RETLIF TESTING LABORATORIES | Put Us To The Test℠
101 New Boston Road
Goffstown, NH 03045 USA
Tel: (603) 497-4600 • Fax: (603) 497-5281 • www.retlif.com

FCC Part 15, Subpart C
Test Report

On

430 kHz Transmitter
FCC ID: KNK430

Customer Name:	Secure Care Products, LLC
Customer P.O:	70039678
Date of Report:	March 24, 2022
Test Report No:	R-6685H-1
Test Start Date:	February 15, 2022
Test Finish Date:	February 16, 2022
Test Technician:	M. Seamans
Approved By:	T. Hannemann
Report Prepared By:	P. Harris

ilac-MRA ANAB ANSI National Accreditation Board ACCREDITED ISO/IEC 17025 TESTING LABORATORY

Our letters, procedures and reports are for the exclusive use of the customer to whom they are addressed and their communication or the use of the name of Retlif Testing Laboratories must receive our prior written approval. Our letters, procedures and reports apply only to the sample tested and are not necessarily indicative of the qualities of apparently identical or similar products. The letters, procedures, reports and the name of Retlif Testing Laboratories or insignia are not to be used under any circumstances in advertising to the public. This report shall not be reproduced, except in full, without prior written approval of Retlif Testing Laboratories.

Certification and Signatures

We certify that this report is a true representation of the results obtained from the tests of the equipment stated. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.

Scott Wentworth
Branch Manager

Todd Hannemann
EMC Test Engineer
iNARTE Certified Technician ATL-0255-T

Non-Warranty Provision
The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

Non-Endorsement
This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This test report may not be used by the client to claim product endorsement by ANSI National Accreditation Board (ANAB).

Technical Information

Report Number:	R-6685H-1
Applicant:	Secure Care Products, LLC
	39 Chenell Drive
	Concord, NH 03301
Manufacturer:	Secure Care Products, LLC
Manufacturer Address:	39 Chenell Drive
	Concord, NH 03301
Test Sample:	430 kHz Transmitter
Model Numbers:	A20080915 and A20080916
Brand Name:	Secure Care Products, LLC
Power Requirements:	3 VDC
Frequency of Operation:	430 kHz
Antenna Type:	Ferrite Loop 430kHz Tuned Tank Antenna
Equipment Use:	Portable transmitter

Model A20080915 and A20080916 are electrically identical units. Model A20080915 is the non-ID transmitter and A20080916 is for the ID transmitter.

These two transmitters differ in the information they transmit. This is entirely under firmware control. The non-ID version transmits a single 1 mS pulse every 65.5 mS. This simple transmit scheme signals the door management hardware to lock the door to prevent egress of the monitored patient. The ID version of this transmitter does the same job as the non-ID product. Additionally, it provides the identity of the individual egressing or attempting to egress the monitored door location. This transmit scheme is two framing bits of 854 and 732 uS. This is followed by 14 bits of data, 244 uS each

The testing included in this report covers the worst case of testing of both models.

Test Specification:
FCC Rules and Regulations Part 15, Subpart C, Section 15.209

Test Procedure:
ANSI C63.10-2013

Test Facility:
Retlif Testing Laboratories
101 New Boston Road
Goffstown, NH 03045
FCC Designation Number: US5327

EUT Description:
The EUT provides awareness of personal security systems.

Tests Performed

The test methods performed on the EUT are shown below:

FCC Part 15, Subpart C	Test Method
15.209(a)	Field Strength of Fundamental
15.209 (a)	Field Strength of Spurious

General Test Requirements

1. The measurement procedures of ANSI C63.10-2013 were utilized as specified in FCC Part 15, Subpart C, Section 15.31(a)(3).
2. All measurements were performed at a 3 meter test distance.
3. The EUT was rotated throughout 360 degrees for all radiated emissions measurements as specified in FCC Section 15.31(f)(5).
4. All readily accessible EUT controls were adjusted in such a manner as to maximize the level of emissions in accordance with FCC Section 15.31(g).
5. Appropriate accessories were attached to all EUT ports during the performance of radiated emissions measurements as required by FCC Section 15.31(i).

Requirements and Test Results

Requirement:

FCC Section 15.209 (a)

Field Strength of Fundamental

FCC Section 15.209(a) – The field strength of any emission within the band 0.009 MHz – 0.490 MHz shall not exceed 2400/F(kHz) at 300 meters.

