



**SAFE VIEW, INC. TEST REPORT**

**FOR THE**

**SECURITY PORTAL, SCOUT 100 VERSION 2 SWITCH**

**FCC PART 15 SUBPART C SECTIONS 15.207 & 15.209**

**COMPLIANCE**

**DATE OF ISSUE: NOVEMBER 27, 2006**

**PREPARED FOR:**

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Meridian, ID 83642

P.O. No.: 4335E  
W.O. No.: 85484

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Date of test: July 25 – November 16, 2006

**Report No.: FC06-056**

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## ADMINISTRATIVE INFORMATION

**DATE OF TEST:** July 25 – November 16, 2006

**DATE OF RECEIPT:** July 25, 2006

**MANUFACTURER:** Safe View, Inc.  
910 East Franklin Road  
Meridian, ID 83642

**REPRESENTATIVE:** Scott Trosper

**TEST LOCATION:** CKC Laboratories, Inc.  
1120 Fulton Place  
Fremont, CA 94539

**TEST METHOD:** ANSI C63.4 (2003)

**PURPOSE OF TEST:** To demonstrate the compliance of the Security Portal, SCOUT 100 Version 2 Switch with the requirements for FCC Part 15 Subpart C Sections 15.207 & 15.209 devices with FCC waiver DA 06-1589 dated August 4, 2006.

### FCC TO CANADA STANDARD CORRELATION MATRIX

Canadian Standard	Canadian Section	FCC Standard	FCC Section	Test Description
RSS GEN	7.1.4	47CFR	15.203	Antenna Connector Requirements
RSS GEN	7.2.1	47CFR	15.35(c)	Pulsed Operation
RSS GEN	7.2.2	47CFR	15.207	AC Mains Conducted Emissions Requirement
RSS 210	2.1	47CFR	15.215(c)	Frequency Stability Recommendation
RSS 210	2.2	47CFR	15.205	Restricted Bands of Operation
RSS 210	2.6	47CFR	15.209	General Radiated Emissions Requirement
	IC 5933		958979	Site File No.

#### CONDITIONS FOR COMPLIANCE

- Modifications:
- 1) Added a two-turn clamp on ferrite on the SCU serial line.
  - 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
  - 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
  - 4) Changed the encoder cable to a custom made, shielded encoder cable.
  - 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

These modifications or Safeview's engineering equivalencies of these modifications will ensure the EUT will continue to meet the FCC standards.

#### APPROVALS

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EMC Engineer



Christine Nicklas, Senior EMC  
Engineer/Consultant

**FCC 15.31(e) Voltage Variations**

Nominal ACV=120. 85% is 102V. 115% is 138V.

**FCC 15.31(m) Number Of Channels**

This device was tested on three channels.

**FCC 15.33(a) Frequency Ranges Tested**

15.207 Conducted Emissions: 150 kHz – 30 MHz

15.209 Radiated Emissions: 130 MHz – 100 GHz

<b>FCC SECTION 15.35: ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE</b>			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	100 GHz	1 MHz

**FCC 15.203 Antenna Requirements**

The Safeview Scout 100 system uses an antenna element permanently attached to a subcomponent in the mast switching array and thereby satisfies the requirements of FCC part 15.203.

**EUT Operating Frequency**

The EUT was operating at 24.25 GHz – 30 GHz.

**Temperature And Humidity During Testing**

The temperature during testing was within +15°C and + 35°C.

The relative humidity was between 20% and 75%.

## EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

## EQUIPMENT UNDER TEST

### Security Portal

Manuf: SafeView, Inc.  
Model: SCOUT 100 Version 2 Switch  
Serial: A100062500152 &  
A100062300146  
FCC ID: pending

## PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

### Computer/Monitor

Manuf: MPC  
Model: CLIENTPRO 474  
Serial: 4007670-0001

### Keyboard

Manuf: MPC  
Model: SK-1688  
Serial: C0602086090

### Computer Power Supply

Manuf: Lite-on Technology Corp.  
Model: PA-1221-03  
Serial: 5Y00045302

### Mouse

Manuf: Microsoft  
Model: Basic Optical Mouse 1.0A  
Serial: NA

## REPORT OF MEASUREMENTS

The following tables report the worst case emissions levels recorded during the tests performed on the EUT. All readings taken were peak readings unless otherwise stated. The data sheets from which the emissions tables were compiled are contained in Appendix C.

**Table 1: FCC 15.207 Six Highest Conducted Emission Levels**

FREQUENCY MHz	METER READING dB $\mu$ V	CORRECTION FACTORS				CORRECTED READING dB $\mu$ V	SPEC LIMIT dB $\mu$ V	MARGIN dB	NOTES
		Lisn dB	HPF dB	Att dB	Cable dB				
0.184906	36.6	0.4	0.1	9.8	0.1	48.1	54.3	-6.2	W
0.293986	33.5	0.3	0.3	9.8	0.1	44.0	50.4	-6.4	W
0.330346	33.2	0.4	0.2	9.8	0.1	43.7	49.4	-5.7	B
0.331073	32.6	0.3	0.2	9.8	0.1	43.0	49.4	-6.4	W
0.364000	31.4	0.3	0.1	9.7	0.2	41.7	48.6	-6.9	WA
0.432881	31.3	0.3	0.0	9.7	0.2	41.5	47.2	-5.7	W

Test Method: ANSI C63.4 (2003)  
Spec Limit: FCC Part 15 Subpart C Section 15.207

NOTES: A = Average Reading  
B = Black Lead  
W = White Lead

**COMMENTS:** The SafeScout S-100 Security Portal is operating and running on an auto-cycle pause time of 6 seconds. The SafeScout S-100 is connected to a support PC by an ethernet connection. The support PC triggers the SCU to begin a security scan. The software is setup to repeatedly run scan while the system is under test. Conducted Emissions 0.15 – 30 MHz.



**Table 2: FCC 15.209 Six Highest Carrier Radiated Emission Levels**

FREQUENCY MHz	METER READING dB $\mu$ V	CORRECTION FACTORS				CORRECTED READING dB $\mu$ V/m	SPEC LIMIT dB $\mu$ V/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
24484.000	91.5	-2.3		0.0	-13.0	76.2	77.9	-1.7	V
24624.000	102.9	-17.0		7.2	-13.0	80.1	82.2	-2.1	V
26973.000	74.7	2.0		7.4	-13.0	71.1	73.0	-1.9	V
26973.000	74.3	2.0		7.4	-13.0	70.7	73.0	-2.3	V
26974.000	74.6	2.0		7.4	-13.0	71.0	73.0	-2.0	V
29802.000	78.3	3.6		7.9	-13.0	76.8	77.9	-1.1	V

Test Method: ANSI C63.4 (2003)  
 Spec Limit: FCC Part 15 Subpart C Section 15.209  
 Test Distance: 1 Meter

NOTES: V = Vertical Polarization

COMMENTS: The Scout 100 V2 Switch Security Portal's antenna masts are reversed from their normal scanning position so these antennas are facing to the outside of the EUT. In actuality, the mast should be facing inward with the antenna 3 meters from the system which is 4.5 meters from the mast. This measurement technique relinquishes the power loss of 1.5 meters making the peak power greater than what it actually is in the system. For this testing the transmitter is transmitting continuously at each of the following frequencies. Low channel=24.65 GHz. Mid channel=27 GHz. Hi channel=29.8 GHz. Measuring Peak Carrier Power per DA 06-1589 paragraph 8b. RBW=100 kHz, VBW=3 MHz, Span=1 GHz. Sweep time=auto. Measuring Average RMS Power per DA 06-1589 paragraph 8a. RBW=1 MHz, VBW=3 MHz, Span=0 Hz. Sweep time=1 sec. Emissions reported represent worst case polarization. Peak limit was derived by adding 41 dB to the average RMS value for that channel and mast antenna number. Data for antenna 320 mid and hi channels was re-measured on 11-16-06. These readings were taken at different AC input voltages to observe the effect on the output power. No effect on output power was noticed by varying the AC input. Nominal ACV=120. 85% is 102V. 115% is 138V.

**Table 3: FCC 15.209 Six Highest Radiated Emission Levels: 9 kHz-1000 MHz**

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS				CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
293.768	51.1	12.9	-25.4	1.7		40.3	46.0	-5.7	H
295.329	50.6	12.9	-25.4	1.7		39.8	46.0	-6.2	VQ
310.234	51.1	13.2	-25.6	1.7		40.4	46.0	-5.6	H
399.029	48.6	15.5	-25.9	2.0		40.2	46.0	-5.8	V
399.926	48.5	15.5	-25.9	2.0		40.1	46.0	-5.9	V
500.013	47.3	17.5	-26.7	2.2		40.3	46.0	-5.7	HQ

Test Method: ANSI C63.4 (2003)  
 Spec Limit: FCC Part 15 Subpart C Section 15.209  
 Test Distance: 3 Meters

NOTES: Q = Quasi Peak Reading  
 V = Vertical Polarization

COMMENTS: The Scout 100 Version 2 Switch Security Portal is operating and running on an auto-cycle pause time of 6 seconds. The Scout 100 is connected to a support PC by an ethernet connection. The support PC triggers the SCU to begin a security scan. The software is setup to repeatedly run scan while the system is under test. Radiated Emissions 30 - 1000MHz. Maximized. Modifications:

- 1) Added a two-turn ferrite on the SCU serial line.
- 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
- 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
- 4) Changed the encoder cable to a custom made, shielded encoder cable.
- 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

These modifications or Safeview's engineering equivalencies of these modifications will ensure the EUT will continue to meet the FCC standards.

The reasons for these modifications are to reduce emissions between 30 MHz and 1000 MHz:

- 1) ferrite on serial line - addresses 60MHz broadband noise
  - 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur
  - 3) DB37 ferrite - addresses 153MHz discrete spur
  - 4) custom shielded encoder cable - multiple discrete frequencies 30-1000MHz
  - 5) 6 dB attenuators addresses the divided down VCO frequencies removing the 700 MHz peaks
- No transceiver related emissions were detected within 20dB of the limit below 30 MHz. Loop antenna was positioned in the horizontal and vertical polarity and rotated to maximize emissions in this range.**

**Table 4: FCC 15.209 Six Highest Radiated Emission Levels: 1-100 GHz**

FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS				CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
12349.240	57.7	39.4	-65.5	17.2		48.8	54.0	-5.2	V
9343.941	57.4	37.9	-63.1	14.5		46.8	54.0	-7.2	H
9343.733	57.4	37.9	-63.1	14.5		46.8	54.0	-7.2	V
12348.580	55.2	39.4	-65.6	17.2		46.3	54.0	-7.7	H
3087.833	71.8	30.2	-64.0	8.5		46.0	54.0	-8.0	H
1000.033	88.3	23.8	-68.9	2.3		45.5	54.0	-8.5	V

Test Method: ANSI C63.4 (2003)  
 Spec Limit: FCC Part 15 Subpart C Section 15.209 and  
 Test Distance: .1 meters for 40-100 GHz and  
 3 Meters for < 40 GHz testing

NOTES: H = Horizontal Polarization  
 V = Vertical Polarization

COMMENTS: The Scout 100 Version 2 Switch Security Portal is operating and running on an auto-cycle pause time of 6 seconds. The Scout 100 is connected to a support PC by an ethernet connection. The support PC triggers the SCU to begin a security scan. The software is setup to repeatedly run scan while the system is under test. Radiated Emissions 1-12.5 GHz. Maximized Emissions. Modifications:

- 1) Added a two-turn clamp on ferrite on the SCU serial line.
- 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
- 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
- 4) Changed the encoder cable to a custom made, shielded encoder cable.
- 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

The reasons for these modifications are:

- 1) ferrite on serial line - addresses 60MHz broadband noise
  - 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur
  - 3) DB37 ferrite - addresses 153MHz discrete spur
  - 4) custom shielded encoder cable - multiple discrete frequencies 30-1000MHz
  - 5) 6 dB attenuators addresses the divided down VCO frequencies removing the 700 MHz peaks
- Signals detected in the range of 40-100 GHz were determined to be noise floor readings, representing no EUT signals detected above this level.

