21 May, 2001

Kevin Towers
Omnex Control Systems, Inc.
#74 – 1833 Coast Meridian Road
Port Coquitlam British Columbia
Canada   V3C 6G5

Dear Mr. Ronnenkamp,

Enclosed is the report for the 902 – 928 Frequency Hopping Transmitter, model HS-900T, which has been certified by both the FCC and Industry Canada.

This is an official copy of this report complete with the original Acme Testing staff signatures, which should be retained by you as the official record of testing, as it may be required for future verification of compliance. Please be aware that our internal controls require us to keep a historical copy of your report on file for three years only.

Acme Testing is accredited by the American Association for Laboratory Accreditation. There is a current Mutual Recognition Agreement between the United States, Australia, New Zealand, Singapore, and Hong Kong. This means that the data contained in this report is acceptable to the authorities of these countries.

Acme Testing has been nominated by NIST as a Conformity Assessment Body under the US-EU Mutual Recognition Agreement, and we are a registered facility with the Japanese Voluntary Control Council for Interference by Information Technology Equipment (VCCI).

Thank you for your business and we look forward to being of service should you require testing services in the future.

Yours Sincerely,

Steve FitzGerald
President

:dp
Enclosure

REPORT OF MEASUREMENTS
PART 15C - INTENTIONAL RADIATOR

DEVICE: 902 – 928 MHz FREQUENCY HOPPING TRANSMITTER

MODEL: HS-900T

MANUFACTURER: OMNEX CONTROL SYSTEMS, INC.

ADDRESS: #74 – 1833 COAST MERIDIAN ROAD
PORT COQUITLAM BRITISH COLUMBIA
CANADA V3C 6G5

THE DATA CONTAINED IN THIS REPORT WAS COLLECTED ON 18 OCTOBER 1998 AND COMPILED BY:

PAUL G. SLAVENS
CHIEF EMC ENGINEER

WORK ORDER: 1940

1. General

1.1 Purpose

The purpose of this report is to show compliance to the FCC regulations for spread spectrum unlicensed devices operating under section 15.247 of the Code of Federal Regulations title 47.

1.2 Manufacturer

Company Name:	Omnex Control Systems, Inc.
Contact:	Kevin Towers
Street Address:	#74 - 1833 Coast Meridian Road
City/Province:	Port Coquitlam British Columbia
Country/Postal Code:	Canada V3C 6G5
Telephone:	604 944-9247
Fax:	604 944-9267

1.3 Test location

Company:	Acme Testing Inc.
OATS File Number:	IC 3251
Street Address:	2002 Valley Highway
Mailing Address:	PO Box 3
City/State/Zip:	Acme WA 98220-0003
Laboratory:	Test Site 2
Telephone:	888 226-3837
Fax:	360 595-2722
E-mail:	acmetest@acmetesting.com
Web:	www.acmetesting.com
Receipt of EUT:	28 September 1999

1.4 Test Personnel

Paul G. Slavens, Chief EMC Engineer

2. Test Results Summary

Summary of Test Results
902 – 928 MHz Frequency Hopping Transmitter, HS-900T

Requirement	CFR Section	Test Result
Radiated Spurs < 15.209	15.205(b)	PASS
Conducted Emissions < 48.0 dBuV	15.207	PASS
Channel Separation > 25 kHz	15.247(a1)	PASS
Number of Channels > 50	15.247(a1i)	PASS
20 dB BW < 500 kHz	15.247(a1i)	PASS
Max Output Power < 1 W	15.247(b2)	PASS
Antenna Gain < 6 dBi	15.247(b3)	PASS
Conducted Spurious >-20 dBc	15.247(c)	PASS

The signed original of this report, supplied to the client, represents the only "official" copy. Retention of any additional copies (electronic or non-electronic media) is at Acme Testing's discretion to meet internal requirements only. The client has made the determination that EUT Condition, Characterization, and Mode of Operation are representative of production units, and meet the requirements of the specifications referenced herein.

Consistent with Industry practice, measurement and test equipment not directly involved in obtaining measurement results but having impacts on measurements (such as cable loss, antenna factors, etc.) are factored into the "Correction Factor" documented in certain test results. Instrumentation employed for testing meets tolerances consistent with known Industry Standards and Regulations.

The measurements contained in this report were made in accordance with the procedure ANSI C63.4 - 1992 and all applicable Public Notices received prior to the date of testing. All emissions from the device were found to be within the limits outlined in this report. Acme Testing assumes responsibility only for the accuracy and completeness of this data as it pertains to the sample tested.

