The CPU in this bike's computer is an AMD 5200 running at 2.6 GHz. The wireless card is a Linksys WMP54G PCI adapter. Low ch 1=2412 MHz, Mid ch 6=2437 MHz, High ch 11=2462 MHz.

NOTE: 1) Bike is in rider mode. 2) 2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic. 3)Antenna gain is specified as 5 dBi, but a cable is installed between the card and the antenna.

Test Setup Photos



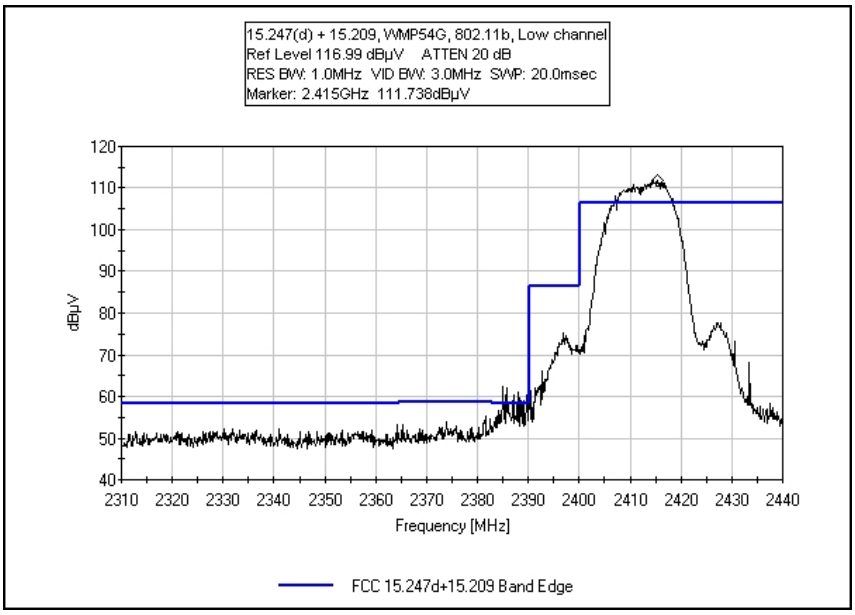




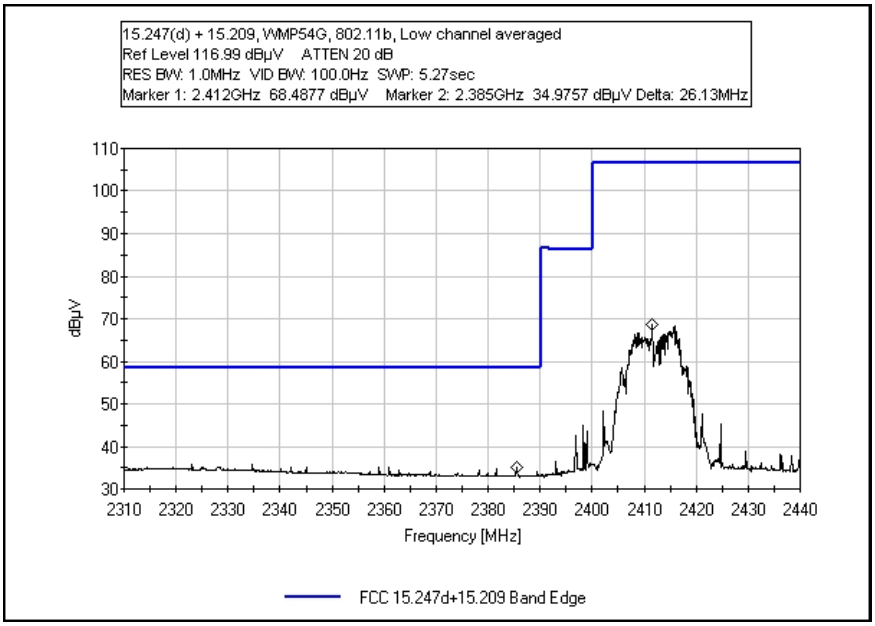
Wireless Router Detail

Test Plots

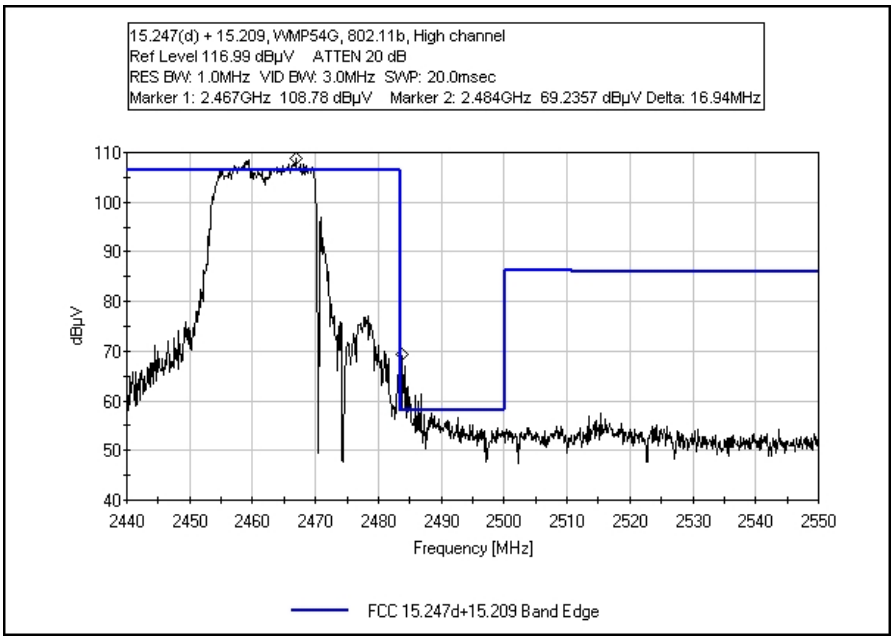
BAND EDGE 802.11b PEAK DATA - LOW CHANNEL



