Application for Certification

FCC ID: EF4 SST00127
IC: 1078A-SST00127

DXS-36AF Remote Control Transmitter

Submitted by:

Linear LLC
1950 Camino Vida Roble, Suite 150
Carlsbad, California 92008
760-438-7138
760-438-7043 (FAX)

SUMMARY OF TEST RESULTS
IN ACCORD WITH
FCC RULES PART 15, RSS-210 ISSUE 8 DECEMBER 2010 AND C63.4-2003

Equipment Model:	SST00127
Transmitter Tested to C63.4-1992 Section:	FCC Rules 15.231
Field Strength at a distance of 3 meters:	3845 uV/Mtr (- 3.9 dB below limit) @ 315 MHz
Peak to Average Ratio:	20 dB - Worst Case Duty Cycle
Test Conditions:	Radiated (Sections 11 & 13)
Transmitter: Transmitter Frequency:	315 MHz Nominal (Factory Tuned Only)
Bandwidth (20 dB down)	< 0.020% of Center Freq.
Frequency Tolerance:	N/A (Nominal +/- 0.125 MHz)
Frequency Stability:	N/A (Nominal +/- 0.125 MHz)
Transmitter Spurious at 3 meters: (Worst Harmonic)	471 uV/Mtr (- 2.16 dB below limit)
Frequency:	2520 MHz
Momentary Operation (Yes/No)	Yes
Holdover time after manual release:	0.8 seconds (maximum)
Duration of transmission after activation:	0.8 seconds on any single automatic activation

Attestation:

The radio apparatus identified in the application has been subject to all the applicable test conditions specified in FCC Rules Part 15 and all of the requirements of the Standard have been met.

Regulatory Compliance Engineer

John W. Kuivinen, P.E. _____ Date: January 31, 2012

Radio Standard Specification
Low Power Communication Devices
C63.4-2003 and FCC Rules Part 15

1.0 General:

1.2, Exclusions to TV Broadcast Freq.	Complies

2.0 Related Documents:

Reference Documents for Application:	CFR 47, FCC Rules Part 15

3.0 Test Equipment:

Supply Voltage:	Fresh CR2450 3 volt lithium button cell battery
Test Equipment List	See Section 6
Signal Detector:	Peak with 20 dB, peak to average conversion.

4.0 Certification and Test Results:

Summary of Results per	See Page 1 of this Report

5.0 General Technical Requirements:

5.1 Testing Methods:	Peak Signal pulse width modulated A1D signal.
5.1 Reference Standard:	C63.4-2003 (FCC Procedure)
5.2 Modulation:	Pulse Position, A1D, AM Modulation
5.3 Type of Antenna:	Integral to Transmitter PCB
5.4 External Controls:	Single reed switch, tamper and manual test push button Optional external switch input. No user serviceable parts except for replacement of battery.
5.5 Accessories:	NONE
5.6 TX Bandwidth:	<0.020 % (See Section 8)
5.7 Equipment Labels:	See Section 2
5.8 Manual Disclaimer:	See attached draft copy of manual
5.9 Usage Restrictions:	Digital Pulse Code Only

6.0 Transmitter Characteristics and Tests:

6.1 Momentary Operated Devices:	Complies
6.1(a) Types of Signals:	Manual Push to Transmit
6.1(a) Automatic Activation:	N/A
6.1(a) Five Second Max. upon release:	Complies
6.1(b) Maximum Field Strength:	315 MHz = 6042 uV/mtr at 3 meters.
6.1(c) Bandwidth (20 dB down)	<0.020 % Complies
6.1(d) Frequency Stability	N/A per regulations +/- 0.125 MHz Maximum Error
6.1(e) Reduced Field Strength	N/A
6.2 Non-Momentary Operated Devices:	N/A
6.2.1 Frequency Bands:	Refer to Table 1
6.3 Restricted Bands:	Complies
6.5 Pulsed Operation:	Complies (20 dB Peak/Average) See Section 8
6.6 Wireline Conducted Emissions:	N/A
7.0 Receivers	N/A
8.0 Self Certification:	N/A
9.0 AC Wireline Conducted Emissions:	N/A
10.0 Terminated Measurement Method:	N/A
11.0 Radiated Measurement Method:	See Section 8
11.1 Measuring Distance:	Complies
11.2 Open Field Test Site:	Complies, C63.4-2003
11.3 Equipment Test Platform:	See Section 8
11.4 Measurement Method:	Complies, See Section 8
12.0 DC Power Consumption Methods:	N/A
13.0 Near Field Measurement for < 30 MHz:	N/A
14.0 Test Report Submission:	See Attached

