

# Marstech Limited

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Authorized by:  
 Professional Engineers  
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Testing For FCC  
 Submissions/Verifications

Industry Canada  
 Test Facility

Qualified  
 Facility

| TEST REPORT   |  |   |                             |
|---|--|---|-----------------------------|
| REPORT DATE:  | 05 August 2004   |   |                             |
| REPORT NO:  | 24180D   |   |                             |
| CONTENTS:   | See Table of Contents  |   |                             |
| SUBMITTOR:  | IgeaCare Systems Inc.<br>5650 Tomken Road, Unit 9<br>Mississauga, Ontario<br>L4W 4P1                     |   |                             |
| SUBJECT:  | Model No:  | IgeaCom500 [with TAV014 RF Board]<br>[Also covers Model IgeaCom300] |                             |
|   | FCC ID:  | SEDIGEACOM  |                             |
| TEST SPECIFICATION:   | FCC 47 CFR Part 15 Subpart "B" for and Unintentional Radiator<br>NOTE: Tests Conducted Are "Type" Tests. |   |                             |
| DATE SAMPLE RECEIVED:   | 28 June 2004   | DATE TESTED:  | 01, 06 and 07 July 2004     |
| RESULTS:  | Equipment tested complies with referenced specification.   |   |                             |
| ALTERATIONS:  | None   |   |                             |
| Tested by:  | Edward Chang   | Approved by:  | Robert G. Marshall, P. Eng. |
|   |  | Date:   | Aug 12/04                   |
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**TECHNICAL REPORT - FCC 2.1033(b)**

**Applicant**

IgeaCare Systems Inc.  
5650 Tomken Road, Unit 9  
Mississauga, Ontario  
L4W 4P1

**FCC Identifier**

SEDIGEACOM

**Manufacturer**

Strategic Electronic Design  
6 Mars Road  
Toronto, Ontario  
M9V 2K1 CANADA

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| <b><u>Exhibit</u></b> | <b><u>Description</u></b>   | <b><u>FCC Ref.</u></b> | <b><u>Page</u></b>  |
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| A                     | Report of Measurements  | 2.1033(b)(6)           | Exhibit A<br>Exhibit A(1) to A(6)                                   |
| B                     | Installation and Operating Instructions<br>Furnished to the User            | 2.1033(b)(3)           | Exhibit B<br>Exhibit B(1)   |
| C                     | Description of Circuit Functions  | 2.1033(b)(4)           | Exhibit C<br>Exhibit C(1)   |
| D                     | Block Diagram<br>Schematic Diagram  | 2.1033(b)(5)           | Exhibit D<br>Exhibit D(1)<br>Exhibit D(2)-1 to -2                   |
| E                     | Photographs<br>Label<br>Equipment -      External Photos<br>Internal Photos | 2.1033(b)(7)           | Exhibit E<br>Exhibit E(1)<br>Exhibit E(2)-1<br>Exhibit E(2)-2 to -5 |

**EXHIBIT A**

(FCC Ref. 2.1033(b)(6))

"Report of Measurements"

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**TEST REPORT CONTAINING:**

|                      |                             |
|----------------------|-----------------------------|
| Exhibit A(1)         | Table of Contents           |
| Exhibit A(2)         | Product Description         |
| Exhibit A(3)-1 to -2 | Field Strength of Emissions |
| Exhibit A(4)-1 to -2 | Test Equipment List         |
| Exhibit A(5)         | 3M Test Site FCC Letter     |
| Exhibit A(6)         | Test Setup Photos           |

**PRODUCT DESCRIPTION**

The IgeaCare Systems Inc. Model IgeaCom500 is an analog speakerphone device with wireless receiver [TAV014 RF Board], to use for emergency calls, which operates at 433.92 MHz. This also covers Model IgeaCom300, which is identical to IgeaCom500 except it does not have TAV014 RF Board.

**15.109 RADIATED EMISSION LIMITS**

**Requirements:**

The field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

| <b>Frequency of Emission (MHz)</b> | <b>Field Strength (microvolts/meter)</b> |
|------------------------------------|--|
| 30-88                              | 100                                      |
| 88-216                             | 150                                      |
| 216-960                            | 200                                      |
| Above 960                          | 500                                      |

**Test Procedure:**

The test procedure used was ANSI STANDARD C63.4-1992 using an appropriate spectrum analyzer, as listed in the Test Equipment List. The bandwidth (RBW) of the spectrum analyzer was 100KHz/120KHz up to 1GHz with an appropriate sweep speed. The VBW above 1.0GHz was = 1.0MHz. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the EUT was 24°C with a humidity of 60%.