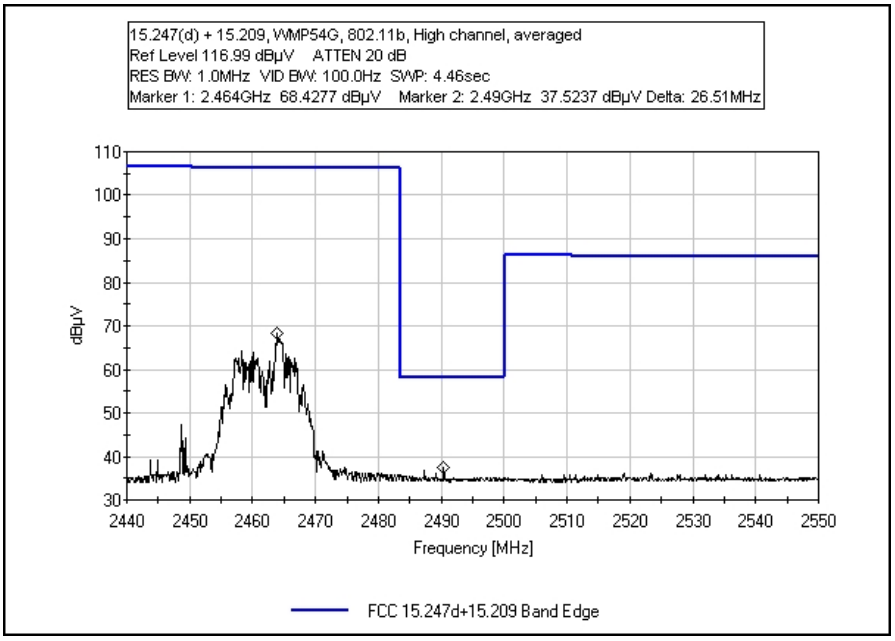
BANDEDGE 802.11b - LOW CHANNEL AVERAGED



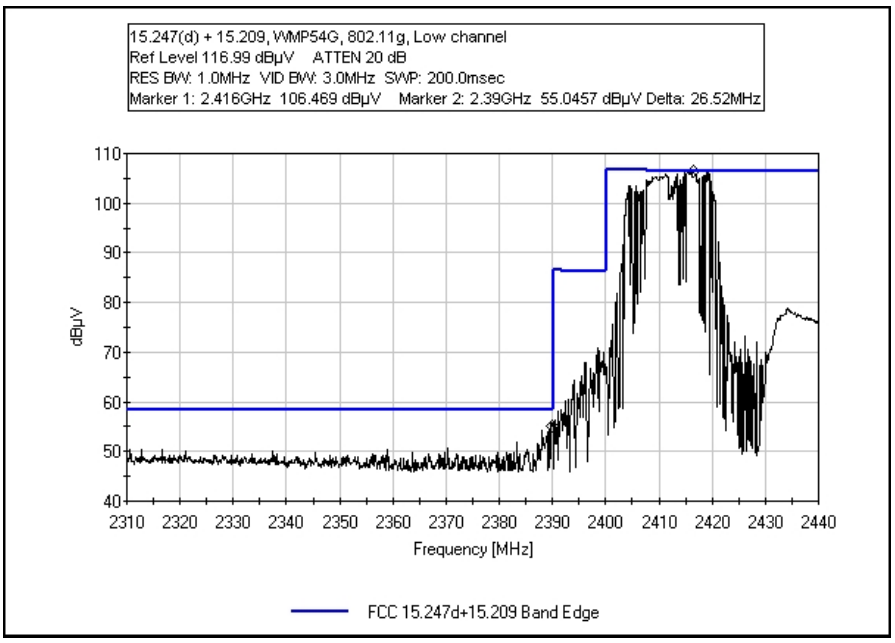
BAND EDGE 802.11b PEAK DATA - HIGH CHANNEL