STATEMENT OF ATTESTATION

Model: DXS-36AF Remote Control Transmitter

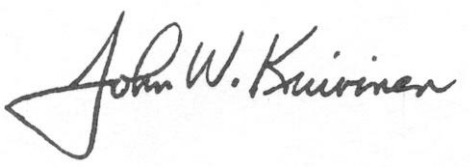
FCC ID: EF4 SST00127\
IC: 1078A-SST00127

The equipment under test is a low powered door/window remote control transmitter used with the Alarm Force series of 315 MHz security consoles. It is designed to send a pulse position encoded RF signal to the receiver when the internal magnetic switch or external switch sensor is opened. Supervisory signals are sent approximately every 1.2 hours. Low battery monitoring functions are provided by this transmitter.

This equipment has been tested in accordance with the requirements contained in the appropriate Commission regulations. To the best of my knowledge, these tests were performed using measurement procedures consistent with industry or commission standards and demonstrate that the equipment complies with the appropriate standards. Each unit manufactured, imported or marketed, as defined in the Commission's regulations, will conform to the sample(s) tested within the variations that can be expected due to quantity production and testing on a statistical basis.

I further certify that the necessary measurements were made by Linear LLC, 1950 Camino Vida Roble, Suite 150, Carlsbad, California. 92008.

Certified by:



_____ January 31, 2012

John W. Kuivinen, P.E. Date

Regulatory Compliance Engineer

1.0 DESCRIPTION

The DXS-36AF is a one channel miniature transmitter operating at a frequency of 315 MHz. The DXS-36AF is intended for use in security applications for protection of doors and windows. The transmitter may be used with Alarm Force consoles. Each transmitter comes from the factory sequentially coded. Power is supplied by a single CR2450 3 Volt battery. Battery life is estimated at a minimum of 5 years under typical conditions.

2.0 OPERATION

The DXS-36AF is typically activated by opening an internally mounted magnetic reed switch. Terminals for an external normally closed glass break switch are also provided. For testing purposes a carbon button switch may be used to initially set up the transmitter. A tamper switch is provided if the case top is removed.

Upon activation, the LED illuminates and power is provided to IC U3 which outputs a 315 MHz crystal stabilized signal to the antenna. The frequency of U3 is stabilized at a 9.84375 MHz crystal Y1 (315 MHz / 32 = 9.94375 MHz). Data output at U1-6 modulates the input of U3 which transmits the pulse-modulated carrier via the antenna.

The transmitter is supervised. It will send a status transmission about every 1.2 hours to show the current status of the battery and contact switches. Any door/window transmission or manual test transmission will reset the internal status timer back to zero and the transmitter will wait another 1.2 hours to send the next transmission.

The test transmission push button requires the use of a special tool (a small pin or wire probe) to access the hidden push button.

The test push button is considered to be a manually activated transmission. As such it may operate continuously. However, due to battery limitations, the test transmission will cease after 10 seconds unless the button is released and then pressed again.

U2 is a voltage detector IC that sends a signal to the microprocessor U1 if the battery is below 2.5 VDC.

3.0 SPECIFICATIONS

Product Identification:	DXS-36AF mini transmitter (SST00127).
Encoding Format:	DX Code for Alarm Force.

Encoding Technique:	Each transmitter is programmed with the sequential serial transmitter ID number.
Number of Channels:	One
RF Carrier Frequency:	315.0 ± 125 KHz
Power Requirements:	CR2450 - 3 Volt battery.
Visual Indicator:	Red LED.
Operating Temperature:	0° C to +70° C. Tested –20° C to 70° C.
Size:	2.4" x 1.1" x 0.59".
Current Consumption:	7 mA (average) transmitting, 6 uA standby

All specifications are nominal unless specified.

REPORT OF MEASUREMENTS

LINEAR LLC
FCC ID: EF4 SST00127
Model : DXS-36AF Remote Control Transmitter

The enclosed documents reflect the requirements contained generally within the code of Federal Regulations, Title 47, Parts 2 and 15 as most recently published October 1, 2011 and all other applicable revisions made by the Commission since that time.

The specific rule sections for which the enclosed documents demonstrate compliance or rely upon to demonstrate compliance with the Commission's application and technical standards are as follows:

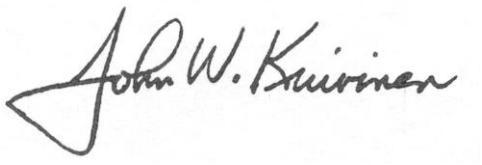
15.201-15.207, 15.231, Subpart C, Intentional Radiators.

Test Procedure C63.4-2003, Section 13, Measurement of Intentional Radiators was used for the testing of this device.