At 430 KHz, 2400/430 = 5.581 uV/m at 300 Meters

Field Strength Measurement & Calculation:

The following spectrum analyzer settings were used:

RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f ≤ 1 GHz

VBW ≥ RBW

Detector Function = Peak or Average as applicable

Trace = Max Hold

Sweep = Auto

The maximized field strength of the emission was calculated as follows:

$F_C = M_R + C_F$

Where:
F_C = Corrected Field Strength Reading in dBµV/m
M_R = Uncorrected Meter Reading in dBµV
C_F = Correction Factor in dB (Pre-Amp + Antenna Factor + Cable Loss + Distance Factor)

For frequencies below 30 MHz a distance factor of -40dB/decade was utilized

Requirements and Test Results (con't)

15.209 (a) Field Strength of Fundamental

Radiated Emissions Measurement Procedure:

The field strength of the fundamental emission was measured with a spectrum analyzer or EMI Receiver. The EUT was placed on an 80cm high wooden test stand located 3 meters from the test antenna on a FCC listed open area test site. Emissions from the EUT were maximized by re-orientating the test sample, rotating the test sample 360 degrees, changing the orientation of the receive antenna and raising and lowering the test antenna from 1 – 4 meters. The maximized field strength of each observed emission was measured, recorded and compared to the specified limits of 15.209(a) as appropriate.

- **Results**: The maximized measured field strength of the fundamental emission was below the specified test limit of 15.209(a). See test data.

Requirement:

15.209 Radiated Emission Limits; General Requirements

Fundamental Frequency (MHz)	Field Strength of Fundamental microvolts/meter	Measurement Distance
0.009 to 0.490	2400/F(kHz)	300
0.490 to 1.705	24000/F(kHz)	30
1.705 to 30.0	30	30
30.0 to 88.0	100	3
88.0 to 216.0	150	3
216.0 to 960.0	200	3
Above 960.0	500	3

Equipment Lists

FCC Section 15.209(a) – Field Strength of Fundamental

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
012	ETS / EMCO	ANTENNA, ACTIVE LOOP	10 kHz - 30 MHz	6502	10/19/2021	10/31/2022
4029B	RETLIF	OPEN AREA TEST SITE, ATTENUATION	3 / 10 Meters	RNH	9/28/2021	9/30/2023
5211	COM-POWER	GENERATOR, COMB	1 MHz - 1 GHz	CGO-501	5/21/2021	5/31/2022
5242	TELEDYNE MICROWAVE	CABLE, COAXIAL	10 kHz - 6 GHz 106'	PR90-195-1275,	9/29/2021	9/30/2022
5231	AGILENT / HP	ANALYZER, SPECTRUM	3 Hz - 26.5 GHz	E4440A	7/6/2021	7/31/2022

FCC Section 15.209(a) – Field Strength of Spurious

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
012	ETS / EMCO	ANTENNA, ACTIVE LOOP	10 kHz - 30 MHz	6502	10/19/2021	10/31/2022
3427B	ETS / EMCO	ANTENNA, BICONICAL	20 - 200 MHz	3104	10/27/2020	4/30/2022
4029B	RETLIF	OPEN AREA TEST SITE, ATTENUATION	3 / 10 Meters	RNH	9/28/2021	9/30/2023
443	ELECTRO-METRICS	ANTENNA, LOG PERIODIC	200 MHz - 1000 MHz	LPA-25	7/21/2021	1/31/2023
5211	COM-POWER	GENERATOR, COMB	1 MHz - 1 GHz	CGO-501	5/21/2021	5/31/2022
5231	AGILENT / HP	ANALYZER, SPECTRUM	3 Hz - 26.5 GHz	E4440A	7/6/2021	7/31/2022
5242	TELEDYNE MICROWAVE	CABLE, COAXIAL	10 kHz - 6 GHz 106'	PR90-195-1275,	9/29/2021	9/30/2022

Test Photographs
Field Strength of Fundamental
FCC Part 15, Subpart C, Section 15.209(a)

Test Photographs
Field Strength of Fundamental

Test Configuration

FCC Section 15.209(a) – Field Strength of Fundamental
Test Data

EMISSIONS TEST DATA SHEET	
Method:	**Field Strength of Emissions - Fundamental Field Strength**
Test Specification:	FCC Part 15, Subpart C Paragraph: 15.209(a)
Job Number:	R-6685H-1
Customer:	Secure Care Products, LLC
Test Sample:	430kHz Transmitter
Model Number:	A20080916
Serial Number:	N/A
Operating Mode:	Transmitting modulated signal at 430kHz, ID Duty cycle
Technician:	M. Seamans
Date(s):	February 16th, 2022
Notes:	Test Distance: 3 meters Detector: Peak and Average Resolution BW: 10 kHz

TEST PARAMETERS								
Frequency		**Measured Average Level**	**Correction Factor**	**Corrected Average Reading**		**Average Reading**	**Converted Average Reading**	**Average Limit at 3m**
kHz		**dBuV**	**dB**	**dBuV/m**		**dBuV/m**	**uV/m**	**uV/m**
430.00		43.25	11.63	54.50		54.50	530.88	55813.95