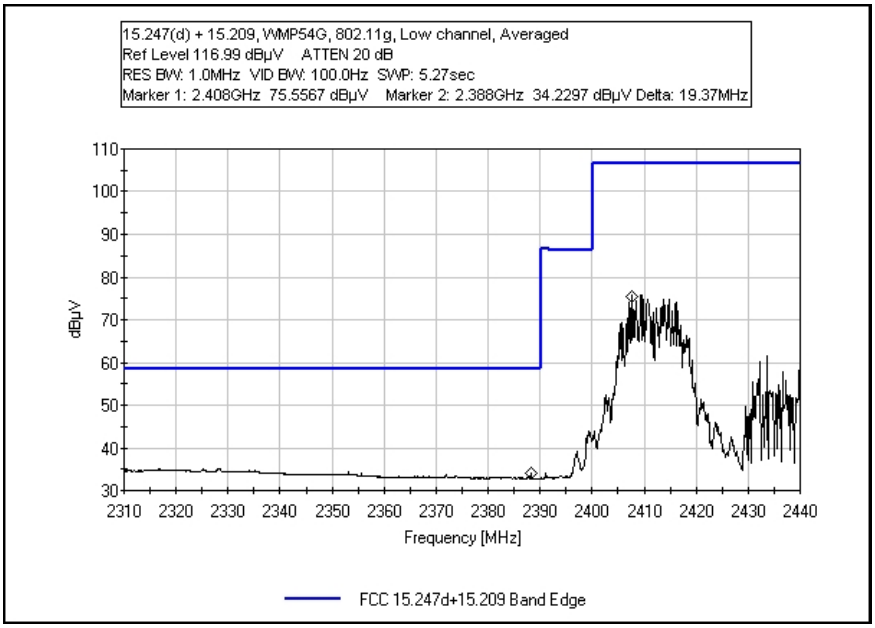
BAND EDGE 802.11b - HIGH CHANNEL AVERAGED



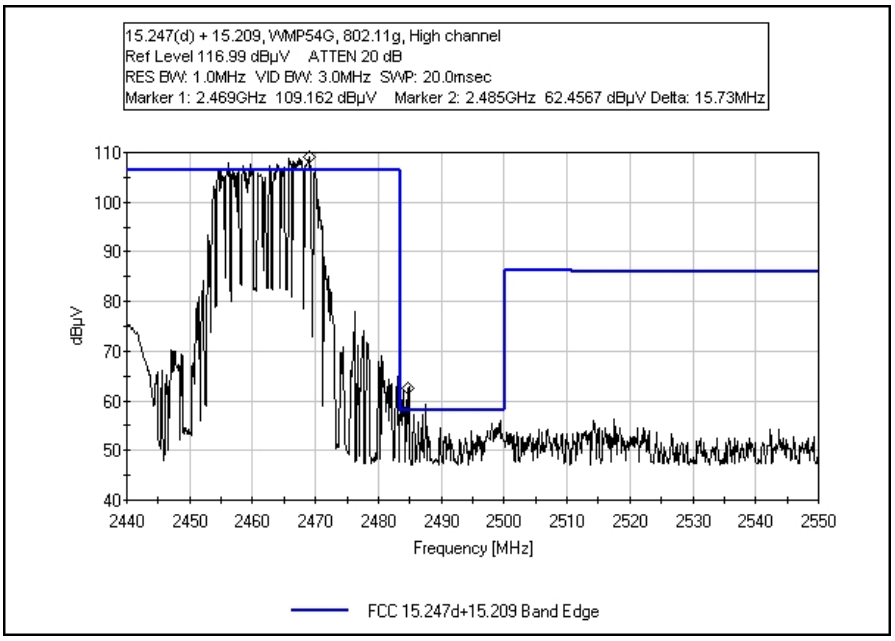
BAND EDGE 802.11g PEAK DATA - LOW CHANNEL



