TIMCO ENGINEERING INC.
849 NW State Road 45
Newberry, Florida 32669
http://www.timcoengr.com
888.472.2424 F 352.472.2030 email: sid@timcoengr.com

Test Report

Product Name: AUTOMATED FUEL MANAGEMENT SYSTEM

FCC ID: NR3AIM2MB

Applicant:

SYN-TECH SYSTEMS, INC.
100 FOUR POINTS WAY
TALLAHASSEE FLORIDA 32305
USA

Date Receipt: 9/27/2005

Date Tested: 10/24/2005

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APPLICANT: SYN-TECH SYSTEMS, INC.

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TEST REPORT CONTAINING:

EXHIBIT INCLUDED:

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EMC Equipment List

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/27/04	3/26/07
3-Meter OATS	TEI	N/A	N/A	Listed 1/13/03	1/12/06
Biconnical Antenna	Eaton	94455-1	1057	CAL 3/18/03	3/18/05
Biconnical Antenna	Eaton	94455-1	1096	CAL 8/17/04	8/17/06
Biconnical Antenna	Electro-Metrics	BIA-25	1171	CAL 4/29/05	4/29/07
Blue Tower Quasi-Peak Adapter	HP	85650A	2811A01279	CAL 4/13/05	4/13/07
Blue Tower RF Preselector	HP	85685A	2926A00983	CAL 8/3/05	8/3/07
Blue Tower Spectrum Analyzer	HP	8568B	2928A04729 2848A18049	CAL 4/13/05	4/13/07
LISN	Electro-Metrics	ANS-25/2	2604	CAL 8/27/04	8/27/06
LISN	Electro-Metrics	EM-7820	2682	CAL 4/28/05	4/28/07
Log-Periodic Antenna	Eaton	96005	1243	CAL 5/8/03	5/8/05

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TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC. The UUT was transmitting a test signal during the testing.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-2003 using a HEWLETT PACKARD spectrum analyzer with a pre-selector. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100KHz and the video bandwidth was 300KHz up to 1.0GHz and 1.0MHz with a video BW of 3.0MHz above 1.0GHz. The ambient temperature of the UUT was 74.3oF with a humidity of 69%.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the Preselector was accounted for in the Spectrum Analyzer Meter Reading.

Example:
Freq (MHz) METER READING + ACF = FS
33 20 dBuV + 10.36 dB = 30.36 dBuV/m @ 3m

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-2003 using a 50uH LISN. Both lines were observed. The bandwidth of the spectrum analyzer was 10kHz with an appropriate sweep speed. The ambient temperature of the UUT was 74.3oF with a humidity of 69%.

ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES: The UUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The UUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

The situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSIC63.4-2003 with the EUT 40 cm from the vertical ground wall.

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APPLICANT: SYN-TECH SYSTEMS, INC.

FCC ID: NR3AIM2MB

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NUMBER: 15.249, 15.209

REQUIREMENTS:

FIELD STRENGTH	FIELD STRENGTH	S15.209	
of Fundamental:	of Harmonics	30 - 88 MHz	40 dBuV/m @3M
902-928 MHZ		88 - 216 MHz	43.5
2.4-2.4835 GHz		216 - 960 MHz	46
94 dBuV/m @3m	54 dBuV/m @3m	ABOVE 960 MHz	54dBuV/m

EMISSIONS RADIATED OUTSIDE OF THE SPECIFIED FREQUENCY BANDS, EXCEPT FOR HARMONICS, SHALL BE ATTENUATED BY AT LEAST 50 dB BELOW THE LEVEL OF THE FUNDAMENTAL OR TO THE GENERAL RADIATED EMISSION LIMITS IN 15.209, WHICHEVER IS THE LESSER ATTENUATION.

TEST RESULTS: This unit DOES meet the FCC requirements.

TEST DATA:

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
902.7	902.66	67.3	V	1.95	22.33	91.58	2.42
902.7	902.66	68.4	H	1.95	23.3	93.65	0.35
902.7	1,805.32	15.6	H	2.74	30.03	48.37	5.63
902.7	1,805.32	16.5	V	2.74	30.03	49.27	4.73
902.7	2,707.98	12.9	H	3.4	32.85	49.15	4.85
902.7	2,707.98	13.2	V	3.4	32.85	49.45	4.55
914.7	914.66	66.3	V	1.97	22.54	90.81	3.19
914.7	914.66	67.1	H	1.97	23.39	92.46	1.54
914.7	1,829.32	14.9	H	2.76	30.18	47.84	6.16
914.7	1,829.32	16.5	V	2.76	30.18	49.44	4.56
914.7	2,743.98	12.8	V	3.42	32.89	49.11	4.89
914.7	2,743.98	13	H	3.42	32.89	49.31	4.69

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FCC ID: NR3AIM2MB

NAME OF TEST: RADIATION INTERFERENCE

TEST DATA CONTD.