In accord with Section 2.948 of the Commission's Rules, a Test Site submittal is on file with the commission and a Letter of Acceptance dated March 31, 2009 (File 90767) is a portion of the Commission's records.

A test site submittal is on file with Industry Canada. The Industry Canada file number is 1078A-1. The file is dated August 4, 2010.

All of the information contained within this documentation is true, correct, and complete to the best of my knowledge.



_____
John W. Kuivinen, P.E.
Regulatory Compliance Engineer

January 31, 2012
Date

MEASUREMENT OF RADIO FREQUENCY EMISSION
OF CONTROL AND SECURITY ALARM DEVICES
FCC RULES PART 15, C63.4-2003 TEST PROCEDURE

I. INTRODUCTION

As part of a continuing series of quality control tests to ensure compliance with all applicable Rules and Regulations, this enclosure details the test procedures for certain radio control devices. Testing was performed at a test site located on the property of Linear LLC, 1950 Camino Vida Roble, Suite 150, Carlsbad, California 92008.

II. MEASUREMENT FACILITY DESCRIPTION

The test facility is a specially prepared area adequately combining the desirability of an interference free location with the convenience of nearby 120 volt power outlets, thus completely eliminating the incidence of inverter hash, so often a problem with field measurements.

III. DESCRIPTION OF SUPPORTING STRUCTURES

For Measuring Equipment - The antenna is supported on a trolley that can be raised and lowered on a mast by means of remote control to any level between 1 meter and 4 meters above the ground. For measurements at 3 meters, an antenna height (center of dipole) of about 1 meter generally yields the greatest field strength. For measurements at 1 meter, an antenna height equal to the device under test generally yields the greatest field strength. Usually, horizontal polarization yields the greatest field strength for both 1 and 3 meter measurements.

For Equipment Under Test (EUT): The equipment to be tested is supported by a wooden turntable at a height of eighty centimeters. A two axis swivel at the top of the turntable permits the unit under test to be manually oriented in the position of maximum received signal strength. The turntable can be rotated by remote control.

Test Configuration - All transmitters were located eighty centimeters above ground, at a distance of three meters from the antenna. They were each oriented for maximum radiation by rotating the turntable. The antenna was then moved vertically along the mast for optimum reception in both horizontal and vertical planes. Where no emissions were found, the antenna was also moved to one meter distance to improve system sensitivity.

All receivers were located eighty centimeters above ground, at a distance of three meters from the antenna. They were each oriented for maximum radiation by rotating the turntable. The antenna was then moved vertically along the mast for optimum reception in both horizontal and vertical planes. Generally, emissions were very close to the observed spectrum analyzer noise floor, making accurate measurement difficult because of the analyzer detector's characteristic of adding signal and noise. To better observe and measure emissions well above the noise floor, the antenna was moved in to one meter. This provides a theoretical 9.54 dB improvement in received field strength, but a possible shift from far field to near field antenna characteristics may introduce an unknown error in measurement.

All transmitters and receivers tested are typical of production units.

A Hewlett-Packard spectrum analyzer consisting of an 8562A or 8594EM mainframe is used for the field strength meter. A set of Ailtech DM-105 series dipoles are used for the receiving antennas up to 1 GHz. An A.H. Systems model SAS-200/511 log periodic antenna is used from 1 to 5 GHz. Since the published antenna factor includes the small amount of balun loss, this factor is not included in the equations for correcting measured values. The cable loss is added to the raw data. For measurements up to 1 GHz, a Hewlett-Packard 8447D broadband RF preamplifier is inserted between the antenna cable and spectrum analyzer input to ensure adequate system sensitivity while measuring.

From 1 GHz to 3 GHz, a Mini-Circuits ZFL-2000 broadband RF preamplifier is used instead of the HP 8447D. In many cases, the antenna is moved in to a distance of 1 meter to enhance test range sensitivity after the 3 meter data is observed. A theoretical 9.54dB improvement is realized. Please see Excel data spreadsheet for details. For a particular device and frequency, the EUT to antenna distance is specified in the Report of Measurements.

Correction of Measured Values - The spectrum analyzer calibration is in units of dBm absolute. Published antenna factor, measured cable loss and preamplifier gain are in units of dB. All equipment is referenced to a 50-ohm characteristic impedance; therefore, any impedance terms will factor out of any calculations. Also, balun loss is included in the antenna factor, so this term will not appear in any calculation.

To obtain field strength, the reference (50 ohm system) 1 UV = 0 dBuV = -107 dBm is used.

For a given frequency: antenna factor, cable loss, preamplifier gain (if used) and a 9.54 dB gain factor (3 meters to 1 meter field strength conversion) when required are

factored into the spectrum analyzer reading, resulting in a field strength in units of dBm.