BAND EDGE 802.11g - LOW CHANNEL AVERAGED



BAND EDGE 802.11g PEAK DATA - HIGH CHANNEL



BAND EDGE 802.11g - HIGH CHANNEL AVERAGED

RSS-210 99% BANDWIDTH

Test Location: CKC Laboratories, Inc. •1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **Expresso Fitness**
Specification: **RSS-210**
Work Order #: **88187** Date: 11/5/2008
Test Type: **99% Bandwidth Measurements**
Equipment: **Recumbent Exercise Bike**
Manufacturer: Expresso Fitness Tested By: Art Rice
Model: S3r
S/N: Beta FCC

***Test Equipment*:**

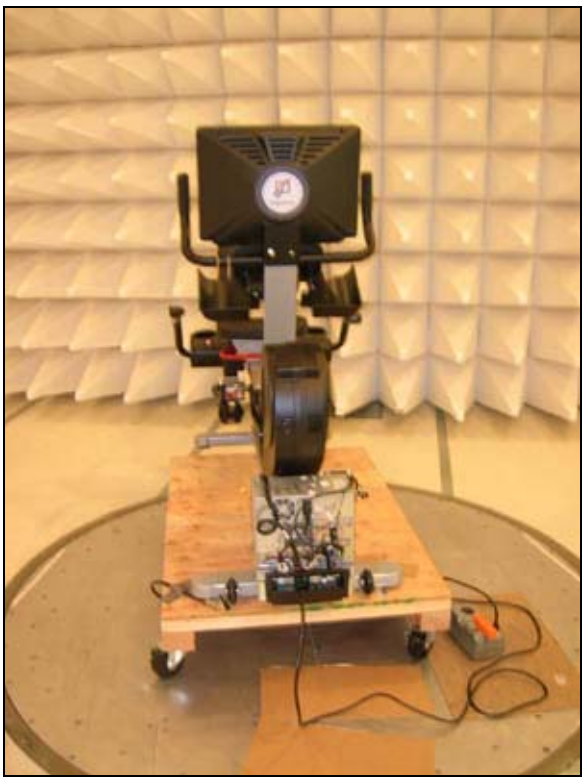
Function	S/N	Calibration Date	Cal Due Date	Asset #
SA - Agilent E4446A	US44300408	03/05/2007	03/05/2009	02668
Cable HF FSJ1P-50A-4	HOL-HF-025-06	05/06/2008	05/06/2010	P05138
Cable, HF	n/a	05/06/2008	05/06/2010	P04241
Preamp, HP83017A	3123A00283	05/16/2007	05/16/2009	00785
Antenna, Horn 1-18 GHz	1064	03/19/2007	03/19/2009	02061
HF Cable		03/27/2007	03/27/2009	01952