**Table 5: Band Edge Emission Levels**

FREQUENCY MHz	METER READING dB $\mu$ V	CORRECTION FACTORS				CORRECTED READING dB $\mu$ V/m	SPEC LIMIT dB $\mu$ V/m	MARGIN dB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
24250.000	43.0	-17.2		7.2	-10.0	23.0	54.0	-31.0	V-2
30000.000	25.3	4.1		7.9	-10.0	27.3	54.0	-26.7	VA-1

Test Method: ANSI C63.4 (2003)  
 Spec Limit: FCC Part 15 Subpart C Section 15.209 and  
 Test Distance: 1 Meter

NOTES: A = Average Reading  
 V = Vertical Polarization  
 1 = Upper Band  
 2 = Lower Band

COMMENTS: The Scout 100 V2 Switch Security Portal antenna mast is in normal position so antennas are facing to the inside of the EUT. Low channel=24.65 GHz. Mid channel=27 GHz. Hi channel=29.8 GHz. Measuring Peak Carrier Power per DA 06-1589 paragraph 8b. RBW=100 kHz, VBW=3 MHz, Span=1 GHz. Sweep time=auto. Measuring Average RMS Power per DA 06-1589 paragraph 8a. RBW=1 MHz, VBW=3 MHz, Span=0 Hz. Sweep time=1 sec. Emissions reported represent worst case polarization. Measuring CW peak values at low and high channel. Measuring sweeping average values at lower and upper band edges. Transmitting on antenna 192. Measurements were taken with the EMC antennas inside the EUT with the transmitter on continuously.

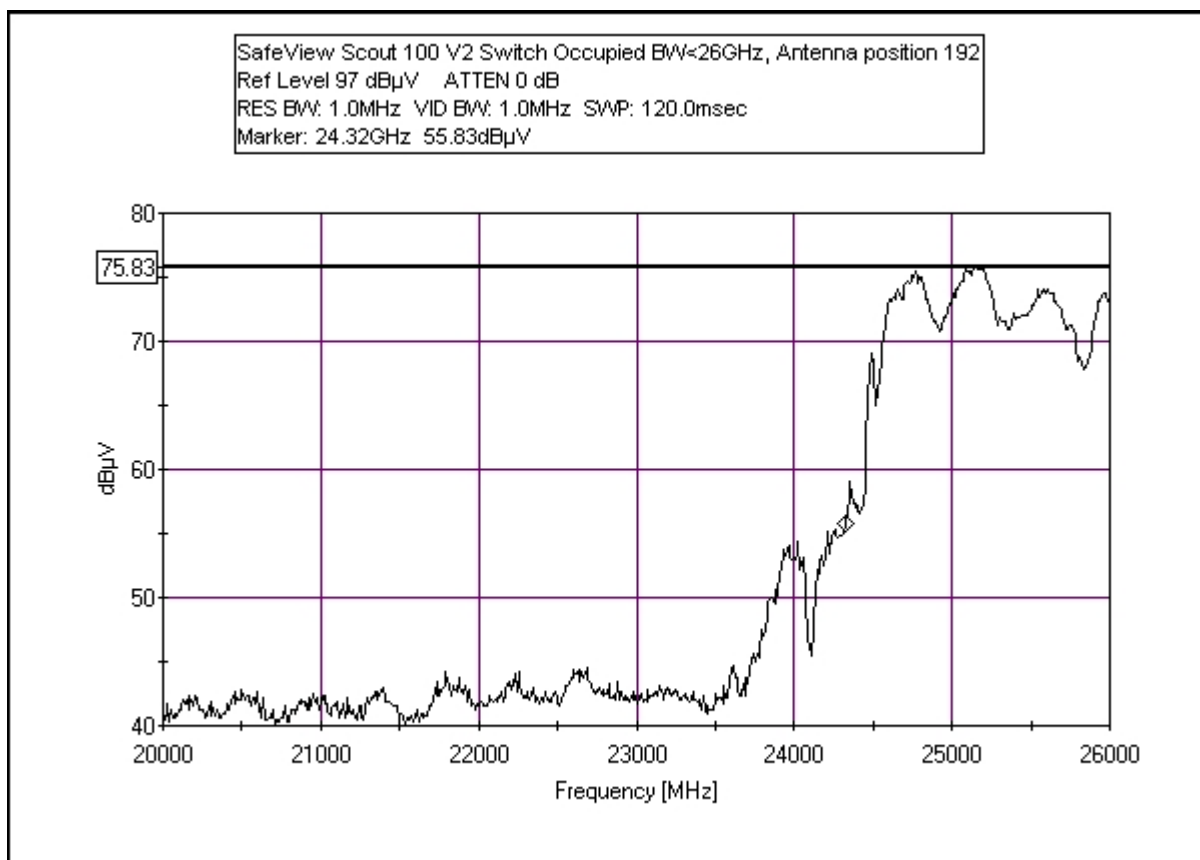
**Band Edge Frequency requirements**

Measurement	Measured Frequency	Limits	
Lower Band Edge	24.32 GHz (fill in)	24.25GHz	Pass
Upper Band Edge	29.868GHz (fill in)	30.00GHz	Pass

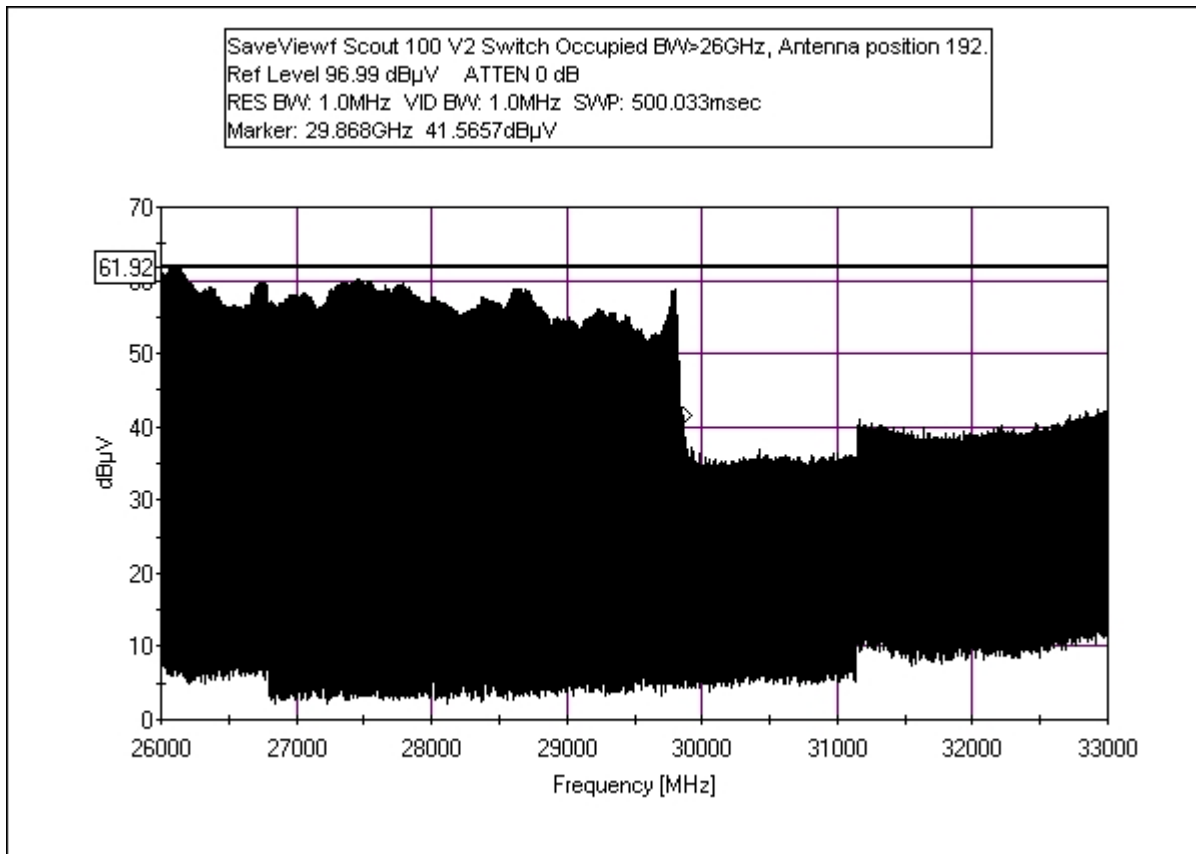
### OCCUPIED BANDWIDTH 20-26 GHz

#### Summary of Occupied Bandwidth

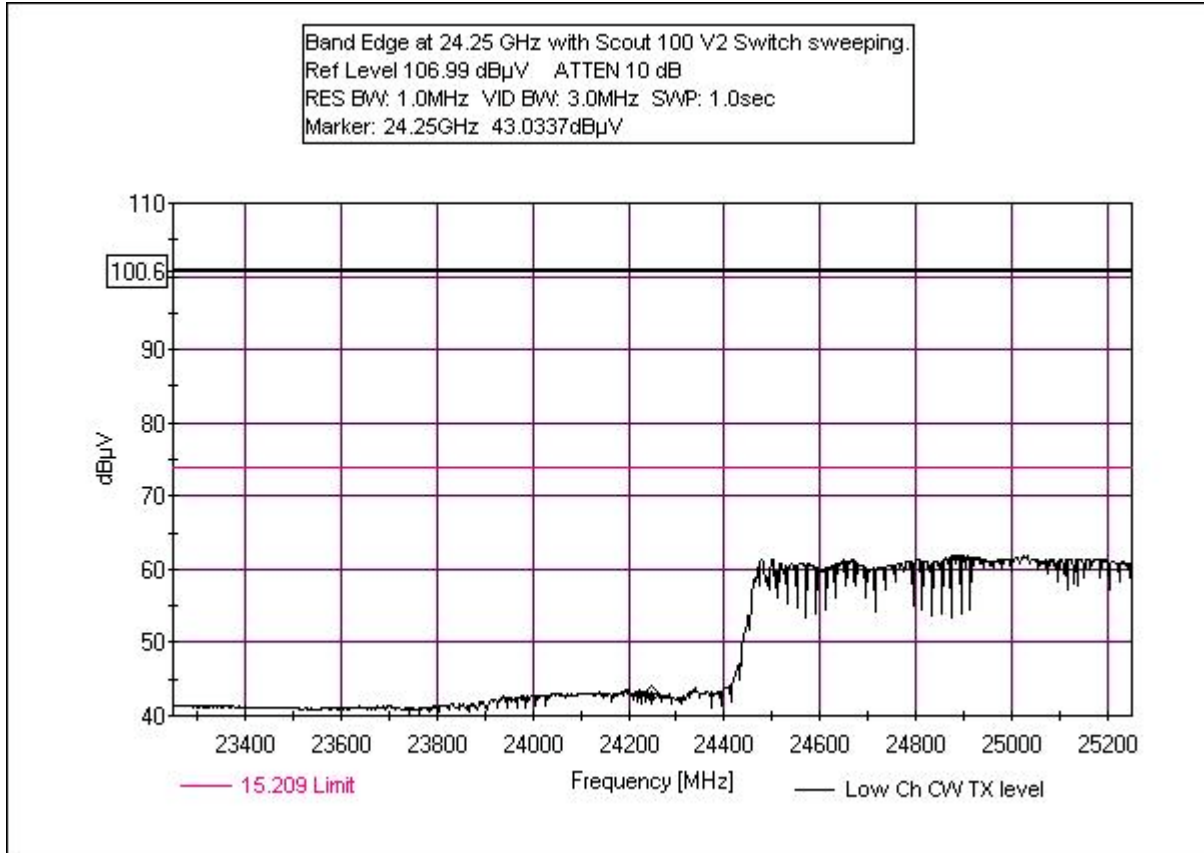
Lower Frequency	Upper Frequency	Measured 20dB Bandwidth
24.32 GHz	29.868GHz	5.548 GHz