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
927.7	927.66	66.1	V	1.99	22.78	90.87	3.13
927.7	927.66	66.9	H	1.99	24.11	93	1
927.7	1,855.32	13.9	H	2.78	30.33	47.01	6.99
927.7	1,855.32	15.5	V	2.78	30.33	48.61	5.39
927.7	2,782.98	12.1	H	3.45	32.94	48.49	5.51
927.7	2,782.98	13	V	3.45	32.94	49.39	4.61
914.7	36.03	24.1	V	0.43	10.34	34.87	5.13
914.7	48.01	21.6	H	0.49	11.2	33.29	6.71
914.7	48.02	27.2	V	0.49	10.7	38.39	1.61
914.7	60.03	14.8	H	0.53	11.09	26.42	13.58
914.7	71.03	27.9	V	0.57	7.36	35.83	4.17
914.7	72.04	22.5	H	0.57	7.89	30.96	9.04
914.7	96	20.2	V	0.64	10.88	31.72	11.78
914.7	96.05	19.8	H	0.64	9.84	30.28	13.22
914.7	144.05	20.6	V	0.69	13.04	34.33	9.17
914.7	144.06	24.2	H	0.69	13.42	38.31	5.19
914.7	160.83	18.5	V	0.74	15.05	34.29	9.21
914.7	161.24	25.3	H	0.74	14.12	40.16	3.34
914.7	211.4	27.7	H	0.92	11.97	40.59	2.91
914.7	222.9	30.6	H	0.95	11.8	43.35	2.65
914.7	244.8	32.7	H	0.99	12.29	45.98	0.02
914.7	245.8	28.4	V	0.99	12.16	41.55	4.45
914.7	312.14	18.9	H	1.11	16.06	36.07	9.93
914.7	384.18	16.5	V	1.18	15.09	32.77	13.23
914.7	480.16	15.6	H	1.28	18.01	34.89	11.11

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FCC ID: NR3AIM2MB

NAME OF TEST: RADIATION INTERFERENCE

TEST DATA CONTD.

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
914.7	492.08	14.6	V	1.29	17.74	33.63	12.37
914.7	499.24	17.6	V	1.3	17.88	36.78	9.22
914.7	530.82	19.2	H	1.39	18.7	39.29	6.71
914.7	532.78	21.2	V	1.4	18.2	40.8	5.2
914.7	563.46	19.8	H	1.49	19.17	40.46	5.54
914.7	563.6	24.4	V	1.49	18.57	44.46	1.54
914.7	798.86	14.7	V	1.9	21.08	37.68	8.32

TEST PROCEDURE: ANSI STANDARD C63.4-2003. The bandwidth of spectrum analyzer was 100 kHz with an appropriate sweep speed. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The spectrum was searched to at least the tenth (10) harmonic of the fundamental.

PERFORMED BY: NAM NGUYEN DATE: 10/24/05

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APPLICANT: SYN-TECH SYSTEMS, INC.

FCC ID: NR3AIM2MB

NAME OF TEST: Occupied Bandwidth

RULES PART NO.: 15.249

REQUIREMENTS: The field strength of any emissions appearing outside the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 50 dB below the level of the carrier or to the general limits of 15.249.

THE PLOT ON THE NEXT PAGE REPRESENTS THE EMISSIONS TAKEN FOR THIS DEVICE.

METHOD OF MEASUREMENT: A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was printed. The vertical scale is set to -10 dBm per division.

TEST RESULTS: The unit DOES meet the FCC requirements.