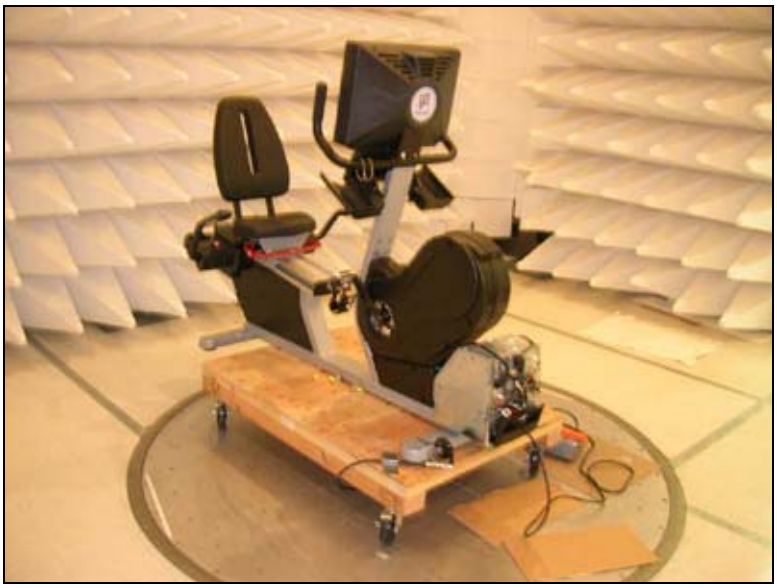
Test Conditions

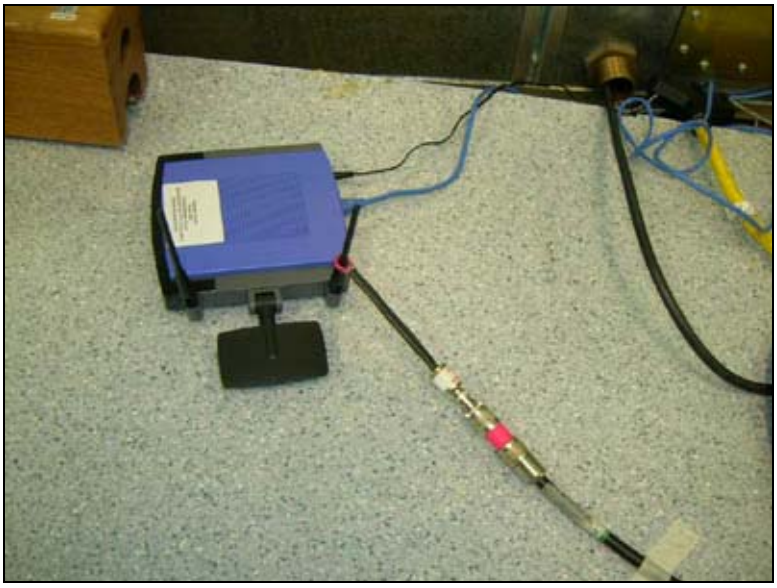
The EUT is an exercise bike with a computer, display, and wireless transceiver. It is connected via wireless connection to the Game PC through a wireless router placed outside the chamber. A loop probe is placed near the router. A coax cable is routed from the loop probe into the chamber under the ground plane, then up to the center of the turntable to a small antenna placed at the base of the bike. The EUT is running in previously determined worst case mode-wireless connection. The CPU in this bike's computer is an AMD 5200 running at 2.6 GHz. The wireless card is a Linksys WMP54G PCI adapter. Low ch 1=2412 MHz, Mid ch 6=2437 MHz, High ch 11=2462 MHz.

NOTE: 1) Bike is in rider mode. 2) 2 passes of reset wire through ferrite core F5-NFR-201010W-02 by E Tronic. 3)Antenna gain is specified as 5 dBi, but a cable is installed between the card and the antenna.