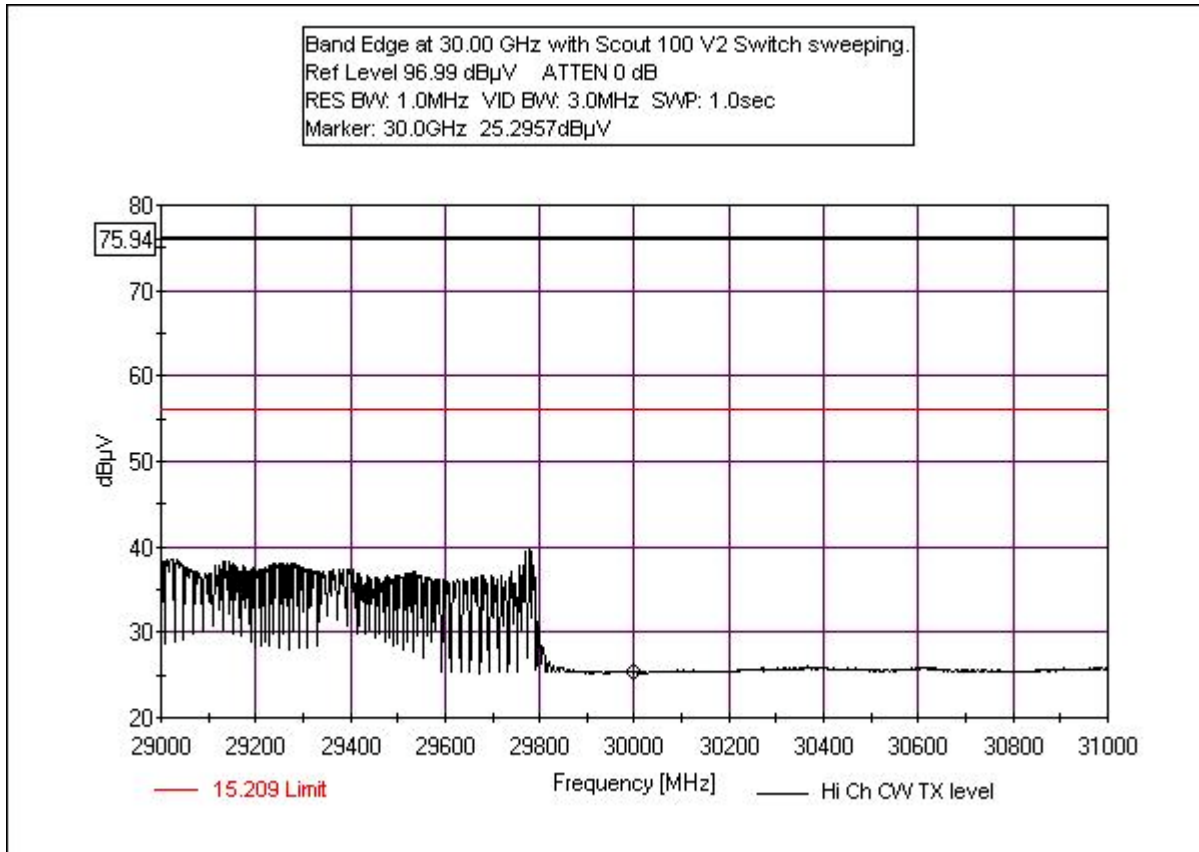
### OCCUPIED BANDWIDTH 26-33 GHz



### 24.25 GHz BAND EDGE AVERAGE



### 30.0 GHz BAND EDGE AVERAGE





**EUT SETUP**

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the photographs in Appendix A. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables. The corrected data was then compared to the applicable emission limits to determine compliance.

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available I/O ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. I/O cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The radiated and conducted emissions data of the EUT was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in Table A.

Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

**CORRECTION FACTORS**

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dB $\mu$ V/m, the spectrum analyzer reading in dB $\mu$ V was corrected by using the following formula in Table A. This reading was then compared to the applicable specification limit to determine compliance.

<b>TABLE A: SAMPLE CALCULATIONS</b>		
	Meter reading	(dB $\mu$ V)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dB $\mu$ V/m)

## **TEST INSTRUMENTATION AND ANALYZER SETTINGS**

The test instrumentation and equipment listed in Appendix B were used to collect both the radiated and conducted emissions data. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. For frequencies from 30 to 1000 MHz, the biconilog antenna was used. The horn antenna was used for frequencies above 1000 MHz. Conducted emissions tests required the use of the FCC type LISNs.

The HP or Agilent spectrum analyzers were used for the measurements under which they are listed. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. For conducted emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. A 10 dB external attenuator was also used during conducted tests, with internal offset correction in the analyzer. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dB $\mu$ V, and a vertical scale of 10 dB per division.

## **SPECTRUM ANALYZER DETECTOR FUNCTIONS**

The notes that accompany the measurements contained in the Tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A" in the appropriate table. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

### **Peak**

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold," the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

### **Quasi-Peak**

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP Quasi-Peak Adapter for the HP Spectrum Analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual were followed.

### **Average**

For certain frequencies, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set into the linear mode and the scan time is reduced. All Average readings listed except the Carrier Peak and Average Emissions Levels were measured using the definition of Average above. The Carrier Peak and Average Emissions Levels were measured using the Average method described in Waiver DA95-1589.

## **EUT TESTING**

### **Mains Conducted Emissions**

During conducted emissions testing, the EUT was located on the turntable in the alternative OATS site. The EUT was a minimum of 80cm from any other conductive surface.

Power to the EUT was provided through a LISN. The LISN was grounded to the ground plane floor of the alternative OATS site. All other objects were kept a minimum of 80 cm away from the EUT during the conducted test.

The LISNs used were 50  $\mu$ H-/+50 ohms. Automated measurements were used in the frequency band of 150 kHz to 30 MHz in the Manual Measurement mode. The automated software was utilized to set up the proper frequency bands and bandwidths for each frequency band. After each frequency band was properly set up, the test engineer set the spectrum analyzer to MAX Hold, Continuous sweep and allowed the spectrum analyzer to capture the data over at least three full cycles of the EUT. The test engineer then let the software know the data had been captured and the software recorded the data and set up the next frequency range. All readings within a minimum of 10 dB of the limit were recorded, and those within 6 dB of the limit were examined with additional measurements using a slower sweep time.

### **Radiated Emissions**

The EUT was floor standing mounted directly on the rotating table.

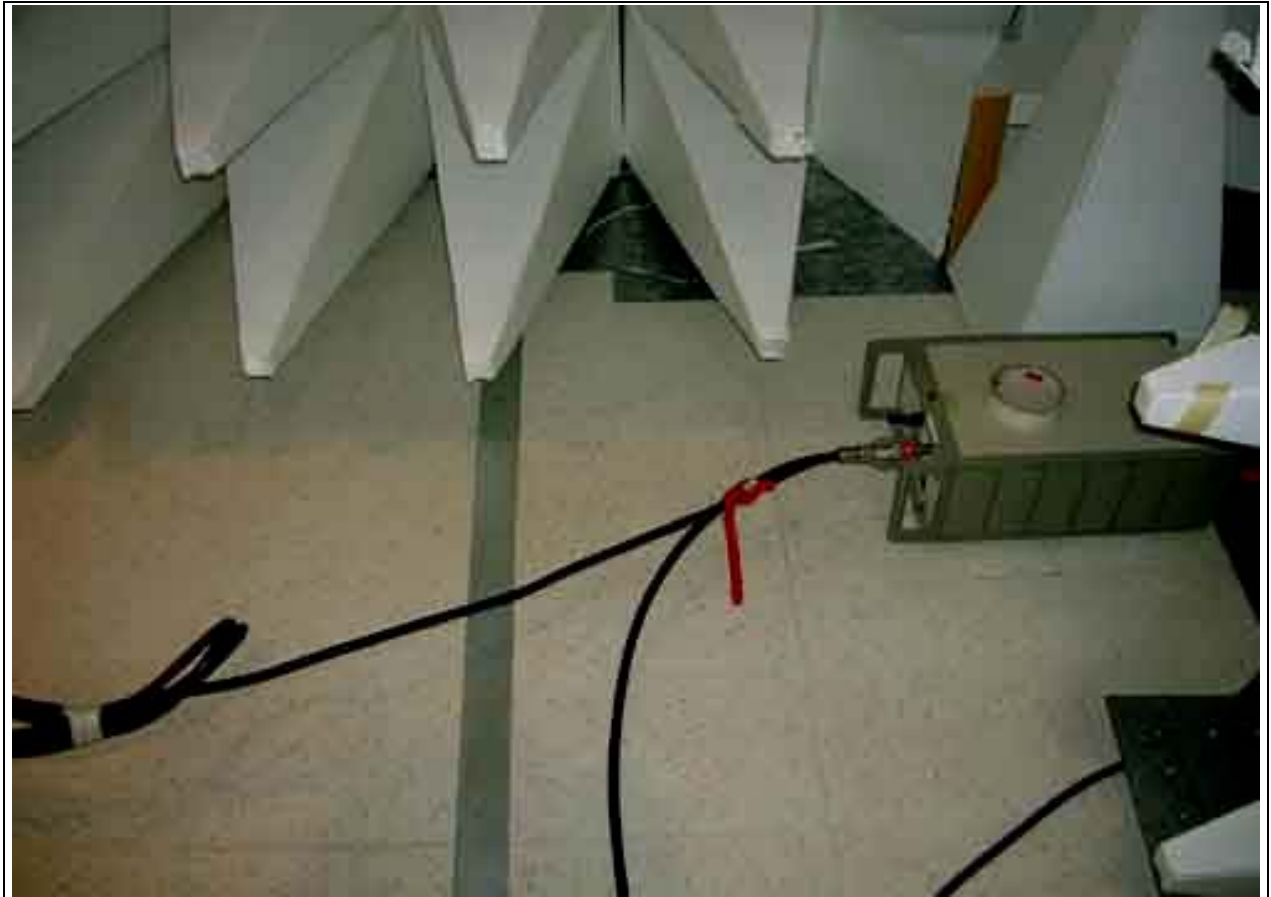
During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. The frequency range of 30 MHz to 1000 MHz was scanned with the biconilog antenna located about 1.5 meter above the ground plane in the vertical polarity. During this scan, the turntable was rotated and all peaks at or near the limit were recorded. A scan of the FM band from 88 to 110 MHz was then made using a reduced resolution bandwidth and frequency span. The biconilog antenna was changed to the horizontal polarity and the above steps were repeated. For frequencies exceeding 1000 MHz, the horn antenna was used. Care was taken to ensure that no frequencies were missed within the FM and TV bands.

A thorough scan of all frequencies was made manually using a small frequency span, rotating the turntable and raising and lowering the antenna from one to four meters as needed. The test engineer maximized the readings with respect to the table rotation, antenna height, and configuration of EUT. Maximizing of the EUT was achieved by monitoring the spectrum analyzer on a closed circuit television monitor.

**APPENDIX A**

**TEST SETUP PHOTOGRAPHS**

**PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS**



Mains Conducted Emissions

**PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS**



Mains Conducted Emissions - Front View

**PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS**



Mains Conducted Emissions - Side View

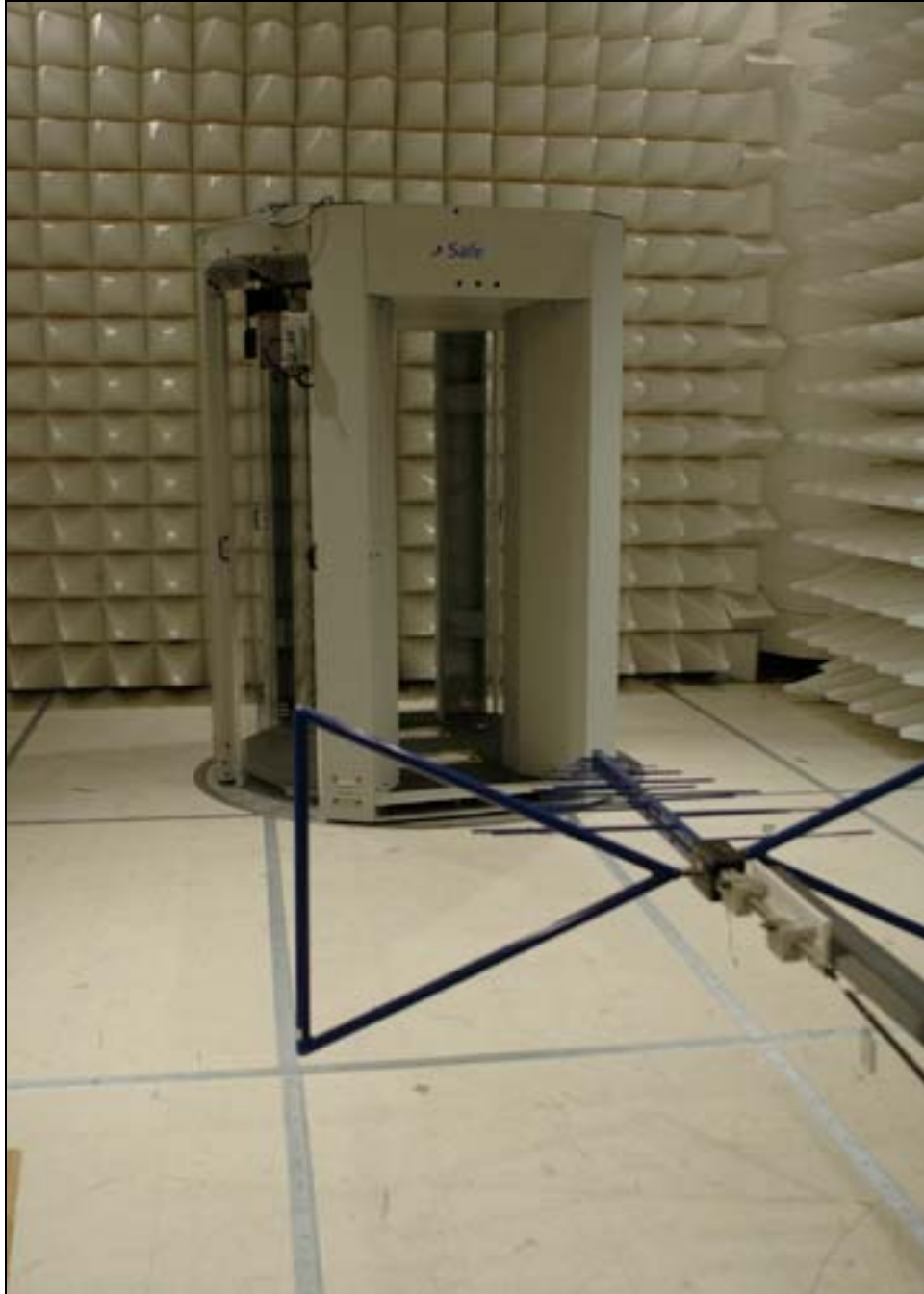
**PHOTOGRAPH SHOWING RADIATED EMISSIONS**