Field strength reading (dBm) + 107 dB = dBuV, using 0 dBuV = 1 uV/meter at a specified distance as reference.

All of the equipment was calibrated to NBS-traceable factory specifications prior to the date of measurement.

IV **MEASUREMENT PROCEDURE**

Transmitters

1. Set the DIP-switch rockers of the transmitter (if needed) to all ON, jam the button in the ON position, and place the transmitter on the test stand.

2. Tune the antenna (if required).

3. Tune the spectrum analyzer.

4. Adjust the antenna height and polarization for peak field strength.

5. Rotate the turntable to orient the transmitter for the highest reading.

6. Record the observed peak emission.

7. Record the screen image (if required).

Spectrum Analyzer Control Settings:

Tuning:	As required
Bandwidth	100 KHz for Field Strength,
Scan Width:	100 KHz/div (may be different when tuning or adjusting display for photographs)
Input Attenuator:	10 dB
Scan Time:	50 mSec. sweep
Reference Level:	0 dBm
Display Mode:	Log 10 dB/division
Video Filter:	OFF
Scan Mode:	Internal
Scan Trigger:	Auto

TESTING INSTRUMENTATION AND EQUIPMENT LIST

SPECTRUM ANALYZERS:

H.P.	HP8594EM	1 KHz to 2.9GHz	
	S/N 3649A00246	Calibrated	01/31/2011
		Due	01/31/2012
H.P.	HP8562A	9 KHz to 2.9GHz	
	S/N 2913A03742	Calibrated	07/27/2011
		Due	07/27/2012

ANTENNAS:

(2)	Ailtech DM105A T1	20-200 MHz		Tuned Dipole
	S/N 93412-105 and 93412-114	Calibrated 6/11	Due:	6/12
(2)	Ailtech DM105A T2	140-400 MHz	Tuned Dipole	
	S/N 93413-113 and 93413-117	Calibrated 6/11	Due:	6/12
(2)	Ailtech DM105A T3	400-1000 MHz	Tuned Dipole	
	S/N 93413-105 and 93414-111	Calibrated 6/11	Due:	6/12
(2)	AH Systems SAS-200/511	1-12.4 GHz		Log Periodic
	S/N 118 and 124, P/Ns 2069	Calibrated 6/11	Due:	6/12
(1)	AH Systems SAS-200/540	20-330 MHz	Biconical	
	S/N 367 P/N 2052			

INSTRUMENTATION:

H.P.	HP8656B RF Generator	100 KHz - 990 MHz	
	S/N A4229590	Calibrated	6/11
		Due	6/12
Solar Electronics Line Impedance Stabilization Network, Type			
	8012-50-R-24-BNC	Calibrated:	6/11
	S/N 8379585	Due:	6/12
HP 8447D	Broadband preamplifier, 0.1-1300 MHz		
	S/N 2443A03660	Calibrated:	6/11
		Due:	6/12
Mini-Circuits	ZFL-2000 broadband preamplifier, 10-3000 MHz		
	S/N Lin 001	Calibrated:	6/11
		Due:	6/12

ACCESSORIES:

(2) Ailtech Rulers calibrated in MHz
4 Meter ABS Antenna Mast and Trolley
Eighty Centimeter Tall, Motorized Wooden Turntable
BNC to BNC Cables - as-required

(2)	25' RG-214/U Low-loss Coaxial Cable		
	S/N- LIN001 & LIN002	Calibrated:	6/11
		Due:	6/12

(2) 3' RG-400E Low-loss Coaxial Cable, calibrated as part of the preamplifiers. Automatically taken into account when used with the above itemized range equipment.

REPORT OF MEASUREMENTS

Applications for control,security alarm,door opener or remote switch

Description: 315.000 MHz transmitter DX format supervised

DATE: January 11, 2012

ITEM TESTED: DXS-36AF Alarm Transmitter, Sample No. 1
MANUFACTURER: Linear LLC
TRADE NAME:
PRODUCT ID:- SST00127

DISTANCE AT WHICH MEASURE 3 meters, DUT 0.8 meters above ground
REFERENCE: 15.231
MEASUREMENT PROCEDURE: C63.4-2003