Test Setup Photos



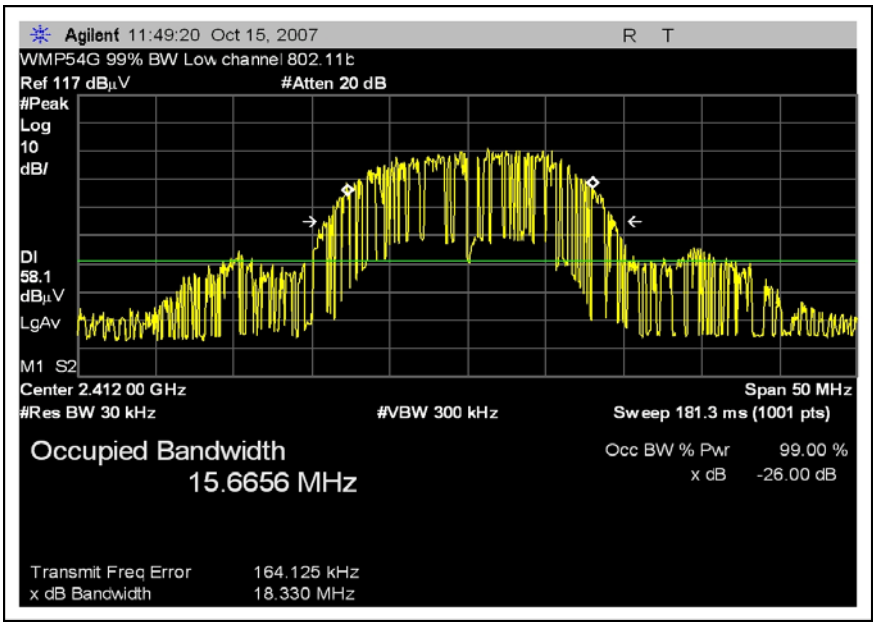




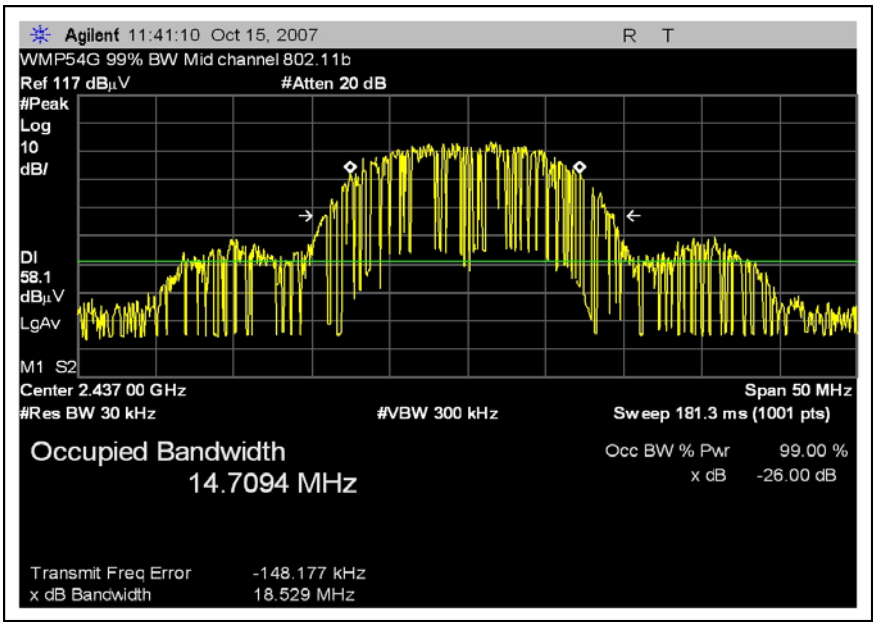
Wireless Router Detail

Test Plots

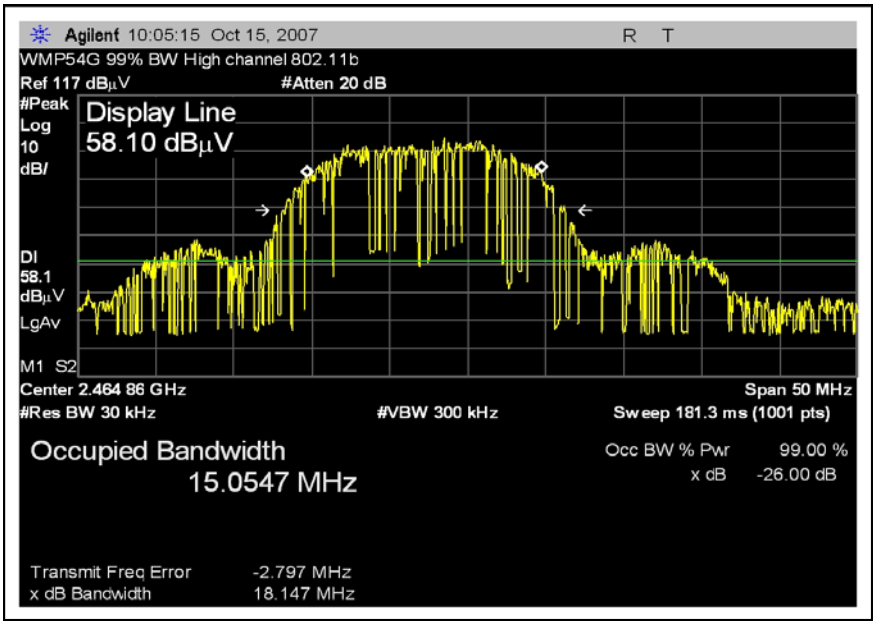
99% BANDWIDTH 802.11b - LOW CHANNEL



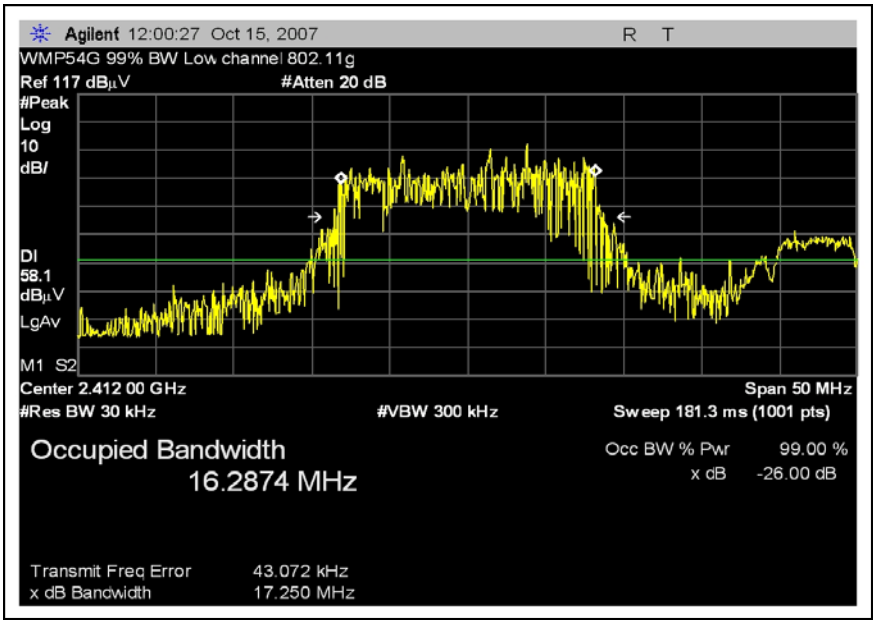
