RETLIF TESTING LABORATORIES
TEST REPORT R-4128N9
June 10, 2003

# FCC PART 15.209 COMPLIANCE TEST REPORT
ON

# SECURE CARE 430kHz ADULT NON-ID TRANSMITTER

| APPLICANT<br>Secure Care Products, Inc.<br>39 Chenell Drive<br>Concord, NH 03303 | MANUFACTURER<br><br>SAME |
|---|---|

TEST SPECIFICATION: FCC Rules and Regulations Part 15, Subpart C, Para. 15.209

TEST PROCEDURE: ANSI C63.4:2001

TEST SAMPLE DESCRIPTION

BRANDNAME: Secure Care MODEL: Part #A20080903

TYPE: Adult Non-Id Transmitter

POWER REQUIREMENTS: 3VDC Internal Lithium Battery (tested with new battery installed)

FREQUENCY OF OPERATION: 430kHz

MODULATION: AM

APPLICABLE RULE SECTION: Part 15, Subpart C, Section 15.209

TESTS PERFORMED

Field Strength of Fundamental Emission 430kHz

Field Strength of Spurious Emissions 9kHz-1GHz

TEST SAMPLE OPERATION

The Secure Care 430kHz Transmitter continuously transmits at 430kHz.

TEST SAMPLE / TEST PROGRAM

15.203 ANTENNA REQUIREMENTS

The device uses a permanently attached internal antenna. The antenna is totally enclosed inside the case.

15.205 RESTRICTED BANDS OF OPERATION

No emissions from the EUT were observed in any of the restricted bands.

15.207 CONDUCTED EMISSIONS

Not applicable (battery operated device).

15.209 RADIATED EMISSIONS

Fundamental Frequency

430kHz

Out of Band, Spurious, Harmonics

9kHz - 1000MHz

No spurious emissions were observed within 20dB of the specified limit at a test distance of 3 meters throughout the required frequency range. The measurements taken at 430kHz were performed at 3 meters and extrapolated to the 300 meter limit using the 40dB/decade extrapolation factor specified for frequencies less than 30MHz.

Determination of Field Strength Limit:

**Fundamental Frequency: 430kHz**

Where F = the frequency in kHz, the formula for calculating the maximum permitted fundamental field strength at 300 meters is:

2400/(F)

2400/(430) = 5.58uV/M = 14.9dBuV/M

Unwanted emissions cannot exceed the level of the fundamental emissions.

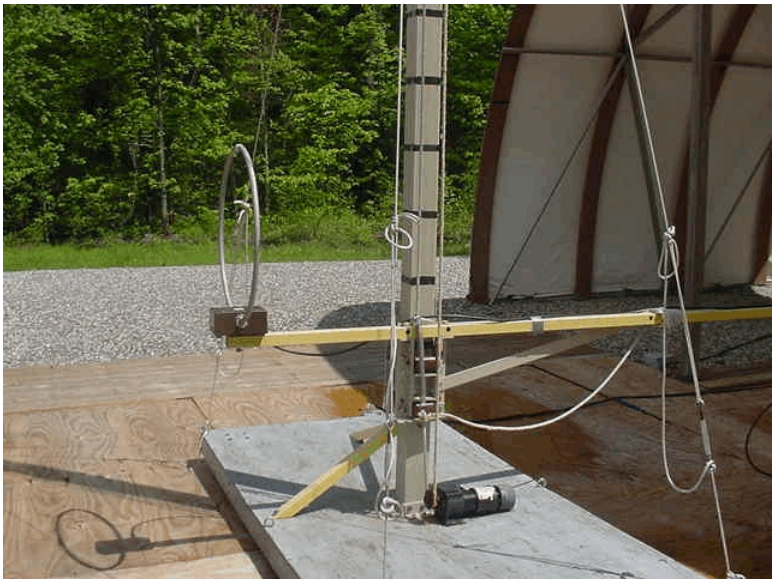
Duty Cycle:

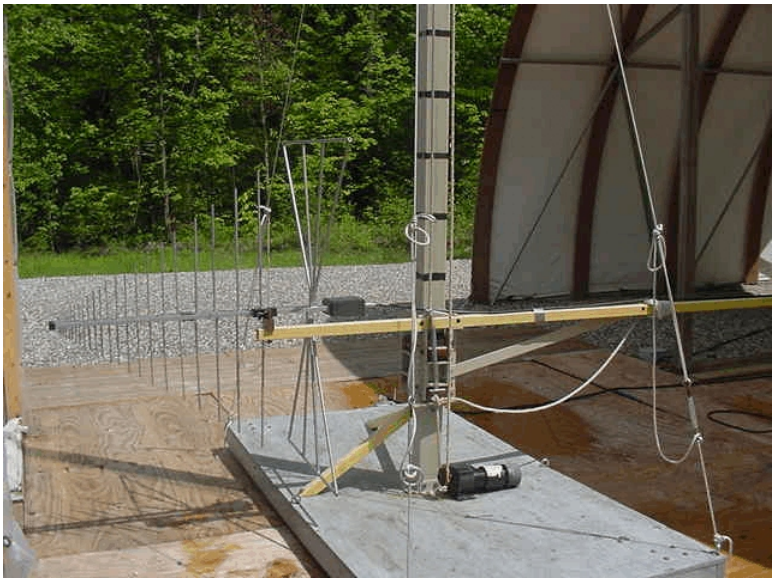
No Duty Cycle Factor was used. The test sample operates at 100% duty cycle and the maximized peak signal of the 430kHz fundamental frequency met the average limit specified in 15.209.

TEST RESULTS

The maximized peak field strength at 430kHz was below the average limit specified in 15.209 and therefore also met the peak emission requirement specified in 15.35. The test sample was tested in 3 orientations (x, y & z axis). Test data reported is for the worst case orientation. No harmonic or spurious emissions were observed.

Radiated Emissions Setup Photographs





Radiated Emissions Setup Photographs

# RETLIF TESTING LABORATORIES

## TABULAR DATA SHEET

| | | | |
|---|---|---|---|
| **Test Method:** | Field Strength of Fundamental | | |
| **Customer:** | Secure Care Products, Inc. | **Job No:** | R-4128N9 |
| **Test Sample:** | 430 kHz Transmitter | | |
| **Model No:** | Adult Non ID Transmitter | **Serial No:** | n/a |
| **Test Specification:** | FCC Part 15, Subpart C<br>Paragraph: 15.209 | | |
| **Operating Mode:** | Continuously Transmitting | | |
| **Technician:** | T. Firkowski | **Date:** | 5/27/2003 |
| **Notes:** | Detector Functions: Peak/Average @ 3m | | |

| Transmit Frequency | Test Frequency | Antenna/EUT Position | Uncorrected Reading | Correction Factor | Corrected Reading | Converted to 300m | | | Converted Reading | Average Limit at 300 Meters |
|---|---|---|---|---|---|---|---|---|---|---|
| kHz | kHz | Polarization/ Axis | dBuV | dB | dBuV/m | dBuV/m | | | uV/m | uV/m |
| 430.00 | 430.000 | V/X | 47.20 | 9.10 | 56.30 | -23.70 | | | 0.07 | 5.58 |