RADIATIOI

A	B	C		D		E		F	G	H	I	J	K	L	M	N	P	Q
Tuned Frequency MHz	Emission Frequency MHz	Ambient Level dBm		FCC Limit dBm		Meter Reading dBm	UUT & Ant Pos.**	Antenna Factor dB	Cable Loss dB	Amp Gain dB	Dist Fac dB	Duty Cycle dB	Emission Data dBm/mtr	dBuV/mtr	uV/M	FCC Limit uV/M	dB:FCC	FREQ. MHz
315.00	315.00	-98.40		-3.98		-7.9	H H	18.6	1.2	27.2	0.00	20.0	-35.30	71.70	3845.92	6042.00	-3.92	315.00
	630.00	-89.80		-32.58		-48.0	H H	26.0	1.7	26.5	0.00	20.0	-66.80	40.20	102.33	604.00	-15.42	630.00
	945.00	-85.90		-36.48		-67.7	H H	29.4	2.2	26.5	0.00	20.0	-82.60	24.40	16.60	604.00	-31.22	945.00
	1260.00	-82.00		-40.38		-66.5	H H	26.8	2.6	20.4	0.00	20.0	-77.50	29.50	29.85	604.00	-26.12	1260.00
	1575.00	-88.64	*	-33.74	*	-56.3	H H	28.7	3.0	19.8	9.54	20.0	-73.94	33.06	44.98	604.00	-22.56	1575.00
	1890.00	-86.94	*	-35.44	*	-62.0	H H	30.0	3.3	19.7	9.54	20.0	-77.94	29.06	28.38	604.00	-26.56	1890.00
	2205.00	-85.14	*	-37.94	*	-68.0	H H	30.8	3.6	18.3	9.54	20.0	-81.44	25.56	18.97	604.00	-30.06	2205.00
	2520.00	-84.04	*	-43.14	*	-45.3	H H	31.7	3.8	14.2	9.54	20.0	-53.54	53.46	470.98	604.00	-2.16	2520.00
	2835.00	-82.94	*	-46.94	*	-52.6	H H	32.4	4.2	11.5	9.54	20.0	-57.04	49.96	314.77	604.00	-5.66	2835.00
	3150.00	-82.04	*	-59.34	*	-75.0	H H	33.1	4.4	0.0	9.54	20.0	-67.04	39.96	99.54	604.00	-15.66	3150.00

NOTES:
* 1 meter measurement corrected to 3 meters
** Device (UUT) and antenna position = H (horizontal) or V (Vertical)

The spectrum was searched from 25 to 3500 MHz
No other emissions were observed except those shown on this page.

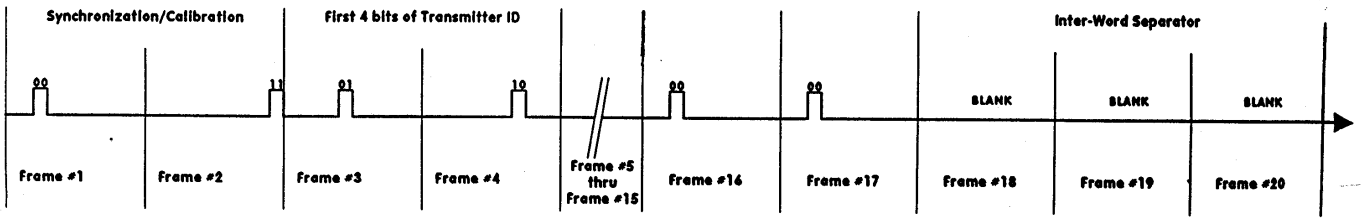
15.207 Conducted Emissions Not Applicable- Battery Powered

1-11-12
TESTED BY DATE

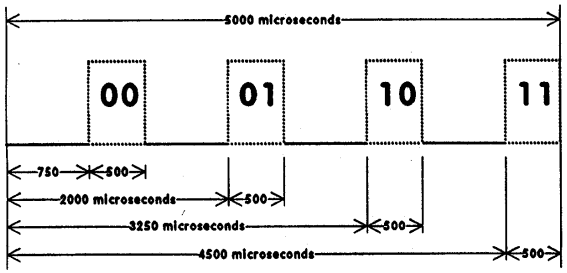
11 Jan 2012
ENGINEER DATE

FILE NAME SST127_X1.XLS DISK NAME: FCC DATA

Sample Word: Transmitter ID = 6xxxx, Compatible with Linear Consoles, No Violation, Good Battery



Each pair of bits is represented by a single 500-microsecond pulse in one of four positions within a 5-millisecond frame:



"DX" Encoding Format

Duty cycle is fixed because a modulus 4 (quaternary) coded, pulse position type A1D modulation is used. Modulation rate is fixed at 17 bits per 100 mSec data word.

During transmission, the transmitter sequentially emits a group of pulse keyed AM modulated carriers. Each pulse has a nominal duration of 500 microseconds (uSec).