PERFORMED BY: NAM NGUYEN DATE: 10/24/05

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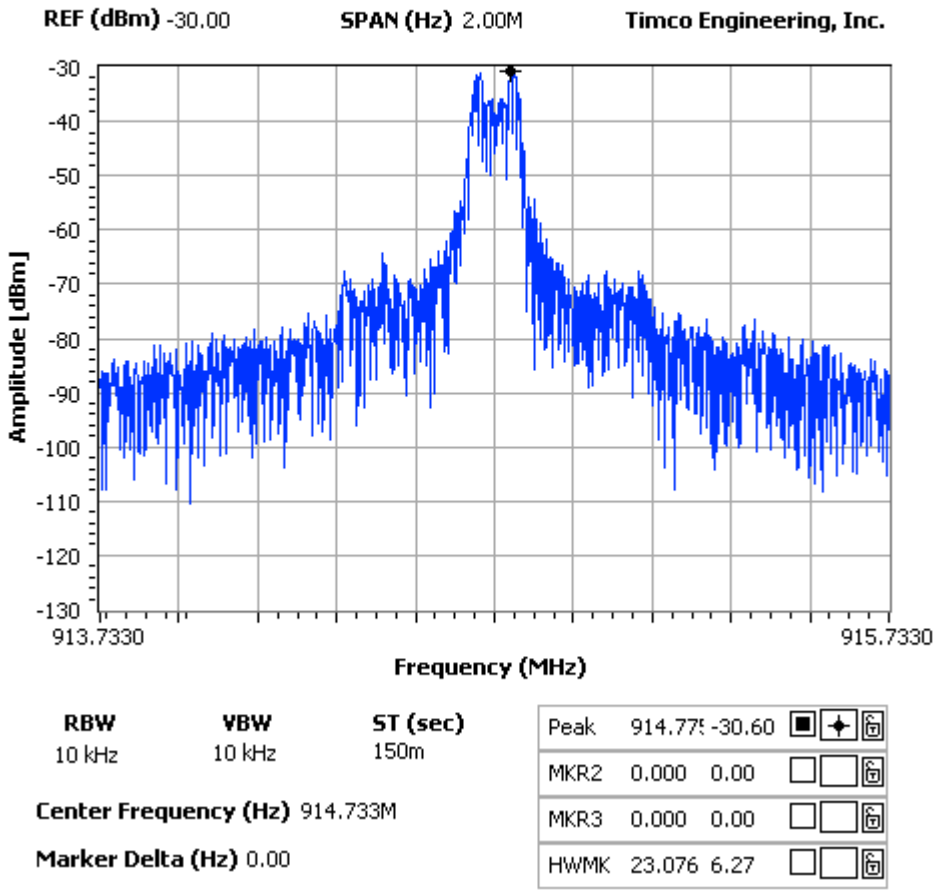
NOTES:

SYN-TECH SYSTEMS, INC.
OCCUPIED BANDWIDTH PLOT



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APPLICANT: SYN-TECH SYSTEMS, INC.

FCC ID: NR3AIM2MB

NAME OF TEST: POWER LINE CONDUCTED INTERFERENCE

RULES PART NO.: 15.107

REQUIREMENTS:

	QUASI-PEAK	**AVERAGE**
.15 – 0.5 MHz	66-56 dBuV	56-46 dBuV
0.5 – 5.0	56	46
5.0 – 30.	60	50

TEST PROCEDURE: ANSI STANDARD C63.4-2003. The spectrum was scanned from .15 to 30 MHz.

TEST DATA:

THE FOLLOWING PLOTS REPRESENT THE EMISSIONS READ FOR POWERLINE CONDUCTED FOR THIS DEVICE.

TEST RESULTS: Both lines were observed. The measurements indicate that the unit DOES appear to meet the FCC requirements for this class of equipment.