Radiated Emissions - 9 kHz - 30 MHz Parallel



**PHOTOGRAPH SHOWING RADIATED EMISSIONS**



Radiated Emissions - 30-1000 MHz

**PHOTOGRAPH SHOWING RADIATED EMISSIONS**



Radiated Emissions – Overall View of Test Setup 18-40 GHz

**PHOTOGRAPH SHOWING 40-100 GHz Setup**



40-100 GHz Setup - Diplexer installed on SA

**PHOTOGRAPH SHOWING 40-100 GHz Setup**



40-100 GHz Typical Horn & Mixer Location near EUT antenna

**PHOTOGRAPH SHOWING CARRIER POWER OF ANTENNA 16**



**PHOTOGRAPH SHOWING CARRIER POWER RADIATED EMISSIONS**



Carrier Power Radiated Emissions - Back View

**PHOTOGRAPH SHOWING OCCUPIED BANDWIDTH**



18-26 GHz

**PHOTOGRAPH SHOWING OCCUPIED BANDWIDTH**



26-40 GHz



## APPENDIX B

### TEST EQUIPMENT LIST

#### *FCC 15.207*

Function	S/N	Calibration Date	Cal Due Date	Asset #
S.A., Display HP-85662A	2542A12169	11/28/2005	11/28/2007	02662
S.A., RF Section HP-8568B	2601A02492	11/28/2005	11/28/2007	02663
Attenuator	none	10/20/2005	10/20/2007	02223
LISN	9408-1006	05/23/2005	05/23/2007	00493
TTE High Pass Filter	H4120	04/20/2005	04/20/2007	05258
QP Adapter	2521A00909	07/12/2006	07/12/2008	00683
Cable		06/13/2006	06/13/2008	AN 00880

#### *FCC 15.209 Carrier Power and Band Edge*

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A Spectrum Analyzer	US44300408	01/13/2005	01/13/2007	02668
Active Horn 18-26GHz	1087835	10/25/2005	10/25/2007	02694
Active Horn 26-40GHz	1097854	10/25/2005	10/25/2007	02695
Cable, HF	n/a	08/09/2005	08/09/2007	P02715
Cable, HF	n/a	07/12/2005	07/12/2007	P05315

#### *FCC 15.209 9 kHz – 30 MHz*

Function	S/N	Calibration Date	Cal Due Date	Asset #
S.A., Display HP-85662A	2542A12169	11/28/2005	11/28/2007	02662
S.A., RF Section HP-8568B	2601A02492	11/28/2005	11/28/2007	02663
QP Adapter HP-85650A	2043A00188	10/23/2004	10/23/2006	01508
Mag Loop - 6502	2078	05/13/2005	05/13/2007	00432
Cable	n/a	06/21/2005	06/21/2007	P05296
Cable	n/a	06/21/2005	06/21/2007	P05299
Cable	n/a	06/21/2005	06/21/2007	P05300

#### *FCC 15.209 30-1000 MHz*

Function	S/N	Calibration Date	Cal Due Date	Asset #
S.A., Display HP-85662A	2542A12169	11/28/2005	11/28/2007	02662
S.A., RF Section HP-8568B	2601A02492	11/28/2005	11/28/2007	02663
QP Adapter	2521A00909	07/12/2006	07/12/2008	00683
Antenna	2630	01/24/2005	01/24/2007	00852
Cable	None	06/21/2005	06/21/2007	P05299
Cable	None	06/21/2005	06/21/2007	P05300
Cable	None	06/21/2005	06/21/2007	P05296
HP8447F opt H64 preamp	2944A03850	03/05/2005	03/05/2007	00501

#### *FCC 15.209 1-12.5 GHz*

Function	S/N	Calibration Date	Cal Due Date	Asset #
Cable, 6'	n/a	06/07/2006	06/07/2008	P04241
Preamp, Agilent 83051A	00323	02/27/2006	02/27/2008	02810
Antenna, Horn 1-18 GHz	1064	03/08/2005	03/08/2007	02061
Preamp, HP83017A	3123A00283	05/09/2005	05/09/2007	00785
Cable HF	n/a	03/08/2005	03/08/2007	P05239
HP8564E SA	3623A00539	10/27/2006	10/27/2008	02410
HF Cable		03/09/2005	03/09/2007	01956

**FCC 15.209 1-18 GHz**

Function	S/N	Calibration Date	Cal Due Date	Asset #
S.A. HP 8564E	3623A00539	08/01/2006	08/01/2008	01406
Preamp, Agilent 83051A	00323	02/27/2006	02/27/2008	02810
Preamp, HP83017A	3123A00283	05/09/2005	05/09/2007	00785
Antenna, Horn	1064	03/08/2005	03/08/2007	02061
Cable, HF 36"	n/a	02/08/2005	02/08/2007	P05200
Cable, HF 48"	n/a	02/08/2005	02/08/2007	P05201
Cable, HF	n/a	02/20/2006	02/20/2008	P05318
HF-Cable-72" Pasternack	None	07/12/2005	07/12/2007	P05317
Active Horn 12-18GHz	1088714	09/22/2005	09/22/2007	02693
12.4-18GHz WaveGuide	n/a	12/19/2005	12/19/2007	P00928
Cable, HF	n/a	08/09/2005	08/09/2007	P02718

**FCC 15.209 18-26.5 GHz**

Function	S/N	Calibration Date	Cal Due Date	Asset #
S.A. HP 8564E	3623A00539	08/01/2006	08/01/2008	01406
Cable, HF 36"	n/a	02/08/2005	02/08/2007	P05200
Cable, HF	n/a	08/09/2005	08/09/2007	P02718
Cable, HF	n/a	07/12/2005	07/12/2007	P05314
Cable, HF 48"	n/a	02/08/2005	02/08/2007	P05201
Horn 18-26 GHz HP 84125-80008		04/30/2005	04/30/2007	01413
18-26.5GHz WaveGuide	n/a	12/20/2005	12/20/2007	P00929
Preamp, Agilent 83051A	00323	02/27/2006	02/27/2008	02810
Horn 26-40 GHz HP 84125-80001		11/05/2004	11/05/2006	01414

**FCC 15.209 26.5-40 GHz**

Function	S/N	Calibration Date	Cal Due Date	Asset #
S.A. HP 8564E	3623A00539	08/01/2006	08/01/2008	01406
Cable, HF 36"	n/a	02/08/2005	02/08/2007	P05200
Cable, HF	n/a	07/12/2005	07/12/2007	P05314
Preamp, Agilent 83051A	00323	02/27/2006	02/27/2008	02810
Horn 26-40 GHz HP 84125-80001		11/05/2004	11/05/2006	01414
Cable, HF	n/a	08/09/2005	08/09/2007	P02715
26.5-40GHz WaveGuide	n/a	12/20/2005	12/20/2007	P00930

**FCC 15.209 40-60 GHz**

Function	S/N	Calibration Date	Cal Due Date	Asset #
Cable, HF	n/a	07/12/2005	07/12/2007	P05314
S.A. Agilent 8564EC	3946A00232	01/19/2005	01/19/2007	1045025
40-60GHz mixer M19HWA	U91211-1	09/26/2006	09/26/2008	02347
40-60GHz Horn M19RH		09/28/2006	09/28/2008	02347

***FCC 15.209 60-90 GHz***

Function	S/N	Calibration Date	Cal Due Date	Asset #
Cable, HF	n/a	07/12/2005	07/12/2007	P05314
S.A. Agilent 8564EC	3946A00232	01/19/2005	01/19/2007	1045025
60-90GHz Horn M12RH		09/28/2006	09/28/2008	02348
60-90GHz mixer M12HWA	E91211-1	09/26/2006	09/26/2008	02348

***FCC 15.209 90-100 GHz***

Function	S/N	Calibration Date	Cal Due Date	Asset #
Cable, HF	n/a	07/12/2005	07/12/2007	P05314
S.A. Agilent 8564EC	3946A00232	01/19/2005	01/19/2007	1045025
90-110GHz Horn M08RH		09/26/2006	09/26/2008	02349
90-110GHz mixer M08HWA	F91211-2	09/26/2006	09/26/2008	02349

**APPENDIX C:**  
**MEASUREMENT DATA SHEETS**

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **SafeView, Inc.**  
 Specification: **FCC 15.207 COND [AVE]**  
 Work Order #: **85822**  
 Test Type: **Conducted Emissions**  
 Equipment: **SafeScout Security Portal**  
 Manufacturer: **SafeView, Inc.**  
 Model: **S-100**  
 S/N: **A100062300146**

Date: 11/8/2006  
 Time: 11:32:38  
 Sequence#: 1  
 Tested By: Art Rice  
 120V 60Hz

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
SafeScout Security Portal*	SafeView, Inc.	S-100	A100062300146

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The SafeScout S-100 Security Portal is operating and running on an auto-cycle pause time of 6 seconds. The SafeScout S-100 is connected to a support PC by an ethernet connection. The support PC triggers the SCU to begin a security scan. The software is setup to repeatedly run scan while the system is under test. Conducted Emissions 0.15 – 30 MHz.

