Flom Test Labs
EMI, EMC, RF Testing Experts Since 1963
toll-free: (866) 311-3268
fax: (480) 926-3598
http://www.flomlabs.com
info@flomlabs.com

Date: October 6, 2006

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Rafe Controls, LLC
Equipment: WirelesStat 6400
FCC ID: UI46400
FCC Rules: 15.249

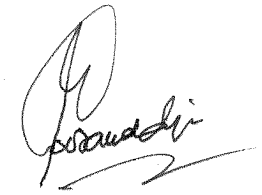
Gentlemen:

On behalf of the Applicant, enclosed please find Application Form 731, Engineering Test Report and all pertinent documentation, the whole for approval of the referenced equipment as shown.

Filing fees are attached.

We trust the same is in order. Should you need any further information, kindly contact the writer who is authorized to act as agent.

Sincerely yours,



Hoosamuddin S. Bandukwala, Lab Director

enclosure(s)
cc: Applicant
HSB/mb

List Of Exhibits
(FCC **Certification** (Transmitters) - Revised 9/28/98)

Applicant: Rafe Controls, LLC

FCC ID: UI46400

By Applicant:

1. Letter Of Authorization

2. Identification Drawings
   - __ Label
   - __ Location of Label
   - __ Compliance Statement
   - __ Location of Compliance Statement

3. Documentation: 2.1033(B)
   - (3) User Manual
   - (4) Operational Description
   - (5) Block Diagram
   - (5) Schematic Diagram
   - (7) Photographs
   - Block Diagram
   - Parts List
   - Active Devices

4. Draft Specification Information

By M.F.A. Inc.

A. Testimonial & Statement of Certification

B. Statement of Qualifications

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Transmitter Certification

of

FCC ID: UI46400
Model: WirelesStat 6400

to

Federal Communications Commission

Rule Part(s) 15.249

Date Of Report: October 6, 2006

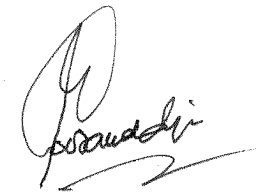
On the Behalf of the Applicant:

Rafe Controls, LLC

At the Request of: P.O.

Rafe Controls, LLC
21196 Limber
Mission Viejo, CA 92692

Attention of: Brad Comyns, Vice President
949-275-2779; fax: 949-830-1556
Email: bfc@cox.net; redtalon@pipeline.com



Supervised By: Hoosamuddin S. Bandukwala, Lab Director

The applicant has been cautioned as to the following:

15.21 Information to User.

The users manual or instruction manual for an intentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.27(a) Special Accessories.

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

Table Of Contents

Required information per ISO/IEC Guide 25-1990, paragraph 13.2:

a) **Test Report**

b) Laboratory: M. Flom Associates, Inc.
(FCC: 31040/SIT) 3356 N. San Marcos Place, Suite 107
(Canada: IC 2044) Chandler, AZ 85225

c) Report Number: d06a0006

d) Client: Rafe Controls, LLC
21196 Limber
Mission Viejo, CA 92692

e) Identification: WirelesStat 6400
FCC ID: UI46400

Description:

f) EUT Condition: Not required unless specified in individual tests.

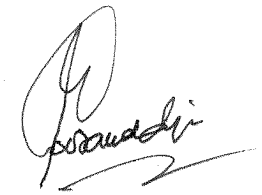
g) Report Date: October 6, 2006
EUT Received:

h, j, k): As indicated in individual tests.

i) Sampling method: No sampling procedure used.

l) Uncertainty: In accordance with MFA internal quality manual.

m) Supervised by:



Hoosamuddin S. Bandukwala, Lab Director

n) Results: The results presented in this report relate only to the item tested.

o) Reproduction: This report must not be reproduced, except in full, without written permission from this laboratory.

List Of General Information Required For Certification

In Accordance with FCC Rules and Regulations,
Volume II, Part 2 and to

15.249

Sub-Part 2.1033
(c)(1): **Name and Address of Applicant**:

Rafe Controls, LLC
21196 Limber
Mission Viejo, CA 92692

Manufacturer:

(c)(2): **FCC ID**: UI46400

Model Number: WirelesStat 6400

(c)(3): **Instruction Manual(s):**

Please See Attached Exhibits

(c)(4): **Type of Emission**:

(c)(5): **FREQUENCY RANGE, MHz**: 903 to 927

(c)(6): **Power Rating, W**:
____ Switchable ____ Variable _x_ N/A

(c)(7): **Maximum Power Rating, W**: 50 mv/m @ 3m

15.203: **Antenna Requirement**:
_x_ The antenna is permanently attached to the EUT
____ The antenna uses a unique coupling
____ The EUT must be professionally installed
____ The antenna requirement does not apply

Subpart 2.1033 (continued)

(c)(8): Voltages & Currents in All Elements in Final RF Stage, Including Final Transistor or Solid State Device:

Collector Current, A	=	per manual
Collector Voltage, Vdc	=	per manual
Supply Voltage, Vdc	=	3.0V

(c)(9): **Tune-Up Procedure**:

N/A

(c)(10): **Circuit Diagram/Circuit Description**:
Including description of circuitry & devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation and limiting power.