**Test Data:**

Refer to Exhibit A(3)-2

**RADIATED EMISSION RESULTS**  
[Model IgeaCom500 (with TAV014 RF Board)]

**RECEIVER**

| Emission Frequency MHz | Meter Reading @3m dB $\mu$ V | Antenna | Cable and ACF dB | Field Strength dB $\mu$ V/M | FCC Limit dB $\mu$ V/M | Margin dB | Detector & BW KHz |
|------------------------|------------------------------|---------|------------------|-----------------------------|------------------------|-----------|-------------------|
|                        |                              |         |                  |                             |                        |           |                   |
| 429.36                 | 14.38                        | LP V    | 21.8             | 36.18                       | 46                     | -9.82     | QP120             |
| 435.16                 | 11.49                        | LP V    | 21.8             | 33.29                       | 46                     | -12.71    | QP120             |
|                        |                              |         |                  |                             |                        |           |                   |
|                        |                              |         |                  |                             |                        |           |                   |
|                        |                              |         |                  |                             |                        |           |                   |
|                        |                              |         |                  |                             |                        |           |                   |
|                        |                              |         |                  |                             |                        |           |                   |
|                        |                              |         |                  |                             |                        |           |                   |

**TEST FACILITY AND EQUIPMENT LIST**

**FACILITIES:**

Radiated      ANSI C63.4 (FCC OET/55) open field 3 metre test range. This test range is protected from the cold and moisture by a non-conductive enclosure.

Conducted      2.5m Anechoic Chamber

**EQUIPMENT**

Anritsu 2601A Spectrum Analyzer  
Advantest R3261A Spectrum Analyzer  
Hewlett-Packard RF generator # 8640 B with an 002 doubler  
A.H. Systems biconical antenna; ..... 20 MHz to 330 MHz  
A.H. Systems log periodic antenna; ..... 300 MHz to 1.8 GHz  
Compliance Design P950 Preamp (16 dB) ... 25 MHz to 1.0 GHz

**NOTE:**

The Anritsu 2601A Spectrum Analyzer and the Advantest R3261A Spectrum Analyzer are calibrated annually, and that calibration is directly traceable to the National Research Council of Canada. (NRC) This equipment is only used by qualified technicians and only for the purpose of EMI measurements. The three metre test range has been carefully evaluated to the ANSI document C63.4 and will be remeasured for reflections and losses every three years.

**ADDITIONAL TEST EQUIPMENT LIST**

1. Spectrum Analyzer: HP 8591EM, S/N 3639A00995, (9KHz - 1.8GHz), Calibration Due June 2005
2. Spectrum Analyzer: ANRITSU 2601A, S/N MT64544, (10KHz - 2.2GHz), Calibrated Due June 2005
3. Spectrum Analyzer: IFR AN940, S/N 635001039, (9KHz - 26.5GHz), Calibration Due April 2005
4. Preamp: HP 8449B, S/N 3008A00378, (1 - 26.5GHz), Calibration Due August 2004
5. Horn Antenna: Q-PAR 6878/24, S/N 1721, (1.5-18GHz)
6. Horn Antenna: A. H. Systems SAS 572, S/N 164 (18 - 26.5GHz)
7. Line Impedance Stabilization Network.: Marstech, Calibration Due July 2004
8. Horn Antenna: Radar System (Flange 3/4" Square) MIL F 3922/68 (26.5 - 40GHz)
9. OML Mixer: M28HWD, S/N Ka31114-1 (26.5 - 40GHz), Calibration Due November 10, 2004
10. OML Diplexer: DPL.313A (Unit plugs into M28HWD)
11. Semflex Cable: Used with M28HWD and DPL 313A

## FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division  
7435 Oakland Mills Road  
Columbia, MD 21046

August 22, 2003

Registration Number: 90578

Electrohome Electronics Ltd.  
809 Wellington St. N.

Kitchener, Ontario, N2G 4J6

Canada

Attention: Tuat Huynh

Re: Measurement facility located at Roseville  
3 meter site  
Date of Renewal: August 22, 2003

Dear Sir or Madam:

Your request for renewal of the registration of the subject measurement facility has been received. The information submitted has been placed in your file and the registration has been renewed. The name of your organization will remain on the list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that the file must be updated for any changes made to the facility and the registration must be renewed at least every three years.

Measurement facilities that have indicated that they are available to the public to perform measurement services on a fee basis may be found on the FCC website [www.fcc.gov](http://www.fcc.gov) under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

Sincerely,  
  
Ms. Phyllis Parrish  
Information Technician

FCC ID: SEDIGEACOM  
Marstech Report No. 24180D  
EXHIBIT A(5)

TOTAL P. 02