**Transducer Legend:**

T1=LISN - AN00493 - Black - ELC "OUT"	T2=TTE HP Filter P05258
T3=ANP02223 10dB Attenuator	T4=Cable P00880

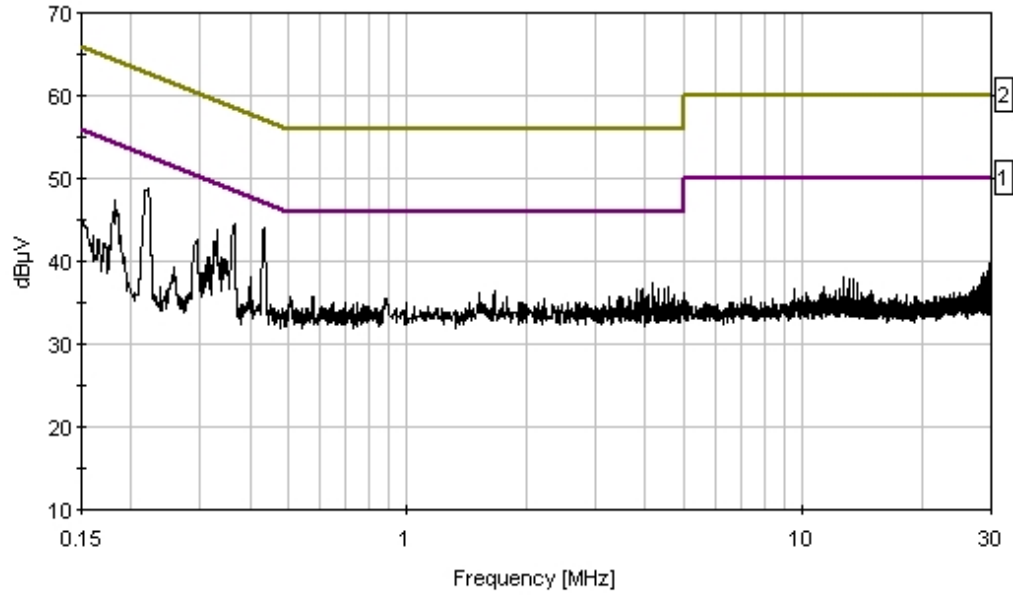
**Measurement Data:** Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V	Spec dB $\mu$ V	Margin dB	Polar Ant
1	330.346k	33.2	+0.4	+0.2	+9.8	+0.1	+0.0	43.7	49.4	-5.7	Black
2	181.270k	35.6	+0.4	+1.4	+9.8	+0.1	+0.0	47.3	54.4	-7.1	Black
3	293.986k	32.1	+0.3	+0.3	+9.8	+0.1	+0.0	42.6	50.4	-7.8	Black
4	183.451k	34.7	+0.4	+1.3	+9.8	+0.1	+0.0	46.3	54.3	-8.0	Black
5	4.190M	27.0	+0.3	+0.1	+9.8	+0.1	+0.0	37.3	46.0	-8.7	Black
6	339.072k	30.0	+0.4	+0.1	+9.8	+0.1	+0.0	40.4	49.2	-8.8	Black
7	344.162k	29.9	+0.4	+0.1	+9.8	+0.1	+0.0	40.3	49.1	-8.8	Black

8	221.000k	33.3	+0.4	+0.2	+9.8	+0.1	+0.0	43.8	52.8	-9.0	Black
	Ave										
^	221.266k	38.4	+0.4	+0.2	+9.8	+0.1	+0.0	48.9	52.8	-3.9	Black
10	4.590M	26.5	+0.4	+0.1	+9.8	+0.2	+0.0	37.0	46.0	-9.0	Black
11	3.790M	26.4	+0.3	+0.1	+9.8	+0.1	+0.0	36.7	46.0	-9.3	Black
12	3.922M	26.3	+0.3	+0.1	+9.8	+0.1	+0.0	36.6	46.0	-9.4	Black
13	4.318M	26.3	+0.3	+0.1	+9.8	+0.1	+0.0	36.6	46.0	-9.4	Black
14	4.454M	26.3	+0.3	+0.1	+9.8	+0.1	+0.0	36.6	46.0	-9.4	Black
15	313.620k	30.0	+0.3	+0.2	+9.8	+0.1	+0.0	40.4	49.9	-9.5	Black
16	1.660M	26.1	+0.3	+0.1	+9.7	+0.2	+0.0	36.4	46.0	-9.6	Black
17	400.157k	28.0	+0.3	+0.0	+9.7	+0.2	+0.0	38.2	47.9	-9.7	Black
18	4.990M	25.7	+0.4	+0.1	+9.8	+0.2	+0.0	36.2	46.0	-9.8	Black
19	360.000k	28.4	+0.4	+0.1	+9.7	+0.2	+0.0	38.8	48.7	-9.9	Black
	Ave										
^	360.978k	34.1	+0.4	+0.1	+9.7	+0.2	+0.0	44.5	48.6	-4.1	Black
21	1.523M	25.8	+0.3	+0.1	+9.7	+0.2	+0.0	36.1	46.0	-9.9	Black
22	4.717M	25.5	+0.4	+0.1	+9.8	+0.2	+0.0	36.0	46.0	-10.0	Black
23	318.710k	29.2	+0.3	+0.2	+9.8	+0.1	+0.0	39.6	49.7	-10.1	Black
24	320.165k	29.2	+0.3	+0.2	+9.8	+0.1	+0.0	39.6	49.7	-10.1	Black
25	4.058M	25.6	+0.3	+0.1	+9.8	+0.1	+0.0	35.9	46.0	-10.1	Black
26	506.328k	25.7	+0.3	+0.0	+9.7	+0.1	+0.0	35.8	46.0	-10.2	Black
27	3.450M	25.4	+0.4	+0.1	+9.7	+0.2	+0.0	35.8	46.0	-10.2	Black
28	1.791M	25.4	+0.3	+0.1	+9.7	+0.2	+0.0	35.7	46.0	-10.3	Black
29	29.623M	28.1	+1.0	+0.3	+9.8	+0.5	+0.0	39.7	50.0	-10.3	Black
30	311.438k	29.0	+0.3	+0.3	+9.8	+0.1	+0.0	39.5	49.9	-10.4	Black

31	573.230k	25.5	+0.3	+0.0	+9.7	+0.1	+0.0	35.6	46.0	-10.4	Black
32	3.254M	25.2	+0.4	+0.1	+9.7	+0.2	+0.0	35.6	46.0	-10.4	Black
33	3.650M	25.3	+0.3	+0.1	+9.8	+0.1	+0.0	35.6	46.0	-10.4	Black
34	308.530k	29.0	+0.3	+0.3	+9.8	+0.1	+0.0	39.5	50.0	-10.5	Black
35	2.229M	25.2	+0.3	+0.1	+9.7	+0.2	+0.0	35.5	46.0	-10.5	Black
36	3.522M	25.2	+0.3	+0.1	+9.8	+0.1	+0.0	35.5	46.0	-10.5	Black
37	29.801M	27.9	+1.0	+0.3	+9.8	+0.5	+0.0	39.5	50.0	-10.5	Black
38	881.253k	25.2	+0.3	+0.0	+9.7	+0.2	+0.0	35.4	46.0	-10.6	Black
39	3.990M	25.1	+0.3	+0.1	+9.8	+0.1	+0.0	35.4	46.0	-10.6	Black
40	4.654M	24.9	+0.4	+0.1	+9.8	+0.2	+0.0	35.4	46.0	-10.6	Black
41	4.024M	25.0	+0.3	+0.1	+9.8	+0.1	+0.0	35.3	46.0	-10.7	Black
42	4.858M	24.7	+0.4	+0.1	+9.8	+0.2	+0.0	35.2	46.0	-10.8	Black
43	648.859k	25.0	+0.3	+0.0	+9.7	+0.1	+0.0	35.1	46.0	-10.9	Black
44	1.438M	24.8	+0.3	+0.1	+9.7	+0.2	+0.0	35.1	46.0	-10.9	Black
45	1.923M	24.8	+0.3	+0.1	+9.7	+0.2	+0.0	35.1	46.0	-10.9	Black
46	2.659M	24.7	+0.4	+0.1	+9.7	+0.2	+0.0	35.1	46.0	-10.9	Black
47	2.723M	24.7	+0.4	+0.1	+9.7	+0.2	+0.0	35.1	46.0	-10.9	Black
48	3.871M	24.8	+0.3	+0.1	+9.8	+0.1	+0.0	35.1	46.0	-10.9	Black
49	2.136M	24.7	+0.3	+0.1	+9.7	+0.2	+0.0	35.0	46.0	-11.0	Black
50	2.561M	24.6	+0.4	+0.1	+9.7	+0.2	+0.0	35.0	46.0	-11.0	Black
51	2.816M	24.6	+0.4	+0.1	+9.7	+0.2	+0.0	35.0	46.0	-11.0	Black
52	435.000k	25.6	+0.3	+0.0	+9.7	+0.2	+0.0	35.8	47.2	-11.4	Black
	Ave										
^	435.062k	33.8	+0.3	+0.0	+9.7	+0.2	+0.0	44.0	47.2	-3.2	Black

CKC Laboratories, Inc. Date: 11/8/2006 Time: 11:32:38 SafeView, Inc. WO#: 85822  
FCC 15.207 COND [AVE] Test Lead: Black 120V 60Hz Sequence#: 1



— Sweep Data      — 1 - FCC 15.207 COND [AVE]      — 2 - FCC 15.207 COND [QP]



Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **SafeView, Inc.**  
 Specification: **FCC 15.207 COND [AVE]**  
 Work Order #: **85822** Date: 11/8/2006  
 Test Type: **Conducted Emissions** Time: 11:30:21  
 Equipment: **SafeScout Security Portal** Sequence#: 2  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: S-100 120V 60Hz  
 S/N: A100062300146

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
SafeScout Security Portal*	SafeView, Inc.	S-100	A100062300146

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The SafeScout S-100 Security Portal is operating and running on an auto-cycle pause time of 6 seconds. The SafeScout S-100 is connected to a support PC by an ethernet connection. The support PC triggers the SCU to begin a security scan. The software is setup to repeatedly run scan while the system is under test. Conducted Emissions 0.15 – 30 MHz.

**Transducer Legend:**

T1=LISN - AN00493 - White - ELC "OUT"	T2=TTE HP Filter P05258
T3=ANP02223 10dB Attenuator	T4=Cable P00880

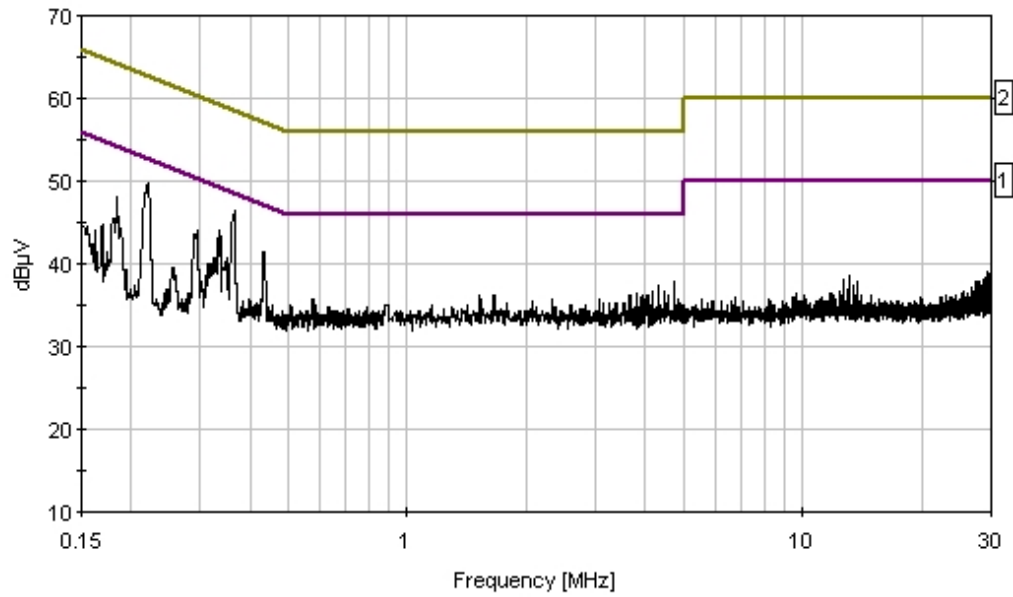
**Measurement Data:** Reading listed by margin. Test Lead: White

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	432.881k	31.3	+0.3	+0.0	+9.7	+0.2	+0.0	41.5	47.2	-5.7	White
2	184.906k	36.6	+0.4	+1.2	+9.8	+0.1	+0.0	48.1	54.3	-6.2	White
3	293.986k	33.5	+0.3	+0.3	+9.8	+0.1	+0.0	44.0	50.4	-6.4	White
4	331.073k	32.6	+0.3	+0.2	+9.8	+0.1	+0.0	43.0	49.4	-6.4	White
5	364.000k	31.4	+0.3	+0.1	+9.7	+0.2	+0.0	41.7	48.6	-6.9	White
Ave	^ 365.978k	36.2	+0.3	+0.1	+9.7	+0.2	+0.0	46.5	48.6	-2.1	White
7	360.000k	30.8	+0.3	+0.1	+9.7	+0.2	+0.0	41.1	48.7	-7.6	White
Ave	^ 361.630k	33.7	+0.3	+0.2	+9.8	+0.1	+0.0	44.1	49.3	-5.2	White