TEST PARAMETERS								
Frequency		**Measured Peak Level**	**Correction Factor**	**Corrected Peak Reading**		**Peak Reading**	**Converted Peak Reading**	**Peak Limit at 3m**
kHz		**dBuV**	**dB**	**dBuV/m**		**dBuV/m**	**uV/m**	**uV/m**
430.00		52.11	11.63	63.74		63.74	1538.15	558139.50

Test Photographs
Field Strength of Spurious
FCC Part 15, Subpart C, Section 15.209(a)

Test Photographs
Field Strength of Spurious

Test Setup, 9 kHz to 30 MHz

Test Photographs
Field Strength of Spurious

Test Setup, 30 MHz to 200 MHz, Horizontal Antenna Polarization

Test Setup, 30 MHz to 200 MHz, Vertical Antenna Polarization

Test Photographs
Field Strength of Spurious

Test Setup, 200 MHz to 1 GHz, Horizontal Antenna Polarization

Test Setup, 200 MHz to 1 GHz, Vertical Antenna Polarization

FCC Part 15, Subpart C, Section 15.209(a) –
Field Strength of Spurious
Test Data

EMISSIONS TEST DATA SHEET	
Method:	**Field Strength of Spurious Emissions**
Test Specification:	FCC Part 15, Subpart C Paragraph: 15.209(a)
Job Number:	R-6685H-1
Customer:	Secure Care Products, LLC
Test Sample:	430kHz Transmitter
Model Number:	A20080916
Serial Number:	N/A
Operating Mode:	Transmitting modulated signal at 430kHz, ID Duty cycle
Technician:	M. Seamans
Date(s):	February 16th, 2022
Notes:	Test Distance: 3 meters Detector: Peak Limits: Quasi-Peak (Average for the frequency bands 9-90kHz and 110-490kHz)

TEST PARAMETERS

Test Frequency	Antenna Position		Peak Reading	Correction Factor	Corrected Reading		Converted Peak Reading	Limit at 3M
MHz	(H/V)		dBuV	dB	dBuV/m		uV/m	uV/m
0.009	-	-	-	-	-	-	-	55813.95
|	-	-	-	-	-	-	-	|
0.860*	-	-	38.61	11.66	50.27	-	326.21	|
|	-	-	-	-	-	-	-	|
0.490	-	-	-	-	-	-	-	55813.95
0.490	-	-	-	-	-	-	-	5581.39
|	-	-	-	-	-	-	-	|
1.290*	-	-	35.98	11.69	37.67	-	76.47	|
|	-	-	-	-	-	-	-	|
1.705	-	-	-	-	-	-	-	5581.39
1.705	-	-	-	-	-	-	-	3000.00
|	-	-	-	-	-	-	-	|
1.720*	-	-	28.60	11.70	40.30	-	103.51	|
2.150*	-	-	34.60	11.71	46.31	-	206.78	|
3.440*	-	-	26.45	11.76	38.21	-	81.38	|
4.730*	-	-	20.12	11.78	31.90	-	39.36	|
14.190*	-	-	18.39	11.20	29.59	-	30.16	|
|	-	-	-	-	-	-	-	|
30.000	-	-	-	-	-	-	-	3000.00

No EUT emissions were observed throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

EMISSIONS TEST DATA SHEET	
Method:	**Field Strength of Spurious Emissions**
Test Specification:	FCC Part 15, Subpart C Paragraph: 15.209(a)
Job Number:	R-6685H-1
Customer:	Secure Care Products, LLC
Test Sample:	430kHz Transmitter
Model Number:	A20080916
Serial Number:	N/A
Operating Mode:	Transmitting modulated signal at 430kHz, ID Duty cycle
Technician:	M. Seamans
Date(s):	February 16th, 2022
Notes:	Test Distance: 3 meters Detector: Peak Limits: Quasi-Peak (Average for the frequency bands 9-90kHz and 110-490kHz)

TEST PARAMETERS

Test Frequency	Antenna Position		Peak Reading	Correction Factor	Corrected Reading		Converted Peak Reading	Limit at 3M
MHz	(H/V)		dBuV	dB	dBuV/m		uV/m	uV/m
30.00	-	-	-	-	-	-	-	100.00
|	-	-	-	-	-	-	-	|
88.00	-	-	-	-	-	-	-	100.00
88.00	-	-	-	-	-	-	-	150.00
|	-	-	-	-	-	-	-	|
216.00	-	-	-	-	-	-	-	150.00
216.00	-	-	-	-	-	-	-	200.00
|	-	-	-	-	-	-	-	|
960.00	-	-	-	-	-	-	-	200.00
960.00	-	-	-	-	-	-	-	500.00
|	-	-	-	-	-	-	-	|
1000.00	-	-	-	-	-	-	-	500.00

No EUT emissions were observed throughout the given frequency spectrum.