Please See Attached Exhibits

(c)(11): **Label Information**:

Please See Attached Exhibits

(c)(12): **Photographs**:

Please See Attached Exhibits

(c)(13): **Digital Modulation Description**:

___ Attached Exhibits
_x_ N/A

(c)(14): **Test and Measurement Data**:

Follows

Sub-part 2.1033(b): **Test and Measurement Data**

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II; Part 2, Sub-part J, Sections 2.1031, 2.1033, 2.1035, 2.1041, 2.1043, 2.1045, and the following individual Parts:

X	15.209	Radiated emission limits; general requirements
	15.211	Tunnel radio systems
	15.213	Cable locating equipment
	15.214	Cordless telephones
	15.217	Operation in the band 160-190 kHz
	15.219	Operation in the band 510-1705 kHz
	15.221	Operation in the band 525-1705 kHz (leaky coax)
	15.223	Operation in the band 1.705-10 MHz
	15.225	Operation in the band 13.553-13.567 MHz
	15.227	Operation in the band 26-27.28 MHz (remote control)
	15.229	Operation in the band 40.66-40.70 MHz
	15.231	Periodic operation in the band 40.66-40.70 MHz and above 70 MHz
	15.233	Operation within the bands 43.71-44.49, 46.60-46.98 MHz 48.75-49.51 MHz and 49.66-50.0 MHz
	15.235	Operation within the band 49.82-49.90 MHz
	15.237	Operation within the bands 72.0-73.0 MHz, 74.6-74.8 MHz and 75.2-76.0 MHz (auditory assistance)
	15.239	Operation in band 88-108 MHz
	15.241	Operation in the band 174-216 MHz (biomedical)
	15.243	Operation in the band 890-940 MHz (materials)
	15.245	Operation within the bands 902-928 MHz, 2435-2465 MHz, 5785-5815 MHz, 10500-10550 MHz, and 24075-24175 MHz (filed disturbance sensors)
	15.247	Operation within bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz (spread spectrum)
X	15.249	Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz
	15.251	Operation within the bands 2.9-3.26 GHz, 3.267-3.332 GHz, 3.339-3.3458 GHz, and 3.358-3.6 GHz (vehicle identification systems)
	15.321	Specific requirements for asynchronous devices operating in the 1910-1920 MHz and 2390-2400 MHz bands (Unlicensed PCS)
	15.323	Specific requirements for isochronous devices operating in the 1920-1930 MHz sub-band (Unlicensed PCS)

Standard Test Conditions
And
Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSIC63.4-2003, section 6.1.9, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst-case measurements.

THE AMERICAN
ASSOCIATION
FOR LABORATORY
ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

FLOM TEST LABS
Chandler, AZ

for technical competence in the field of

Electrical Testing

The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO/IEC 17025 - 1999 "General Requirements for the Competence of Testing and Calibration Laboratories" and any additional program requirements in the identified field of testing.

Presented this 14th day of June 2004.

President
For the Accreditation Council
Certificate Number 2152.01
Valid to November 30th, 2006
Revised September 25, 2006

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

A2LA

"A2LA has accredited M. Flom Associates, Inc. Chandler, AZ for technical competence in the field of Electrical Testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO/IEC 17025 – 1999 'General Requirements for the Competence of Testing and Calibration Laboratories' and any additional program requirements in the identified field of testing."

Certificate Number: **2152-01**

Name of Test: Field Strength of Spurious Radiation

Specification: 47 CFR 15.249

Guide: ANSI C.63.4 2003

Measurement Procedure

Standard applicable:

According to 15.249, all other emissions outside these bands shall not exceed the general radiated emission limits specified in 15.209(a). And according to 15.33 (a) (1), for an intentional radiator operating below 10 GHz, the frequency range of measurements: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