9	4.726M	27.3	+0.4	+0.1	+9.8	+0.2	+0.0	37.8	46.0	-8.2	White
10	350.707k	30.3	+0.3	+0.1	+9.7	+0.2	+0.0	40.6	48.9	-8.3	White
11	4.322M	26.9	+0.4	+0.1	+9.8	+0.1	+0.0	37.3	46.0	-8.7	White
12	221.000k	33.2	+0.4	+0.2	+9.8	+0.1	+0.0	43.7	52.8	-9.1	White
^	220.538k	39.3	+0.4	+0.2	+9.8	+0.1	+0.0	49.8	52.8	-3.0	White
14	4.190M	26.2	+0.4	+0.1	+9.8	+0.1	+0.0	36.6	46.0	-9.4	White
15	4.458M	26.2	+0.4	+0.1	+9.8	+0.1	+0.0	36.6	46.0	-9.4	White
16	3.790M	26.1	+0.4	+0.1	+9.8	+0.1	+0.0	36.5	46.0	-9.5	White
17	1.660M	26.0	+0.3	+0.1	+9.7	+0.2	+0.0	36.3	46.0	-9.7	White
18	3.654M	25.9	+0.4	+0.1	+9.8	+0.1	+0.0	36.3	46.0	-9.7	White
19	3.926M	25.9	+0.4	+0.1	+9.8	+0.1	+0.0	36.3	46.0	-9.7	White
20	4.054M	25.9	+0.4	+0.1	+9.8	+0.1	+0.0	36.3	46.0	-9.7	White
21	4.590M	25.7	+0.4	+0.1	+9.8	+0.2	+0.0	36.2	46.0	-9.8	White
22	1.523M	25.8	+0.3	+0.1	+9.7	+0.2	+0.0	36.1	46.0	-9.9	White
23	170.362k	32.2	+0.4	+2.3	+9.8	+0.1	+0.0	44.8	54.9	-10.1	White
24	2.327M	25.5	+0.3	+0.1	+9.7	+0.2	+0.0	35.8	46.0	-10.2	White
25	4.854M	25.3	+0.4	+0.1	+9.8	+0.2	+0.0	35.8	46.0	-10.2	White
26	3.059M	25.3	+0.4	+0.1	+9.7	+0.2	+0.0	35.7	46.0	-10.3	White
27	576.866k	25.5	+0.3	+0.0	+9.7	+0.1	+0.0	35.6	46.0	-10.4	White
28	3.990M	25.2	+0.4	+0.1	+9.8	+0.1	+0.0	35.6	46.0	-10.4	White
29	2.081M	25.2	+0.3	+0.1	+9.7	+0.2	+0.0	35.5	46.0	-10.5	White
30	4.569M	25.0	+0.4	+0.1	+9.8	+0.2	+0.0	35.5	46.0	-10.5	White
31	3.254M	24.9	+0.4	+0.1	+9.7	+0.2	+0.0	35.3	46.0	-10.7	White

32	3.361M	24.9	+0.4	+0.1	+9.7	+0.2	+0.0	35.3	46.0	-10.7	White
33	3.386M	24.9	+0.4	+0.1	+9.7	+0.2	+0.0	35.3	46.0	-10.7	White
34	3.518M	24.9	+0.4	+0.1	+9.8	+0.1	+0.0	35.3	46.0	-10.7	White
35	3.561M	24.9	+0.4	+0.1	+9.8	+0.1	+0.0	35.3	46.0	-10.7	White
36	3.127M	24.8	+0.4	+0.1	+9.7	+0.2	+0.0	35.2	46.0	-10.8	White
37	877.000k	24.9	+0.3	+0.0	+9.7	+0.2	+0.0	35.1	46.0	-10.9	White
38	1.413M	24.9	+0.3	+0.0	+9.8	+0.1	+0.0	35.1	46.0	-10.9	White
39	29.267M	27.3	+1.2	+0.3	+9.8	+0.5	+0.0	39.1	50.0	-10.9	White
40	2.591M	24.6	+0.4	+0.1	+9.7	+0.2	+0.0	35.0	46.0	-11.0	White
41	4.118M	24.6	+0.4	+0.1	+9.8	+0.1	+0.0	35.0	46.0	-11.0	White
42	155.818k	30.8	+0.4	+3.5	+9.8	+0.1	+0.0	44.6	55.7	-11.1	White
43	1.149M	24.7	+0.3	+0.0	+9.8	+0.1	+0.0	34.9	46.0	-11.1	White
44	1.298M	24.6	+0.3	+0.0	+9.8	+0.1	+0.0	34.8	46.0	-11.2	White
45	29.616M	27.0	+1.2	+0.3	+9.8	+0.5	+0.0	38.8	50.0	-11.2	White
46	163.090k	30.8	+0.4	+2.9	+9.8	+0.1	+0.0	44.0	55.3	-11.3	White
47	4.275M	24.3	+0.4	+0.1	+9.8	+0.1	+0.0	34.7	46.0	-11.3	White
48	29.794M	26.9	+1.2	+0.3	+9.8	+0.5	+0.0	38.7	50.0	-11.3	White
49	1.545M	24.3	+0.3	+0.1	+9.7	+0.2	+0.0	34.6	46.0	-11.4	White
50	13.067M	27.6	+0.6	+0.2	+9.8	+0.4	+0.0	38.6	50.0	-11.4	White
51	1.239M	24.3	+0.3	+0.0	+9.8	+0.1	+0.0	34.5	46.0	-11.5	White
52	28.917M	26.6	+1.2	+0.3	+9.8	+0.5	+0.0	38.4	50.0	-11.6	White
53	4.088M	23.9	+0.4	+0.1	+9.8	+0.1	+0.0	34.3	46.0	-11.7	White

CKC Laboratories, Inc. Date: 11/8/2006 Time: 11:30:21 SafeView, Inc. WVO#: 85822  
 FCC 15.207 COND [AVE] Test Lead: White 120V 60Hz Sequence#: 2



— Sweep Data      — 1 - FCC 15.207 COND [AVE]      — 2 - FCC 15.207 COND [QP]

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **Safe View, Inc.**  
 Specification: **FCC 15.209 30Mhz to 100 GHz**  
 Work Order #: **85484** Date: 11/16/2006  
 Test Type: **Carrier Power** Time: 18:33:56  
 Equipment: **Security Portal** Sequence#: 45  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: SCOUT 100 Version 2 Switch  
 S/N: A100062500152

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Security Portal*	SafeView, Inc.	SCOUT 100 Version 2 Switch	A100062500152

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The Scout 100 V2 Switch Security Portal's antenna mast is reversed in position so the EUT antennas are facing to the outside of the EUT. Low channel=24.65 GHz. Mid channel=27 GHz. Hi channel=29.8 GHz. Measuring Peak Carrier Power per DA 06-1589 paragraph 8b. RBW=100 kHz, VBW=3 MHz, Span=1 GHz. Sweep time=auto. Measuring Average RMS Power per DA 06-1589 paragraph 8a. RBW=1 MHz, VBW=3 MHz, Span=0 Hz. Sweep time=1 sec. Emissions reported represent worst case polarization. Peak limit was derived by adding 41 dB to the average RMS value for that channel and mast antenna number. Data for antenna 320 mid and hi channels was re-measured on 11-16-06. Nominal AC=120V, 85% is 102V, & 115% is 138V. Measurements were made at various input voltage levels from 85% to 115% of nominal voltage and no effect was observed on the output power. Transmitter is transmitting continuously during this testing.

**Transducer Legend:**

T1=Horn AN02695 Miteq Active 26-40GHz	T2=ANT 18-26GHz Active Horn
T3=Cable AN2715 40 GHz	T4=CAB HF 72" ANP05315 Pasternack

**Measurement Data:** Reading listed by margin. Test Distance: 1 Meter

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	29802.000M	78.3	+3.6	+0.0	+0.0	+7.9	-13.0	76.8	77.9	-1.1	Vert
									Peak power at hi channel, antenna 16, 102 VAC. atten 10		188
2	24484.000M	91.5	+0.0	-17.1	+14.8		-13.0	76.2	77.9	-1.7	Vert
									Peak power at low channel, antenna 192, 120 VAC.		100

3	26973.000M	74.7	+2.0	+0.0	+0.0	+7.4	-13.0	71.1	73.0	-1.9	Vert 51
Peak power at mid channel, antenna 320, 102 VAC. atten 0											
4	26974.000M	74.6	+2.0	+0.0	+0.0	+7.4	-13.0	71.0	73.0	-2.0	Vert 51
Peak power at mid channel, antenna 320, 138 VAC. atten 0											
5	24624.000M	102.9	+0.0	-17.0	+0.0	+7.2	-13.0	80.1	82.2	-2.1	Vert 188
Peak power at low channel, antenna 16, 102VAC, atten 10											
6	26973.000M	74.3	+2.0	+0.0	+0.0	+7.4	-13.0	70.7	73.0	-2.3	Vert 51
Peak power at mid channel, antenna 320, 120 VAC. atten 0											
7	26974.000M	81.3	+2.0	+0.0	+0.0	+7.4	-13.0	77.7	80.1	-2.4	Vert 188
Peak power at mid channel, antenna 16, 138 VAC, atten 10											
8	29802.000M	78.5	+3.6	+0.0	+0.0	+7.9	-13.0	77.0	79.6	-2.6	Vert 188
Peak power at hi channel, antenna 16, 120 VAC. atten 10											
9	24632.000M	101.6	+0.0	-17.0	+0.0	+7.2	-13.0	78.8	81.5	-2.7	Vert 43
Peak power at low channel, antenna 320, 102VAC, atten 10											
10	24633.000M	101.2	+0.0	-17.0	+0.0	+7.2	-13.0	78.4	81.4	-3.0	Vert 43
Peak power at low channel, antenna 320, 138 VAC, atten 10											
11	24633.000M	101.3	+0.0	-17.0	+0.0	+7.2	-13.0	78.5	81.5	-3.0	Vert 43
Peak power at low channel, antenna 320, 120 VAC, atten 10											
12	26994.000M	70.6	+1.9	+0.0	+14.5		-13.0	74.0	77.2	-3.2	Vert 100
Peak power at mid channel, antenna 192, 102 VAC.											

13	26994.000M	80.5	+1.9	+0.0	+0.0	+7.4	-13.0	76.8	80.2	-3.4	Vert 188
										Peak power at mid channel, antenna 16, 102 VAC, atten 10	
14	26991.000M	70.3	+1.9	+0.0	+14.5		-13.0	73.7	77.4	-3.7	Vert 100
										Peak power at mid channel, antenna 192, 138 VAC.	
15	24481.000M	93.2	+0.0	-17.1	+14.8		-13.0	77.9	81.7	-3.8	Vert 100
										Peak power at low channel, antenna 192, 138 VAC.	
16	24482.000M	92.8	+0.0	-17.1	+14.8		-13.0	77.5	81.5	-4.0	Vert 100
										Peak power at low channel, antenna 192, 102 VAC.	
17	29786.000M	73.2	+3.5	+0.0	+0.0	+7.9	-13.0	71.6	75.7	-4.1	Vert 51
										Peak power at hi channel, antenna 320, 138 VAC. atten 0	
18	29785.000M	73.2	+3.5	+0.0	+0.0	+7.9	-13.0	71.6	75.8	-4.2	Vert 51
										Peak power at hi channel, antenna 320, 120 VAC. atten 0	
19	29785.000M	73.3	+3.5	+0.0	+0.0	+7.9	-13.0	71.7	76.0	-4.3	Vert 51
										Peak power at hi channel, antenna 320, 102 VAC. atten 0	
20	26986.000M	78.1	+1.9	+0.0	+0.0	+7.4	-13.0	74.4	79.5	-5.1	Vert 188
										Peak power at mid channel, antenna 16, 120 VAC, atten 10	
21	24622.970M Ave	64.1	+0.0	-17.0	+0.0	+7.2	-13.0	41.3	54.0	-12.7	Vert 188
										Average RMS power at low channel, sweeping, antenna 16, 120VAC, atten 10	
22	24622.970M Ave	64.0	+0.0	-17.0	+0.0	+7.2	-13.0	41.2	54.0	-12.8	Vert 188
										Average RMS power at low channel, sweeping, antenna 16, 102 VAC, atten 10	