Paul G. Slavens Chief EMC Engineer	Date of Issuance

3. Description of Equipment and Peripherals

3.1 Equipment Under Test (EUT)

Device:	902 – 928 MHz Frequency Hopping Transmitter
Model Number:	HS-900T
Serial Number:	Demonstration
FCC ID:	IA9FHS900T
Power:	120 V/60 Hz
Grounding:	Local
Antenna Distance:	3 meter

3.2 EUT Peripherals

Not applicable, the EUT is a stand-alone device.

3.3 Description of Interface Cables

Not applicable, the EUT is a stand-alone device.

3.4 Mode of Operation During Tests

The EUT was exercised by constantly transmitting.

3.5 Modifications Required for Compliance

1. None.

4. Antenna requirement

4.1 Regulation

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of Part 15C. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

4.2 Result

The antenna connector is a left-handed (reverse) SMA connector.

5. Conducted Emissions Tests

Test Requirement: FCC CFR47, Part 15C

Test Procedure: ANSI C63.4:1992

5.1 Test Equipment

Spectrum Analyzer: Hewlett-Packard 8567A, Serial Number 2602A-00165, Calibrated: 12 March 1999, Calibration due Date: 12 March 2000

RF Preselector: Hewlett-Packard 85685A, Serial Number 2648A-00392, Calibrated: 12 March 1999, Calibration due Date: 12 March 2000

Quasi Peak Adapter: Hewlett-Packard 85650A, Serial Number 2521A-00689, Calibrated: 12 March 1999, Calibration due Date: 12 March 2000

Line Impedance Stabilization Network: Rhode & Schwarz ESH2-Z5, Serial Number ACMERS1, Calibrated: 28 September 1999, Calibration due Date: 28 September 2000

5.2 Purpose

The purpose of this test is to evaluate the level of conducted noise the EUT imposes on the AC mains.

5.3 Test Procedures

For tabletop equipment, the EUT is placed on a 1 meter by 1.5 meters wide and 0.8 meter high nonconductive table that is placed above the groundplane. Floor standing equipment is placed directly on the groundplane. Any supplemental grounding mechanisms are connected, if appropriate. The EUT is connected to its associated peripherals, with any excess I/O cabling bundled to approximately 1 meter. The EUT is connected to a dedicated LISN and all peripherals are connected to a second separate LISN circuit. The LISNs are bonded to the groundplane.

Conducted Emissions Test Characteristics	
Frequency range	0.45 MHz - 30.0 MHz
Test instrumentation resolution bandwidth	9 kHz
Lines Tested	Line 1/Line 2

The following option may be employed if the conducted emissions exceed the limits in paragraph (a) of this Section when measured using instrumentation employing a quasi-peak detector function: if the level of the emission measured using the quasi-peak instrumentation is 6 dB, or more, higher than the level of the same emission measured with instrumentation having an average detector and a 9 kHz minimum bandwidth, that emission is considered broadband and the level obtained with the quasi-peak detector may be reduced by 13 dB for comparison to the limits. When employing this option, the following conditions shall be observed:

(1) The measuring instrumentation with the average detector shall employ a linear IF amplifier.

(2) Care must be taken not to exceed the dynamic range of the measuring instrument when measuring an emission with a low duty cycle.

(3) The test report required for verification or for an application for a grant of equipment authorization shall contain all details supporting the use of this option.

Procedure for determining broadband emissions:

If quasi-peak emissions exceed the limit of 15.207(a) print out all quasi-peak signals exceeding the limit.
Manually put the spectrum analyzer in linear mode at the frequency the quasi-peak emission exceeds the limit.
Set the video bandwidth to 1 Hz and the sweep time to automatic.
Using a span of 20 kHz and a resolution bandwidth of 9 kHz adjust the reference level so that the signal is in the middle of the display.
Record the level of the average emission reading.
Repeat for all quasi-peak signals that exceed the limit.
If all average readings are at least 6 dB less than there associated quasi-peak limit use the limit of 15.207(b).