Real Time Analysis: From time zero, one two bit synchronization data sequence is fixed at bit values of 0 and 3. Each of the remaining 15 data pulses occurs within a 5 mSec window that determines which one of 4 possible data states that that pulse may represent.

Duty Cycle Factor, Typical design values:

(17 pulses x 500 uSec)/ 100 mSec = 8.5E-2

20log(8.5E-2) = -21.4 dB Duty Cycle Correction Factor

FCC Rules permit only a -20 dB peak to average factor.

Worst Case Calculations:

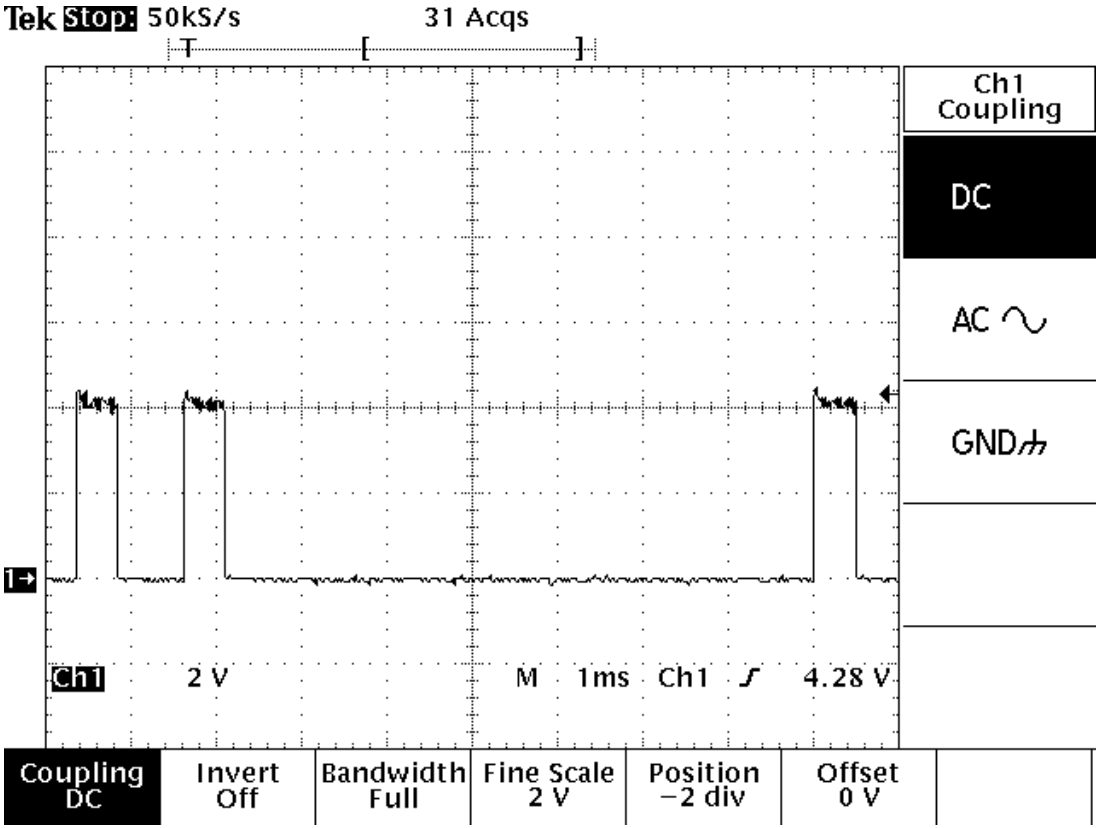
All data pulses are controlled by a microcontroller with a +/- 15% resistor capacitor oscillator timing element. The transmitter's on time and inter pulse gap is therefore controlled within +/- 15% of the typical calculations. When the RC time constant is short then all the pulses and the inter pulse gaps are short. Likewise, when the pulses are long the inter pulse gaps are proportionately longer.