23	24622.970M Ave	64.0	+0.0	-17.0	+0.0	+7.2	-13.0	41.2	54.0	-12.8	Vert 188
									Average RMS power at low channel, sweeping, antenna 16, 138VAC, atten 10		
24	24483.070M Ave	56.0	+0.0	-17.1	+14.8		-13.0	40.7	54.0	-13.3	Vert 100
									Average RMS power at low channel, sweeping, antenna 192, 138 V		
25	24622.970M Ave	63.3	+0.0	-17.0	+0.0	+7.2	-13.0	40.5	54.0	-13.5	Vert 43
									Average RMS power at low channel, sweeping, antenna 320, 102 VAC, atten 10		
^	24623.000M	103.4	+0.0	-17.0	+0.0	+7.2	-13.0	80.6	82.3	-1.7	Vert 188
									Peak power at low channel, antenna 16, 120VAC, atten 10		
^	24623.000M	102.8	+0.0	-17.0	+0.0	+7.2	-13.0	80.0	82.2	-2.2	Vert 188
									Peak power at low channel, antenna 16, 138VAC, atten 10		
28	24622.970M Ave	63.3	+0.0	-17.0	+0.0	+7.2	-13.0	40.5	54.0	-13.5	Vert 43
									Average RMS power at low channel, sweeping, antenna 320, 120 VAC, atten 10		
29	24483.070M Ave	55.8	+0.0	-17.1	+14.8		-13.0	40.5	54.0	-13.5	Vert 100
									Average RMS power at low channel, sweeping, antenna 192, 102 V.		
30	24622.970M Ave	63.2	+0.0	-17.0	+0.0	+7.2	-13.0	40.4	54.0	-13.6	Vert 43
									Average RMS power at low channel, sweeping, antenna 320, 138 VAC, atten 10		
31	29800.000M Ave	40.1	+3.6	+0.0	+0.0	+7.9	-13.0	38.6	54.0	-15.4	Vert 188
									Average RMS power at hi channel, sweeping, antenna 16, 120 VAC, atten 10		



32	27000.000M Ave	42.2	+1.9	+0.0	+0.0	+7.4	-13.0	38.5	54.0	-15.5	Vert 188
									Average RMS power at mid channel, sweeping, antenna 16, 120 VAC, atten 10		
^	27000.000M	42.9	+1.9	+0.0	+0.0	+7.4	-13.0	39.2	54.0	-14.8	Vert 188
									Average RMS power at mid channel, sweeping, antenna 16, 102 VAC, atten 10		
^	27000.000M	42.8	+1.9	+0.0	+0.0	+7.4	-13.0	39.1	54.0	-14.9	Vert 188
									Average RMS power at mid channel, sweeping, antenna 16, 138 VAC, atten 10		
35	29800.000M Ave	38.4	+3.6	+0.0	+0.0	+7.9	-13.0	36.9	54.0	-17.1	Vert 188
									Average RMS power at hi channel, sweeping, antenna 16, 102 VAC, atten 10		
36	24483.070M Ave	52.2	+0.0	-17.1	+14.8		-13.0	36.9	54.0	-17.1	Vert 100
									Average RMS power at low channel, sweeping, antenna 192, 120 VAC.		
37	26992.000M Ave	33.3	+1.9	+0.0	+14.5		-13.0	36.7	54.0	-17.3	Vert 100
									Average RMS power at mid channel, sweeping, antenna 192, 120 V		
38	26991.490M Ave	33.0	+1.9	+0.0	+14.5		-13.0	36.4	54.0	-17.6	Vert 100
									Average RMS power at mid channel, sweeping, antenna 192, 138 V		
39	29801.000M Ave	30.7	+3.6	+0.0	+15.0		-13.0	36.3	54.0	-17.7	Vert 188
									Average RMS power at hi channel, sweeping, antenna 16, 138 VAC		
^	29801.000M	68.9	+3.6	+0.0	+15.0		-13.0	74.5	77.3	-2.8	Vert 188
									Peak power at hi channel, antenna 16, 138 VAC.		

^ 29801.000M	68.3	+3.6	+0.0	+15.0	-13.0	73.9	77.1	-3.2	Vert 100	
							Peak power at hi channel, antenna 192, 120 VAC.			
42 26992.000M Ave	32.8	+1.9	+0.0	+14.5	-13.0	36.2	54.0	-17.8	Vert 100	
							Average RMS power at mid channel, sweeping, antenna 192, 102 VAC			
^ 26992.000M	71.1	+1.9	+0.0	+14.5	-13.0	74.5	77.7	-3.2	Vert 100	
							Peak power at mid channel, antenna 192, 120 VAC.			
44 29799.000M Ave	30.5	+3.6	+0.0	+15.0	-13.0	36.1	54.0	-17.9	Vert 100	
							Average RMS power at hi channel, sweeping, antenna 192, 138 VAC			
^ 29799.000M	67.7	+3.6	+0.0	+15.0	-13.0	73.3	76.0	-2.7	Vert 100	
							Peak power at hi channel, antenna 192, 138 VAC.			
^ 29799.000M	68.1	+3.6	+0.0	+15.0	-13.0	73.7	77.1	-3.4	Vert 100	
							Peak power at hi channel, antenna 192, 102 VAC.			
47 29800.000M Ave	30.5	+3.6	+0.0	+15.0	-13.0	36.1	54.0	-17.9	Vert 100	
							Average RMS power at hi channel, sweeping, antenna 192, 120 VAC			
48 29800.000M Ave	30.5	+3.6	+0.0	+15.0	-13.0	36.1	54.0	-17.9	Vert 100	
							Average RMS power at hi channel, sweeping, antenna 192, 102 VAC			
49 29786.490M Ave	36.6	+3.5	+0.0	+0.0	+7.9	-13.0	35.0	54.0	-19.0	Vert 51
							Average RMS power at hi channel, antenna 320, 102 VAC. atten 0			
50 29786.490M Ave	36.4	+3.5	+0.0	+0.0	+7.9	-13.0	34.8	54.0	-19.2	Vert 51
							Average RMS power at hi channel, antenna 320, 120 VAC. atten 0			

51	29786.490M Ave	36.3	+3.5	+0.0	+0.0	+7.9	-13.0	34.7	54.0	-19.3	Vert 51
										Average RMS power at hi channel, antenna 320, 138 VAC. atten 0	
52	26974.480M Ave	35.6	+2.0	+0.0	+0.0	+7.4	-13.0	32.0	54.0	-22.0	Vert 51
										Average RMS power at mid channel, antenna 320, 138 VAC. atten 0	
53	26974.480M Ave	35.6	+2.0	+0.0	+0.0	+7.4	-13.0	32.0	54.0	-22.0	Vert 51
										Average RMS power at mid channel, antenna 320, 120 VAC. atten 0	
54	26974.480M Ave	35.6	+2.0	+0.0	+0.0	+7.4	-13.0	32.0	54.0	-22.0	Vert 51
										Average RMS power at mid channel, antenna 320, 102 VAC. atten 0	

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **SafeView, Inc.**  
 Specification: **FCC 15.209 30Mhz to 100 GHz**  
 Work Order #: **85822** Date: 11/14/2006  
 Test Type: **Maximized Emissions** Time: 19:47:14  
 Equipment: **SafeScout Security Portal** Sequence#: 14  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: S-100  
 S/N: A100062300146

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
SafeScout Security Portal*	SafeView, Inc.	S-100	A100062300146

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The SafeScout S-100 Security Portal is operating and running on an auto-cycle pause time of 6 seconds. The SafeScout S-100 is connected to a support PC by an ethernet connection. The support PC triggers the SCU to begin a security scan. The software is setup to repeatedly run scan while the system is under test. 1) Added ferrite. 2 wraps to SCU serial line. 2) Taped AC line cable down, added two ferrites on AC line to motor controller. 3) Add ferrite to each DB37 cable at ISU. 4) Changed to custom made shielded encoder cable. 5) 6 dB attenuator on both masts at FDIV. The reason for each of these 4 modifications is as follows: 1) ferrite on serial line - addresses 60MHz broadband noise. 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur. 3) DB37 ferrite - addresses 153MHz discrete spur. 4) custom Shielded encoder cable - multiple discrete frequencies 30-1000MHz. Radiated Emissions 9kHz-1000 MHz.

**Transducer Legend:**

T1=0852-Bi-Log Antenna	T2=Amp Cal.HP-8447F OPT H64- AN 00501
T3=Cable P05296 25' RG214 N-N	T4=Cable P05299 2' RG214 N-N
T5=Cable P05300 12' RG214 N-N	

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	310.234M	51.1	+13.2 +0.6	-25.6	+1.0	+0.1	+0.0 317	40.4	46.0	-5.6	Horiz 119
2	500.013M QP	47.3	+17.5 +0.7	-26.7	+1.3	+0.2	+0.0 298	40.3	46.0	-5.7	Horiz 174
^	500.030M	50.0	+17.5 +0.7	-26.7	+1.3	+0.2	+0.0 298	43.0	46.0	-3.0	Horiz 174
4	293.768M	51.1	+12.9 +0.6	-25.4	+1.0	+0.1	+0.0 315	40.3	46.0	-5.7	Horiz 170
5	399.029M	48.6	+15.5 +0.7	-25.9	+1.1	+0.2	+0.0 278	40.2	46.0	-5.8	Vert 158

6	399.926M	48.5	+15.5 +0.7	-25.9	+1.1	+0.2	+0.0 75	40.1	46.0	-5.9	Vert 202
7	295.329M QP	50.6	+12.9 +0.6	-25.4	+1.0	+0.1	+0.0 242	39.8	46.0	-6.2	Vert 99
^	295.329M	53.6	+12.9 +0.6	-25.4	+1.0	+0.1	+0.0 242	42.8	46.0	-3.2	Vert 99
9	307.687M	49.8	+13.2 +0.6	-25.5	+1.0	+0.1	+0.0 311	39.2	46.0	-6.8	Horiz 119
10	64.882M QP	52.6	+5.7 +0.2	-25.9	+0.4	+0.1	+0.0 105	33.1	40.0	-6.9	Horiz 246
^	64.891M	55.4	+5.7 +0.2	-25.9	+0.4	+0.1	+0.0 104	35.9	40.0	-4.1	Horiz 246
12	398.300M	47.5	+15.5 +0.7	-25.9	+1.1	+0.2	+0.0 239	39.1	46.0	-6.9	Horiz 179
13	307.728M	49.7	+13.2 +0.6	-25.5	+1.0	+0.1	+0.0 241	39.1	46.0	-6.9	Vert 99
14	294.770M	49.6	+12.9 +0.6	-25.4	+1.0	+0.1	+0.0 79	38.8	46.0	-7.2	Horiz 161
15	766.604M	41.7	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 232	38.8	46.0	-7.2	Horiz 178
16	500.033M QP	45.6	+17.5 +0.7	-26.7	+1.3	+0.2	+0.0 298	38.6	46.0	-7.4	Vert 179
^	500.013M	49.9	+17.5 +0.7	-26.7	+1.3	+0.2	+0.0 299	42.9	46.0	-3.1	Vert 179
18	778.787M	41.3	+21.5 +0.8	-27.0	+1.5	+0.2	+0.0 91	38.3	46.0	-7.7	Horiz 134
19	293.210M	49.0	+12.9 +0.5	-25.4	+1.0	+0.1	+0.0 80	38.1	46.0	-7.9	Vert 177
20	919.234M	38.9	+22.8 +0.9	-26.8	+1.8	+0.2	+0.0 88	37.8	46.0	-8.2	Vert 144
21	778.470M	40.8	+21.5 +0.8	-27.0	+1.5	+0.2	+0.0 258	37.8	46.0	-8.2	Vert 100 6 dB attenuator on both masts at FDIV.
22	35.217M QP	41.4	+15.8 +0.2	-26.1	+0.3	+0.1	+0.0 327	31.7	40.0	-8.3	Vert 114
^	35.217M	47.2	+15.8 +0.2	-26.1	+0.3	+0.1	+0.0 328	37.5	40.0	-2.5	Vert 114
24	204.458M QP	50.0	+9.0 +0.5	-25.6	+0.8	+0.1	+0.0 80	34.8	43.5	-8.8	Vert 98
^	204.441M	51.6	+9.0 +0.5	-25.6	+0.8	+0.1	+0.0 79	36.4	43.5	-7.1	Vert 98
26	60.047M	50.9	+5.4 +0.3	-26.1	+0.5	+0.1	+0.0 198	31.1	40.0	-8.9	Horiz 280
27	765.777M QP	40.0	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 233	37.1	46.0	-8.9	Horiz 178
^	765.774M	44.2	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 232	41.3	46.0	-4.7	Horiz 178
29	935.461M	37.4	+23.2 +0.9	-26.5	+1.8	+0.2	+0.0 255	37.0	46.0	-9.0	Horiz 175