5.4 Test Results

LINE 1

PEAK #	FREQ. (MHz)	QUASI PEAK READING (dBuV)	AVERAGE READING (dBuV)
1	1.716	48.7	37.9
2	1.812	49.3	38.1
3	1.914	50.8	40.2
4	2.012	48.2	39.5
5	17.53	55.5	45.0

LINE 2

PEAK #	FREQ. (MHz)	QUASI PEAK READING (dBuV)	AVERAGE READING (dBuV)
1	1.789	49.6	40.6
2	1.89	50.1	40.4
3	1.996	50.0	40.5
4	17.53	57.9	46.3

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PEAK DATA

LINE 1

PEAK #	FREQ. (MHz)	AMPL (dBuV)
1	0.4998	45.7
2	0.5986	49.5
3	0.6991	46.4
4	0.7962	46.2
5	0.903	44.1
6	1.003	44.9
7	1.1	42.3
8	1.196	41.9
9	1.301	44.2
10	1.397	45.1
11	1.494	43.6
12	1.598	44.2
13	1.625	42.6
14	1.694	45.8
15	1.797	46.8
16	1.906	48.1
17	1.996	47.3
18	7.235	42.8
19	7.388	42.4
20	7.482	43.0
21	7.577	43.4
22	7.673	43.2
23	7.737	43.7
24	7.868	44.1
25	7.968	44.5
26	8.069	43.1
27	8.274	43.6
28	8.45	43.3
29	8.629	42.2
30	9.113	41.9

PEAK DATA

LINE 2

PEAK #	FREQ. (MHz)	AMPL (dBuV)
1	0.5019	45.9
2	0.5986	48.7
3	0.6991	46.8
4	0.7995	45.9
5	0.8992	43.9
6	0.9986	45.1
7	1.1	43.6
8	1.201	42.0
9	1.295	47.0
10	1.403	47.2
11	1.5	46.3
12	1.598	47.6
13	1.625	45.2
14	1.694	50.3
15	1.797	50.2
16	1.906	51.4
17	1.996	50.6
18	2.099	45.5
19	17.1	57.4

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6. 20 dB Bandwidth and Channel Separation

6.1 Regulation

15.247(a1) Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20-dB bandwidth of the hopping channel, whichever is greater. The system shall hop to channel frequencies that are selected at the system-hopping rate from a pseudorandomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

6.2 Test Equipment

Spectrum Analyzer: Hewlett-Packard 8567A, Serial Number 2602A-00165, Calibrated: 12 March 1999, Calibration due Date: 12 March 2000

RF Preselector: Hewlett-Packard 85685A, Serial Number 2648A-00392, Calibrated: 12 March 1999, Calibration due Date: 12 March 2000

6.3 Test Procedures

The RF output of the EUT was connected to the RF input port of the RF preselector through a 20-dB pad. The following measurements were made with a RBW = 10 kHz and VBW = 30 KHz.

6.4 Test Results

The measured 20 dB bandwidth of the carrier frequency is 45 kHz. The transmitter has hopping channel carrier frequencies separated by 400 kHz. The transmitter can be set to operate on any of 256 frequency channels in the 902-928MHz band. The frequencies are divided into four groups of 64 frequencies, each group using every fourth available frequency. Sixty-three of the 64 frequencies in a group are then used equally by the spread spectrum transmitter in a pseudo random sequence. A list of all of the frequencies can be found in Appendix A. Each channel is 30kHz wide. The hop sequence is a sequence of 63 numbers randomly generated with a Reed-Solomon algorithm. The unique serial number of the transmitter is used as a seed to the random number generator. The list of 63 numbers (channels) is used to lookup in the frequency table to determine the next transmit frequency. The first three channels (1 – 3) have data transmitted on every hop cycle. This is to enable the receiver to acquire the hop transmitter initially. The power amplifier is turned on periodically for the remaining channels (4 – 63) in order to reduce transmitter current consumption and heat generated by the PA. The transmitter will hop to every frequency, but only every 10 th channel will have the PA turned on. This means that for frequencies used on channels 4 through 63 will only be transmitted on once in 10 hop cycles (or 11.34 seconds). A change of state on one (or both) of the digital inputs will cause a temporary lapse of the channel skipping. When a change of state happens, the transmitter will turn the PA on for the following 10 channels, after which it will resume the channel skipping activity.

The associated receiver has an input bandwidth equal to the transmitter hopping channel bandwidth. The receiver shifts frequency with the transmitter.

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7. Number of Channels

7.1 Regulation

15.247(a1i) For frequency hopping systems operating in the 902-928 MHz band: if the 20-dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20-dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20-dB bandwidth of the hopping channel is 500 kHz.

7.2 Test Results

The transmitter uses 63 hopping frequencies and has a 20 dB bandwidth of 45 kHz. The average time of occupancy on any frequency is 0.317 seconds in a 20 second period.

8. Power Output

8.1 Regulation

15.247(b2) For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph 15.247(a)(1)(i).