PERFORMED BY: NAM NGUYEN DATE: 10/24/05

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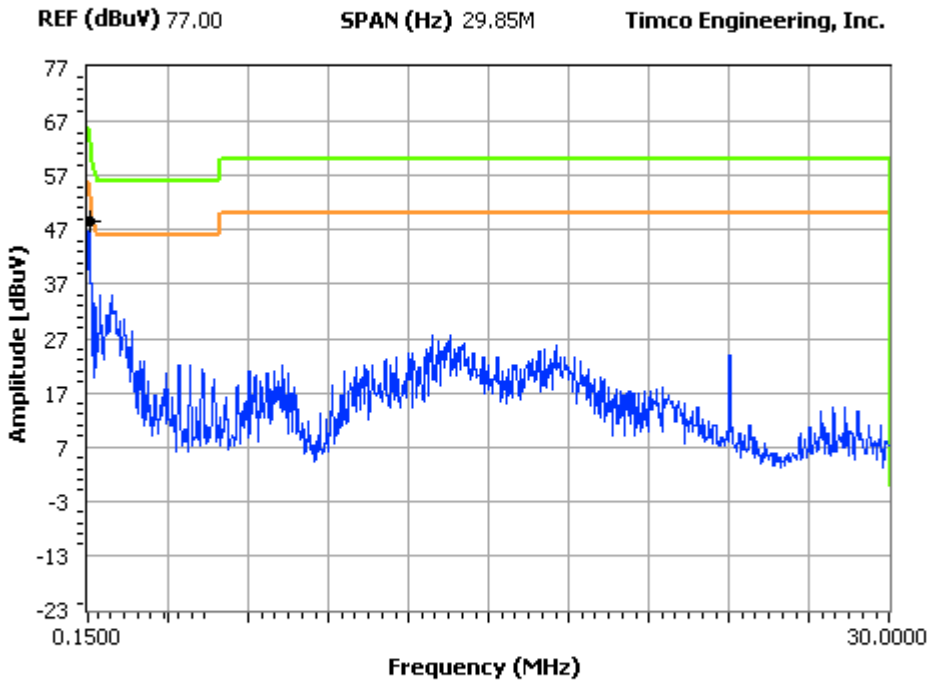
NOTES:

SYN-TECH SYSTEMS, INC. -
POWERLINE CONDUCTED PLOT - LINE 1

FCC 15.107 Mask Class B



RBW	VBW	ST (sec)
10 kHz	30 kHz	2

Center Frequency (Hz) 15.075M

Marker Delta (Hz) 0.00

Peak	0.210	48.70
MKR2	0.000	0.00
MKR3	0.000	0.00
HWMK	23.076	6.27

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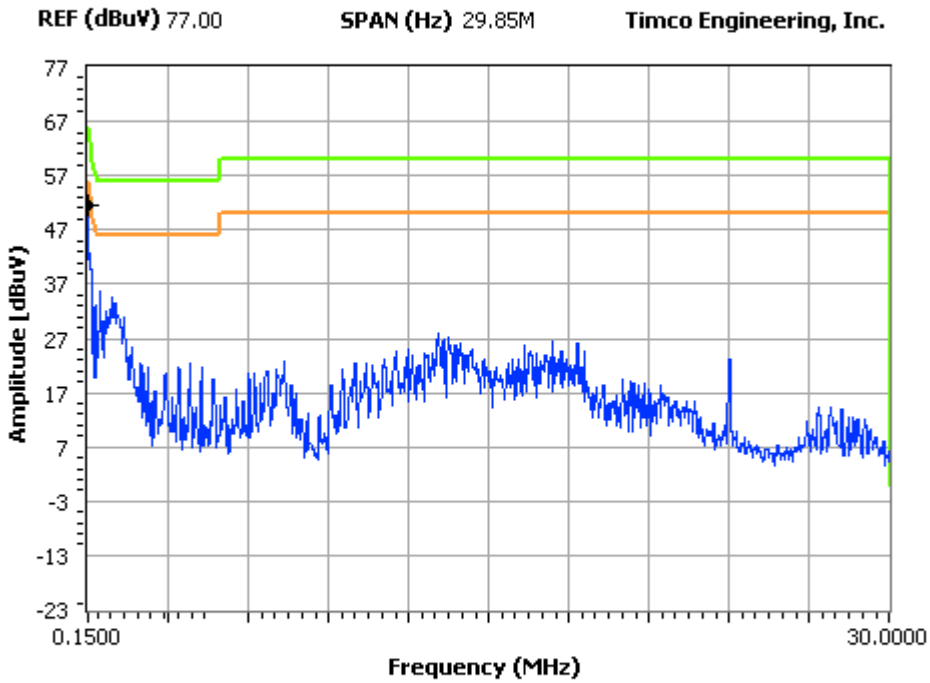
NOTES:

SYN-TECH SYSTEMS, INC. -
POWERLINE CONDUCTED PLOT - LINE 2

FCC 15.107 Mask Class B



RBW	VBW	ST (sec)
10 kHz	30 kHz	2

Center Frequency (Hz) 15.075M

Marker Delta (Hz) 0.00

Peak	0.150	51.70
MKR2	0.000	0.00
MKR3	0.000	0.00
HWMK	23.076	6.27