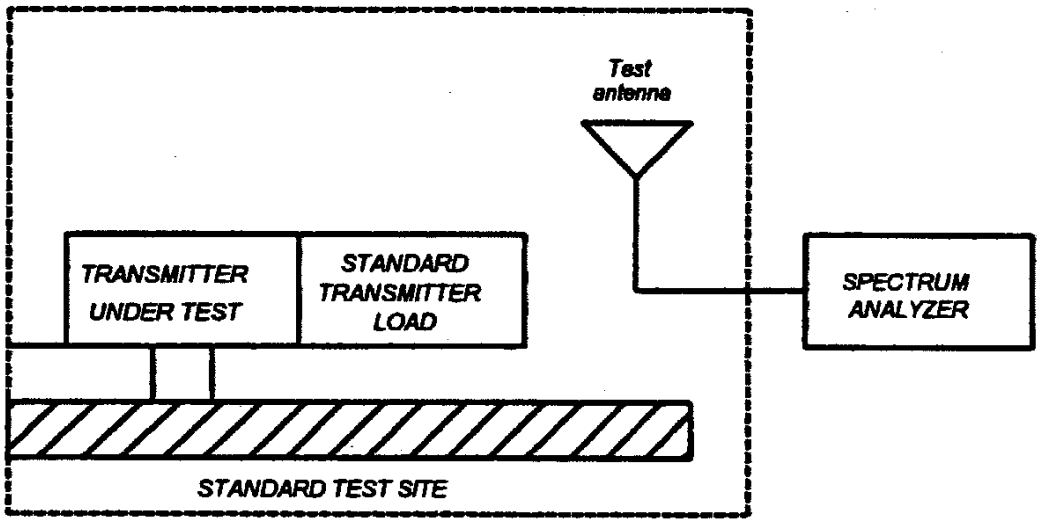
EUT Setup

1. The radiated emission test were performed in the 3 meter open-test site, using the setup in accordance with the ANSI C63.4:2003
2. The EUT was put in the front of the test table. The peripherals were placed on the side of the host system. The rear of the EUT and peripherals were placed flush with the rear of the tabletop.
3. The spacing between the peripherals was 10 centimeters.
4. External I/O cables were draped along the edge of the test table and bundled when necessary

Measurement Procedure

1. The EUT was place on a turn table which is 0.8m above ground plane
2. Adjust the spectrum analyzer for the following settings:
   a. Resolution Bandwidth 100 kHz (<1 GHZ), 1 MHZ (> 1GHz).
   b. Video Bandwidth = 3 times Resolution Bandwidth, or 30 kHz
   c. Sweep Speed ≤2000 Hz/second
   d. Detector Mode = Mean or Average Power
3. The turn table shall rotate 360 degrees to determine the position of the maximum emission level
4. The EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions
5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance
6. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical
7. Repeat above procedures until all frequencies measured were complete.

Name of Test: Field Strength of Spurious Radiation (Cont.)



Name of Test: Field Strength of Spurious Radiation (Cont.)

Test Equipment:

	Asset (as applicable)	Description	s/n	Cycle	Cal Due
Transducer					
	i00088	EMCO 3109-B 25MHz-300MHz	2336	12 mo.	Oct-07
	i00065	EMCO 3301-B Active Monopole	2635	12 mo.	Oct-06
X	i00089	Aprel 2001 200MHz-1GHz	001500	12 mo.	Oct-07
X	i00103	EMCO 3115 1GHz-18GHz	9208-3925	12 mo.	Sept-08
Amplifier					
	i00028	HP 8449A	2749A00121	12 mo.	Dec-06
Spectrum Analyzer					
	i00029	HP 8563E	3213A00104	12 mo.	Jan-07
X	i00033	HP 85462A	3625A00357	12 mo.	Oct-06
	i00048	HP 8566B	2511AD1467	6 mo.	Aug-07

Test Setup: Radiated Emissions

State:

Name of Test: Field Strength of Spurious Radiation
g0690079: 2006-Sep-29 Fri 12:24:00
State: 2:High Power

Frequency Tuned, MHz	Frequency Emission, MHz	Meter, dBuV	CF, dB	dBuV/m @ 3m	Limit (dBuV)
905.000000	1806.415500	12.4	32.93	45.33	54.0
905.000000	2709.621000	15.57	36.76	52.33	54.0
905.000000	3612.829000	6.73	40.46	47.19	54.0
905.000000	4516.038500	3.23	42.81	46.04	54.0
905.000000	5419.247500	4.57	46.09	50.66	54.0

Name of Test: Field Strength of Spurious Radiation
g0690080: 2006-Sep-29 Fri 14:25:00
State: 2:High Power