8.2 Test Equipment

Spectrum Analyzer: Hewlett-Packard 8566B, Serial Number 2410A-00168, Calibrated: 31 December 1997, Calibration due Date: 31 December 1998

RF Preselector: Hewlett-Packard 85685, Serial Number 2648A-00519, Calibrated: 31 December 1997, Calibration due Date: 31 December 1998

8.3 Test Procedures

The RF output of the EUT was connected to the RF input port of the RF Preselector through a 20-dB pad. The following measurements were made with a RBW = 3 MHz and VBW = 3 MHz.

8.4 Test Results

Measured maximum Peak Envelope Power was 29.0 dBm or 795 mW.

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9. Antenna gain requirements

9.1 Regulation

15.247(b3) Except as shown below, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the above stated values by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

9.2 Result

The unit uses an omni directional quarter – wave monopole with a gain of 2.1 dBi.

10. Radio Frequency exposure

10.1 Regulation

15.247(b4) Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. *See* §1.1307(b)(1) of this Chapter.

10.2 Result

The device uses an integral monopole antenna. The device EIRP is less than 1.1 watts. The manufacturer will notify installers in the installation instructions that the separation distance between the transmitter/antenna and nearby persons to ensure RF exposure compliance, and to inform installer to ensure proper installation.

11. Conducted Spurious Emissions

11.1 Regulation

15.247 (c) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c).

11.2 Test Equipment

Spectrum Analyzer: Hewlett-Packard 8566B, Serial Number 2410A-00168, Calibrated: 31 December 1997, Calibration due Date: 31 December 1998

RF Preselector: Hewlett-Packard 85685, Serial Number 2648A-00519, Calibrated: 31 December 1997, Calibration due Date: 31 December 1998

Quasi Peak Adapter: Hewlett-Packard 85650A, Serial Number 2043A-00327, Calibrated: 31 December 1997, Calibration due Date: 31 December 1998

11.3 Test Procedures

The RF output of the EUT was connected to the RF input port of the RF preselector through a 20 dB pad. The following measurements were made with a RBW = 100 kHz and VBW = 300 kHz.

11.4 Test Results

PRODUCT EMISSIONS
LOWEST CHANNEL
Fc = 902.2

No	FREQUENCY (MHz)	POWER (dBm)	RELATIVE LEVEL (dBc)
1	1804.4	-30.2	-59.2

PRODUCT EMISSIONS
MIDDLE CHANNEL
Fc = 915.0

No	FREQUENCY (MHz)	POWER (dBm)	RELATIVE LEVEL (dBc)
1	1830.0	-30.5	-59.5

PRODUCT EMISSIONS
HIGHEST CHANNEL
Fc = 927.7

No	FREQUENCY (MHz)	POWER (dBm)	RELATIVE LEVEL (dBc)
1	1855.4	-30.0	-59.0

12. Radiated Spurious Emissions

12.1 Regulation

15.247 (c) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c).

12.2 Test Equipment

Spectrum Analyzer: Hewlett-Packard 8566B, Serial Number 2410A-00168, Calibrated: 31 December 1997, Calibration due Date: 31 December 1998

RF Preselector: Hewlett-Packard 85685, Serial Number 2648A-00519, Calibrated: 31 December 1997, Calibration due Date: 31 December 1998

Quasi Peak Adapter: Hewlett-Packard 85650A, Serial Number 2043A-00327, Calibrated: 31 December 1997, Calibration due Date: 31 December 1998

Line Impedance Stabilization Network: Rhode & Schwarz ESH2-Z5, Calibrated: 4 June 1997, Calibration due Date: 31 December 1998

Broadband Biconical Antenna (20 MHz to 200 MHz): EMCO 3110, Serial Number 1115, Calibrated: 27 July 1997, Calibration due Date: 31 December 1998

Broadband Log Periodic Antenna (200 MHz to 1000 MHz): EMCO 3146, Serial Number 2853, Calibrated: 27 July 1997, Calibration due Date: 31 December 1998

EUT Turntable Position Controller: EMCO 1061-3M 9003-1441, No Calibration Required

Antenna Mast: EMCO 1051 9002-1457, No Calibration Required

2 GHz to 10 GHz Low Noise Preamplifier: Milliwave 593-2898, Serial Number 2494, Calibrated: 19 June 1997, Calibration due Date: 31 December 1998

Double Ridge Guide Horn Antenna: EMCO 3115, Serial Number 5534, Calibrated: 21 July 1998, Calibration due Date: 21 November 1999

12.3 Test Procedures

For tabletop equipment, the EUT is placed on a 1 meter by 1.5 meters wide and 0.8 meter high nonconductive table that sits on a flush mounted metal turntable. Floor standing equipment is placed directly on the flush mounted metal turntable. The EUT is connected to its associated peripherals with any excess I/O cabling bundled to approximately 1 meter.