-15% (17 pulses X 425uSec/pulse) / 0.1 Sec = 7.23E-2

20log(7.23E-2) = -22.8 dB

+15% (17 pulses X 575uSec/pulse) / 0.1 Sec = 97.8E-3

20log(97.8E-3) = -20.2 dB



INDIVIDUAL DATA PULSES, QUATERNARY ENCODED DATA FORMAT

500 uSEC FOR EACH DATA PULSE

TIME DURATION FOR EACH PULSE IS FIXED

3 DATA PULSES SHOWN ABOVE

LINEAR LLC\
FCC ID: EF4 SST00127
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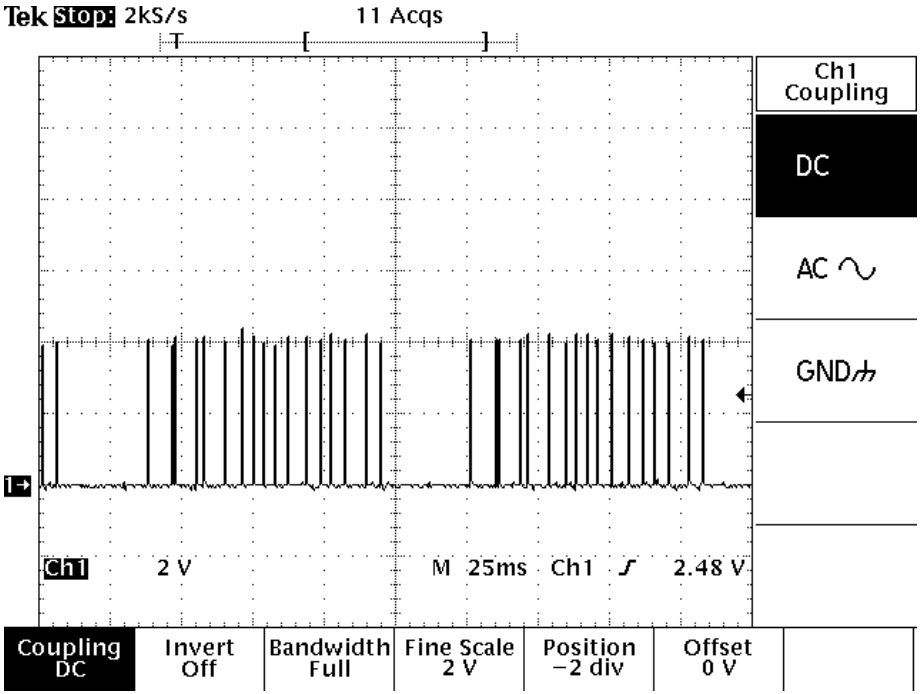


17 BITS / DATA WORD + 3 BLANK FRAMES BETWEEN WORDS

DATA WORD = 20 X 5000 USEC = 100 MILLISECONDS FOR NOMINAL DATA WORD FRAME

TWO DATA WORDS SHOWN ABOVE

LINEAR LLC\
FCC ID: EF4 SST00127
IC:1-78A-SST00127

Transmitter Duty Cycle Calculations and Time Domain Information

DX Data Format

Worst case duty cycle is computed because coded pulse width type A1D modulation is used. Data rate is seventeen 500 uSec pulses in any 100 mSec. time window.

During transmission, the transmitter sequentially emits a group of 17 encoded pulses in the form of a pulse-keyed carrier. The data stream consists of preamble and encoded data string.

REAL TIME ANALYSIS:

Description	Total Time	"On" Time
Total Transmission	17 x 500 uSec. = 8.5 E-3 Sec on time	

In compliance with FCC Rules 15.35(c), the following duty cycle factor is used for all field strength calculations. A 100 mSec. full word time window is selected with the worst case programmable on time ratio.

$$\frac{\text{8.5 E-3 On time}}{\text{100 E-3 Total time Window}} = \text{8.5 E-2 on time per 100 mSec. time window}$$

20 log (8.5E-2) = -21.4 dB 20 dB Duty Cycle Ratio (Per FCC Rules)

DURATION OF RF TRANSMISSIONS

DXS-36AF

REMOTE CONTROL TRANSMITTER

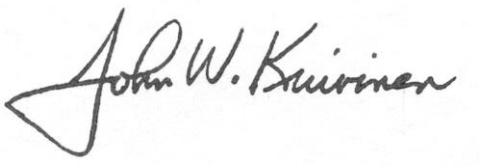
These transmitters are manually activated by a door opening / closing or optional external alarm, tamper or test push button switch. They are used for remote control of a home alarm system. Transmissions are encoded in Linear DX format and are limited to 8 data words lasting approximately 1 second from start of first transmission to end of last repeated word.

Automatic status transmissions are made at 1.2 hour intervals. DX format transmissions have a 10% duty cycle for each word and are repeated 8 times to insure proper reception.

Manually activated transmission may operate continuously. Due to concerns about battery life, the transmitter microprocessor has an internal clock that limits manually activated transmissions, even if the contact is held down, to no longer than 10 seconds Only after the switch / button is released and then pressed again may another transmission cycle begin.

On a brief momentary pressing of the test switch or door/window contacts, the microprocessor will power up and complete a minimum of 8 words in the RF data message. This transmission will take approximately 1 second. FCC Rules 15.231 (a)(1) allows no longer than 5 seconds upon the release of a manually activated transmitter.