# RETLIF TESTING LABORATORIES

## TABULAR DATA SHEET

| | | | |
|---|---|---|---|
| **Test Method:** | Out of Band Emissions 9kHz to 1 GHz | | |
| **Customer:** | Secure Care Products, Inc. | **Job No:** | R-4128N9 |
| **Test Sample:** | 430 kHz Transmitter | | |
| **Model No:** | Adult Non ID Transmitter | **Serial No:** | n/a |
| **Test Specification:** | FCC Part 15, Subpart C<br>Paragraph: 15.209 | | |
| **Operating Mode:** | Continuously Transmitting | | |
| **Technician:** | T. Firkowski | **Date:** | 5/27/2003 |
| **Notes:** | Detector Function: Peak @ 3m | | |

| Transmit Frequency | Test Frequency | Antenna/EUT Position | Meter Reading | Correction Factor | Corrected Reading | Converted to 300m | | | Converted Reading | Limit at 300 Meters |
|---|---|---|---|---|---|---|---|---|---|---|
| kHz | MHz | Polarization/ Axis | dBuV | dB | dBuV/m | dBuV/m | | | uV/m | uV/m |
| 430.00 | 0.009 | - | - | - | - | - | | | - | 2400/F(kHz) |
| \| | \| | - | - | - | - | - | | | - | \| |
| 430.00 | 0.490 | - | - | - | - | - | | | - | 2400/F(kHz) |
| Transmit Frequency | Test Frequency | Antenna/EUT Position | Meter Reading | Correction Factor | Corrected Reading | Converted to 30m | | | Converted Reading | Limit at 30 Meters |
| kHz | MHz | Polarization/ Axis | dBuV | dB | dBuV/m | dBuV/m | | | uV/m | uV/m |
| 430.00 | 0.490 | - | - | - | - | - | | | - | 24000/F(kHz) |
| \| | \| | - | - | - | - | - | | | - | \| |
| \| | 1.705 | - | - | - | - | - | | | - | 24000/F(kHz) |
| \| | 1.705 | - | - | - | - | - | | | - | 30.00 |
| \| | \| | - | - | - | - | - | | | - | \| |
| \| | 27.120 | - | - | - | - | - | | | - | \| |
| \| | \| | - | - | - | - | - | | | - | \| |
| 430.00 | 30.000 | - | - | - | - | - | | | - | 30.00 |
| Transmit Frequency | Test Frequency | Antenna/EUT Position | Meter Reading | Correction Factor | Corrected Reading | | | | Converted Reading | Limit at 3 Meters |
| kHz | MHz | Polarization/ Axis | dBuV | dB | dBuV/m | | | | uV/m | uV/m |
| 430.00 | 30.0 | - | - | - | - | | | | - | 100.00 |
| \| | \| | - | - | - | - | | | | - | \| |
| \| | \| | - | - | - | - | | | | - | \| |
| \| | \| | - | - | - | - | | | | - | \| |
| \| | 88.0 | - | - | - | - | | | | - | 100.00 |
| \| | 88.0 | - | - | - | - | | | | - | 150.00 |
| \| | \| | - | - | - | - | | | | - | \| |
| \| | 216.0 | - | - | - | - | | | | - | 150.00 |
| \| | 216.0 | - | - | - | - | | | | - | 200.00 |
| \| | \| | - | - | - | - | | | | - | \| |
| \| | 960.0 | - | - | - | - | | | | - | 200.00 |
| \| | 960.0 | - | - | - | - | | | | - | 500.00 |
| \| | \| | - | - | - | - | | | | - | \| |
| 430.00 | 1000.0 | - | - | - | - | | | | - | 500.00 |

No EUT emissions were observed at the stated test distance throughout the given frequency spectrum.

# TEST EQUIPMENT LIST

| EN | Type | Manufacturer | Description | Model No. | Cal Date | Due Date |
|---|---|---|---|---|---|---|
| 3207 | Loop Antenna, Active | EMCO | 10 KHz - 30 MHz | 6502 | 5/14/03 | 5/14/04 |
| 4029 | Test Site Attenuation | Retlif | 3 / 10 Meters | RNH | 8/8/02 | 8/8/03 |
| 4202 | Biconilog | EMCO | 26 MHz - 2 GHz | 3142 | 7/25/02 | 7/25/03 |
| 713 | EMI Test Receiver | Rohde & Schwarz | 20 Hz - 26.5 GHz | ESI26 | 1/29/03 | 1/29/04 |