Preview tests are performed to determine the "worst case" mode of operation. With the EUT operating in "worst case" mode, emissions from the unit are maximized by adjusting the polarization and height of the receive antenna and rotating the EUT on the turntable. Manipulating the system cables also maximizes EUT emissions.

Radiated Emissions Test Characteristics	
Frequency range	30 MHz – 10,000 MHz **15.205 RESTRICTED BANDS ONLY**
Test distance	3 m
Test instrumentation resolution bandwidth	120 kHz (30 MHz - 1000 MHz) 1 MHz (1000 MHz - 10000 MHz)
Receive antenna scan height	1 m - 4 m
Receive antenna polarization	Vertical/Horizontal

Calculation of average correction factor = 20 * log (20 mSec/100 mSec)
= 20 * log .2
= -14 dB

20 milliseconds is the worst case on time for any 100 milliseconds time frame.

12.4 Test Results

PRODUCT EMISSIONS
LOWEST CHANNEL
Fc = 902.2
PEAK DATA

No	EMISSION FREQUENCY MHz	SPEC LIMIT dBuV/m	MEASUREMENTS ABS dBuV/m	dLIM dB	MODE	POL	SITE HGT cm	AZM deg
1	1353.30	74.0	52.4	-21.6	PK	V	100	343
2	2255.49	74.0	61.3	-12.7	PK	V	100	281

PRODUCT EMISSIONS
LOWEST CHANNEL
Fc = 902.2
CALCULATED AVERAGE DATA

No	EMISSION FREQUENCY MHz	SPEC LIMIT dBuV/m	MEASUREMENTS ABS dBuV/m	dLIM dB	MODE	POL	SITE HGT cm	AZM deg
1	1353.30	54.0	38.4	-15.6	AVG	V	100	343
2	2255.49	54.0	47.3	-6.7	AVG	V	100	280

PRODUCT EMISSIONS
MIDDLE CHANNEL
Fc = 914.4
PEAK DATA

No	EMISSION FREQUENCY MHz	SPEC LIMIT dBuV/m	MEASUREMENTS ABS dBuV/m	dLIM dB	MODE	POL	SITE HGT cm	AZM deg
1	1371.56	74.0	51.0	-23.0	PK	V	100	340
2	2286.00	74.0	60.2	-13.8	PK	V	100	302

PRODUCT EMISSIONS
MIDDLE CHANNEL
Fc = 914.4
CALCULATED AVERAGE DATA

No	EMISSION FREQUENCY MHz	SPEC LIMIT dBuV/m	MEASUREMENTS ABS dBuV/m	dLIM dB	MODE	POL	SITE HGT cm	AZM deg
1	1371.56	54.0	37.0	-17.0	AVG	V	100	340
2	2286.00	54.0	46.2	-7.8	AVG	V	100	302

PRODUCT EMISSIONS
HIGHEST CHANNEL
Fc = 927.7
PEAK DATA

No	EMISSION FREQUENCY MHz	SPEC LIMIT dBuV/m	MEASUREMENTS ABS dBuV/m	dLIM dB	MODE	POL	SITE HGT cm	AZM deg
1	1391.54	74.0	50.3	-23.7	PK	V	100	315
2	2319.26	74.0	61.7	-12.3	PK	V	100	292

PRODUCT EMISSIONS
HIGHEST CHANNEL
Fc = 927.7
CALCULATED AVERAGE DATA

No	EMISSION FREQUENCY MHz	SPEC LIMIT dBuV/m	MEASUREMENTS ABS dBuV/m	dLIM dB	MODE	POL	SITE HGT cm	AZM deg
1	1391.54	54.0	36.3	-17.7	AVG	V	100	315
2	2319.26	54.0	47.7	-6.3	AVG	V	100	292

13. Continuous Data and Short Transmissions

13.1 Regulation

15.247(g) Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. However, the system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this section should the transmitter be presented with a continuous data (or information) stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its transmissions over the minimum number of hopping channels specified in this section.

13.2 Test Results

When required to send continuous data, all frequencies of a sequence (63) are used one before any re-use of frequencies occurs. When presented with a short burst, any one frequency is not re-used until all frequencies (63) of sequence have been used. The sequence is not truncated and re-started.

14. Coordination of Frequency Hopping

14.1 Regulation

15.247(h) The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hopsets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

14.2 Result

This system does not incorporate intelligence to avoid interfering carriers. It progresses linearly through the hopping sequence.

15. Miscellaneous Comments and Notes

1. None.