Frequency Tuned, MHz	Frequency Emission, MHz	Meter, dBuV	CF, dB	dBuV/m @ 3m	Limit (dBuV)
914.000000	1828.534500	10.07	33.03	43.1	54.0
914.000000	2742.802833	16.57	36.91	53.48	54.0
914.000000	3657.074500	7.73	40.66	48.39	54.0
914.000000	4571.339500	3.8	43.04	46.84	54.0
914.000000	5485.610333	5.13	46.29	51.49	54.0

Name of Test: Field Strength of Spurious Radiation
g0690081: 2006-Sep-29 Fri 15:59:00
State: 2:High Power

Frequency Tuned, MHz	Frequency Emission, MHz	Meter, dBuV	CF, dB	dBuV/m @ 3m	Limit (dBuV)
927.000000	1853.423167	10.13	33.14	43.27	54.0
927.000000	2780.135166	14.3	37.07	51.37	54.0
927.000000	3706.842999	5.47	40.88	46.35	54.0
927.000000	4633.561666	4.47	43.28	47.75	54.0
927.000000	5560.277000	0.8	46.43	47.23	54.0

Name of Test: Radiated Spurious Emissions (Non-Harmonic)

Specification: 47 CFR 15.249(c)

Guide: ANSI C 63.4 2003

Test Equipment: As per previous page

15.249(c):

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 emissions limits in § 15.209, whichever is the lesser attenuation.

General Radiated Emission Limits Per 15.209:

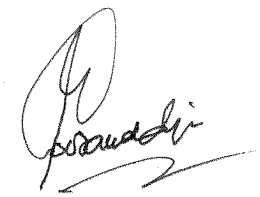
Frequency, MHz	Field Strength, µV/m @ 3m
30 – 88	100
88 – 216	150
216 – 960	200
Above 960	300

Measurement Results: Attached

Measurement Results: Radiated Emissions (non-harmonic)

Frequency of Carrier, MHz =
Spectrum Searched = 0 to 10 x F_C
All Other Emissions = = 20 dB Below Limit
Limit, μV /m @ 3m = 15.209

Emission MHz	Level dBuV	@m	C.F. dB	Calc. dBuV	@m	Limit dBuV	Margin dB
33.000	11.3	3	15.7	27.0	3	40.0	-13.0
66.499	12.2	3	11.4	23.6	3	40.0	-16.4
150.357	10.8	3	18.0	28.8	3	43.5	-14.7
549.999	10.4	3	24.7	35.1	3	46.0	-11.0
749.999	10.8	3	26.5	37.3	3	46.0	-8.7
905.099	11.1	3	28.8	39.8	3	46.0	-6.2



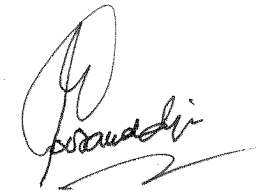
Supervised By: Hoosamuddin S. Bandukwala, Lab Director

Name of Test: RF Output Power

State:

Fundamental frequency	Field strength of fundamental (millivolts/ meter)	Field strength of harmonics (microvolts/ meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

Emission MHz	Level dBuV/m	@m	C.F. dB	Calc. dBuV/m	@m	Limit dBuV/m	Margin dB
903.215	60.9	3	28.7	89.6	3	94.0	-4.4
914.275	60.3	3	29.4	89.7	3	94.0	-4.3
926.837	60.7	3	29.9	90.6	3	94.0	-3.4



Supervised By: Hoosamuddin S. Bandukwala, Lab Director

Radiated Measurements
For Part 15 Transmitters with Integral Antennas

Radiated Measurements

Range Of Measurement	Specification	Resolution B/W	Video B/A
30 to 1000 MHz	CISPR	=100 kHz	=100 kHz
>1000 MHz	FCC, 15.37(b)	1 MHz	=1 MHz
(if averaging)	FCC, 15.37(b)	1 MHz	10 Hz

Measuring Equipment

a. **Antennas**:

EMCO 3109	20 - 300 MHz
APREL AALP2001	200 - 1000 MHz
APREL AAB20200	20 - 200 MHz
APREL AAH118	1 - 18 GHz

b. **Instruments**:

HP8566B	Spectrum Analyzer
HP85685A	Preselector, w/ preamp below 2 GHz
HP85650A	Quasi Peak Adapter
HP8449	Preamp, above 2 GHz

All test instrumentation is calibrated every January and every July. In addition, all test instrumentation is calibrated daily, or as required by the manufacturer. A Calibration Agreement is maintained with Hewlett Packard.

Part 15.21, Information to User

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly avoided by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.205 Restricted Bands of Operation

(a) Except as shown in paragraph (b) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.25
0.495-0.505	16.69475-16.69625	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2655-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-339.4	3600-4400	(2)
13.36-13.41			

Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. Above 38.6