Signed:



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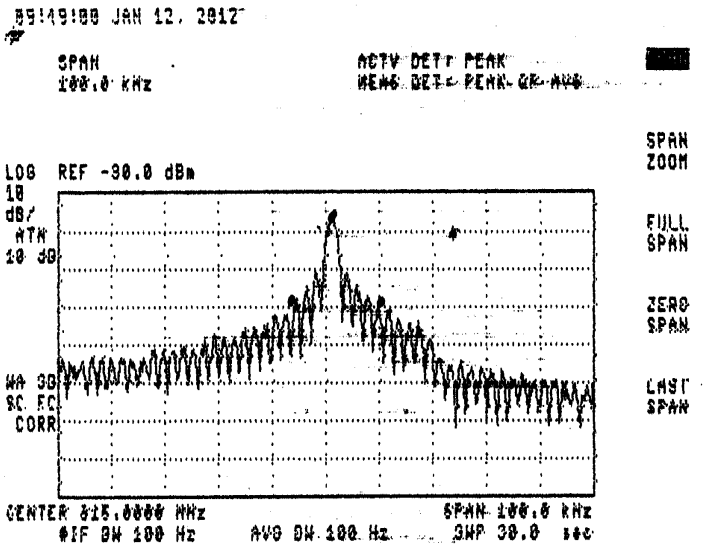
Regulatory Compliance Engineer



DEVICE: DXS-36AF Remote Control Transmitter

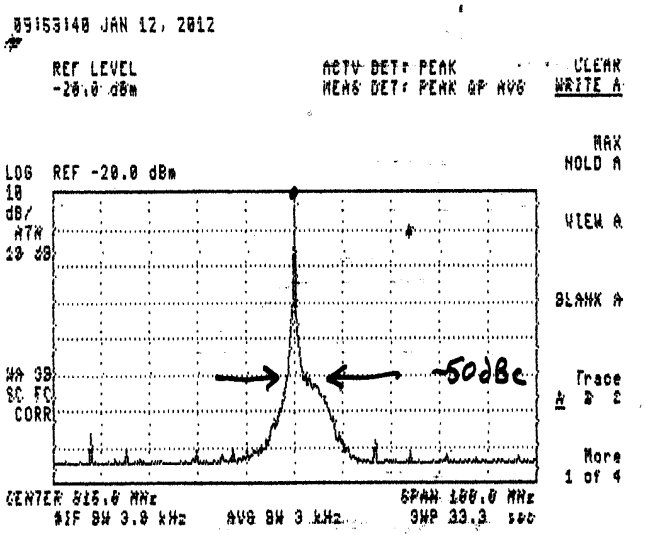
PHOTOGRAPH: Occupied Bandwidth

CONDITIONS: Transmitter Fundamental. A1D Modulation - Pulse Position Modulation. Crystal Frequency Determining Element.

SPECTRUM ANALYZER CONTROL SETTINGS

CENTER FREQUENCY:	315.0 MHz	INPUT ATTENUATION:	-10 dB
SCAN WIDTH:	10 KHz / Div.	PREAMPLIFIER GAIN:	0 dB
SCAN TIME:	30 Sec.	LOG REF. LEVEL:	0 dBm
RF BANDWIDTH:	100 Hz		
ANTENNA:	6" Whip Ant. at Analyzer Input	TUNED TO:	N/A
ANTENNA DISTANCE:	0.1 Meters	ANTENNA HEIGHT:	N/A
SYSTEM NOISE FLOOR:	N/A		

NOTES: Per 15.231(c), Occupied Bandwidth (20 dB down) is less than +/- 10 KHz. This is less than 0.020% of the center frequency. FCC Rules, 15.231(c) devices must be less than 0.25% of center frequency. This device therefore complies with 15.231(c).



DEVICE: DXS-36AF Remote Control Transmitter

PHOTOGRAPH: Transmitter Spurious Emissions +/-50 MHz of the tuned center frequency.

CONDITIONS: Transmitter Fundamental. A1D Modulation, Crystal Frequency Determining Element.

SPECTRUM ANALYZER CONTROL SETTINGS

CENTER FREQUENCY:	315.0 MHz	INPUT ATTENUATION:	-10 dB
SCAN WIDTH:	100 MHz	PREAMPLIFIER GAIN:	0 dB
SCAN TIME:	33 Sec.	LOG REF. LEVEL:	0 dBm
RF BANDWIDTH:	3.0 KHz		
ANTENNA:	6" Whip Antenna on Analyzer Input	TUNED TO:	N/A
ANTENNA DISTANCE:	0.1 Meters	ANTENNA HEIGHT:	N/A
SYSTEM NOISE FLOOR:	N/A		

No emissions occur outside of the of the rated center freq. except for harmonic spurious signals.