99% BANDWIDTH 802.11b - MID CHANNEL



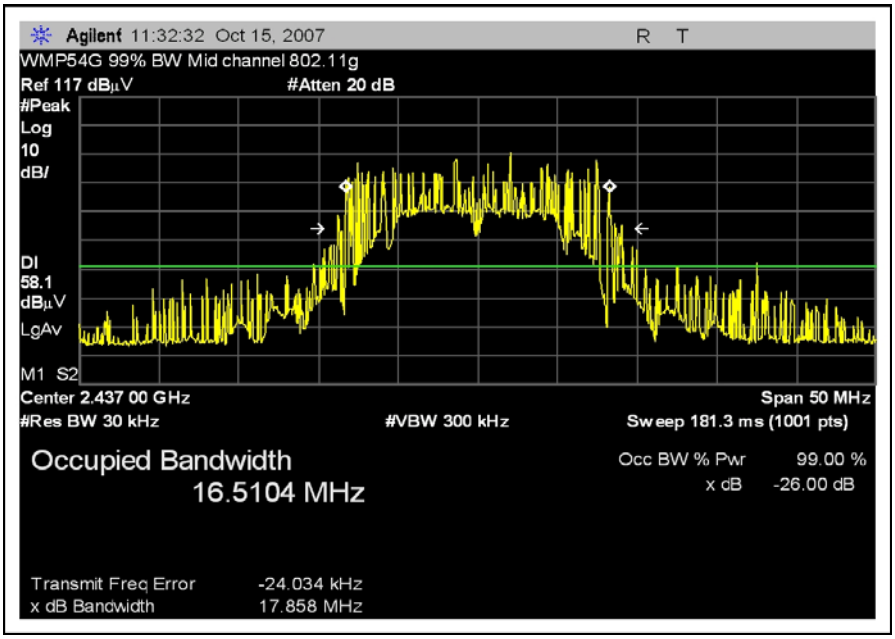
99% BANDWIDTH 802.11b - HIGH CHANNEL



99% BANDWIDTH 802.11g - LOW CHANNEL



99% BANDWIDTH 802.11g - MID CHANNEL



99% BANDWIDTH 802.11g - HIGH CHANNEL