30	766.744M QP	39.4	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 258	36.5	46.0	-9.5	Vert 106
^	766.715M	43.0	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 258	40.1	46.0	-5.9	Vert 106
32	766.184M	39.4	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 95	36.5	46.0	-9.5	Horiz 143
									6 dB attenuator on both masts at FDIV.		
33	763.924M QP	39.4	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 256	36.5	46.0	-9.5	Vert 100
^	763.924M	49.4	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 256	46.5	46.0	+0.5	Vert 100
35	764.170M QP	39.3	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 254	36.4	46.0	-9.6	Vert 101
^	764.195M	46.7	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 254	43.8	46.0	-2.2	Vert 101
37	334.072M	46.3	+13.8 +0.5	-25.7	+1.0	+0.1	+0.0 250	36.0	46.0	-10.0	Horiz 125
38	763.690M QP	38.5	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 254	35.6	46.0	-10.4	Vert 101
^	763.706M	45.8	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 254	42.9	46.0	-3.1	Vert 101
40	764.933M QP	38.3	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 278	35.4	46.0	-10.6	Vert 121
^	764.933M	45.1	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 278	42.2	46.0	-3.8	Vert 121
42	765.008M QP	37.9	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 233	35.0	46.0	-11.0	Horiz 178
^	765.072M	44.5	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 232	41.6	46.0	-4.4	Horiz 178
44	765.700M QP	37.8	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 257	34.9	46.0	-11.1	Vert 100
									6 dB attenuator on both masts at FDIV.		
^	765.688M	43.7	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 257	40.8	46.0	-5.2	Vert 100
									6 dB attenuator on both masts at FVIV.		
46	971.155M QP	42.8	+23.6 +1.0	-26.7	+1.8	+0.2	+0.0 87	42.7	54.0	-11.3	Horiz 102
^	971.135M	45.9	+23.6 +1.0	-26.7	+1.8	+0.2	+0.0 88	45.8	54.0	-8.2	Horiz 102
48	99.650M QP	47.5	+9.6 +0.2	-25.7	+0.5	+0.0	+0.0 9	32.1	43.5	-11.4	Horiz 171
^	99.632M	53.9	+9.6 +0.2	-25.7	+0.5	+0.0	+0.0 9	38.5	43.5	-5.0	Horiz 185
50	101.004M	47.1	+9.7 +0.2	-25.7	+0.5	+0.0	+0.0 15	31.8	43.5	-11.7	Horiz 149
51	275.367M	45.5	+12.7 +0.4	-25.4	+0.9	+0.1	+0.0 239	34.2	46.0	-11.8	Vert 189
52	762.953M QP	37.1	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 252	34.2	46.0	-11.8	Vert 100
^	762.953M	49.2	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0 252	46.3	46.0	+0.3	Vert 100

54	763.948M QP	35.4	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0	32.5	46.0	-13.5	Horiz 178
^	763.948M	44.3	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0	41.4	46.0	-4.6	Horiz 178
56	216.408M	46.7	+9.9 +0.4	-25.4	+0.8	+0.1	+0.0	32.5	46.0	-13.5	Horiz 103
57	200.003M	45.3	+8.6 +0.5	-25.6	+0.8	+0.1	+0.0	29.7	43.5	-13.8	Horiz 229
58	215.956M	42.3	+9.9 +0.4	-25.4	+0.8	+0.1	+0.0	28.1	43.5	-15.4	Vert 131
59	215.956M	42.3	+9.9 +0.4	-25.4	+0.8	+0.1	+0.0	28.1	43.5	-15.4	Vert 99
60	212.880M	42.5	+9.6 +0.4	-25.5	+0.8	+0.1	+0.0	27.9	43.5	-15.6	Vert 106
61	971.049M QP	38.2	+23.6 +1.0	-26.7	+1.8	+0.2	+0.0	38.1	54.0	-15.9	Vert 106
^	971.049M	42.9	+23.6 +1.0	-26.7	+1.8	+0.2	+0.0	42.8	54.0	-11.2	Vert 106
63	779.506M	32.7	+21.5 +0.8	-27.0	+1.5	+0.2	+0.0	29.7	46.0	-16.3	Vert 100
									6 dB attenuator on both masts at FDIV.		
64	216.105M	43.2	+9.9 +0.4	-25.4	+0.8	+0.1	+0.0	29.0	46.0	-17.0	Horiz 188
65	90.825M QP	39.3	+8.5 +0.2	-25.9	+0.4	+0.0	+0.0	22.5	43.5	-21.0	Horiz 216
^	90.825M	54.7	+8.5 +0.2	-25.9	+0.4	+0.0	+0.0	37.9	43.5	-5.6	Horiz 216
67	92.781M QP	38.9	+8.7 +0.2	-25.9	+0.4	+0.0	+0.0	22.3	43.5	-21.2	Horiz 179
^	92.782M	53.8	+8.7 +0.2	-25.9	+0.4	+0.0	+0.0	37.2	43.5	-6.3	Horiz 178
69	94.220M QP	37.5	+8.9 +0.2	-25.9	+0.4	+0.0	+0.0	21.1	43.5	-22.4	Horiz 184
^	94.139M	52.1	+8.9 +0.2	-25.9	+0.4	+0.0	+0.0	35.7	43.5	-7.8	Horiz 179
71	763.600M QP	23.1	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0	20.2	46.0	-25.8	Horiz 178
^	763.572M	43.7	+21.6 +0.8	-27.0	+1.5	+0.2	+0.0	40.8	46.0	-5.2	Horiz 178

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **Safe View, Inc.**  
 Specification: **FCC 15.209**  
 Work Order #: **85484** Date: 9/19/2006  
 Test Type: **Maximized Emissions** Time: 17:49:55  
 Equipment: **Security Portal** Sequence#: 12  
 Manufacturer: SafeView, Inc. Tested By: C. Nicklas  
 Model: SCOUT 100 Version 2 Switch  
 S/N: A100062500152

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Security Portal*	SafeView, Inc.	SCOUT 100 Version 2 Switch	A100062500152

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The Scout 100 Version 2 Switch Security Portal is transmitting continuously. The Scout 100 is connected to a support PC by an ethernet connection. The support PC triggers the SCU to begin a security scan. Radiated Emissions 1-12.5 GHz. Maximized Emissions.

Modifications in at time of testing were:

- 1) Added a two-turn ferrite on the SCU serial line.
- 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
- 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
- 4) Changed the encoder cable to a custom made, shielded encoder cable.
- 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

The reason for each of these 5 modifications is as follows:

- 1) ferrite on serial line - addresses 60MHz broadband noise
- 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur
- 3) DB37 ferrite - addresses 153MHz discrete spur
- 4) custom shielded encoder cable - multiple discrete frequencies 30-1000MHz
- 5) 6 dB attenuators addresses the divided down VCO frequencies removing the 700 MHz peaks

**Transducer Legend:**

T1=Horn Antenna AN02061 sn1064 (Fremont)	T2=AMP AN02810 50GHz
T3=ANP04241 HF-Heliox Cable	T4=P05138 HF Cable 25ft
T5=ANP5201 1-40GHz	T6=ANP05200 1-40GHz
T7=HP-83017A, A/N 00785	

**Measurement Data:** Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB $\mu$ V	T5	T6	T7		Table	dB $\mu$ V/m	dB $\mu$ V/m	dB	Ant
1	1297.067M	86.5	+24.7	-28.2	+0.4	+1.7	+0.0	47.7	54.0	-6.3	Horiz
			+0.9	+1.0	-39.3		63				211



2	1000.010M	88.2	+23.8 +0.8	-28.3 +0.8	+0.4 -40.6	+1.4	+0.0 -2	46.5	54.0	-7.5	Horiz 209
3	3065.100M	73.8	+30.2 +1.5	-26.3 +1.4	+0.5 -37.6	+2.7	+0.0 25	46.2	54.0	-7.8	Horiz 206
4	1686.900M	80.7	+26.8 +1.0	-28.1 +1.1	+0.5 -38.4	+1.9	+0.0 196	45.5	54.0	-8.5	Vert 205
5	1096.800M	85.7	+24.1 +0.8	-28.3 +0.9	+0.4 -40.1	+1.5	+0.0 147	45.0	54.0	-9.0	Vert 204
6	3067.300M	71.5	+30.2 +1.5	-26.3 +1.4	+0.5 -37.6	+2.7	+0.0 25	43.9	54.0	-10.1	Horiz 206
7	1685.200M	79.0	+26.7 +1.0	-28.1 +1.1	+0.5 -38.4	+1.9	+0.0 196	43.7	54.0	-10.3	Vert 205
8	9201.225M Ave	57.3	+37.7 +2.6	-26.6 +2.4	+1.4 -36.7	+4.9	+0.0 244	42.9	54.0	-11.1	Horiz 210
^	9201.225M	65.2	+37.7 +2.6	-26.6 +2.4	+1.4 -36.7	+4.9	+0.0 244	50.9	54.0	-3.1	Horiz 210

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **Safe View, Inc.**  
 Specification: **FCC 15.209**  
 Work Order #: **85484** Date: 9/20/2006  
 Test Type: **Maximized Emissions** Time: 14:35:12  
 Equipment: **Security Portal** Sequence#: 15  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: SCOUT 100 Version 2 Switch  
 S/N: A100062500152

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Security Portal*	SafeView, Inc.	SCOUT 100 Version 2 Switch	A100062500152

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The Scout 100 Version 2 Switch Security Portal is transmitting continuously. . Radiated Emissions 1-18 GHz. No signals seen above 12.5 GHz. Notes: 1) Not sweeping, transmitting on LOW channel from antenna 192. Disabled the brake, so we can rotate the mast to the pre-cal position for worst case emissions.

Modifications in at time of testing were:

- 1) Added a two-turn ferrite on the SCU serial line.
- 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
- 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
- 4) Changed the encoder cable to a custom made, shielded encoder cable.
- 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

The reason for each of these 5 modifications is as follows:

- 1) ferrite on serial line - addresses 60MHz broadband noise
- 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur
- 3) DB37 ferrite - addresses 153MHz discrete spur
- 4) custom shielded encoder cable - multiple discrete frequencies 30-1000MHz
- 5) 6 dB attenuators addresses the divided down VCO frequencies removing the 700 MHz peaks

**Transducer Legend:**

T1=Horn Antenna AN02061 sn1064 (Fremont)	T2=AMP AN02810 50GHz
T3=P05138 HF Cable 25ft	T4=ANP5201 1-40GHz
T5=ANP05200 1-40GHz	T6=HP-83017A, A/N 00785
T7=CAB HF 72" ANP05317 Pasternack	

**Measurement Data:** Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1			T2			Dist	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			T5 dB	T6 dB	T7 dB	T4 dB	Table						
1	12349.240M	57.7	+39.4	-29.0	+6.0	+3.2	+0.0	48.8	54.0	-5.2	Vert		
			+2.8	-36.5	+5.2						175		

2	12348.580M	55.2	+39.4 +2.8	-29.0 -36.5	+6.0 +5.2	+3.2 346	+0.0	46.3	54.0	-7.7	Horiz 209
3	3087.833M	71.8	+30.2 +1.4	-26.4 -37.6	+2.7 +2.4	+1.5 370	+0.0	46.0	54.0	-8.0	Horiz 137
4	6175.167M	63.8	+34.5 +1.9	-27.3 -37.2	+4.1 +3.5	+2.1 346	+0.0	45.4	54.0	-8.6	Horiz 99
5	9262.866M	55.7	+37.8 +2.4	-26.6 -36.6	+5.0 +4.4	+2.6 97	+0.0	44.7	54.0	-9.3	Horiz 99
6	3087.575M	70.5	+30.2 +1.4	-26.4 -37.6	+2.7 +2.4	+1.5 340	+0.0	44.7	54.0	-9.3	Vert 100
7	6175.467M	61.7	+34.5 +1.9	-27.3 -37.2	+4.1 +3.5	+2.1 352	+0.0	43.3	54.0	-10.7	Vert 148
8	12348.780M Ave	50.5	+39.4 +2.8	-29.0 -36.5	+6.0 +5.2	+3.2	+0.0	41.6	54.0	-12.4	Vert 175
9	9262.764M	51.3	+37.8 +2.4	-26.6 -36.6	+5.0 +4.4	+2.6 11	+0.0	40.3	54.0	-13.7	Vert 215
10	1096.500M	79.5	+24.1 +0.9	-28.3 -40.1	+1.5 +1.5	+0.8 216	+0.0	39.9	54.0	-14.1	Vert 219
11	1090.133M	76.7	+24.1 +0.9	-28.3 -40.2	+1.5 +1.5	+0.8 216	+0.0	37.0	54.0	-17.0	Vert 219

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **Safe View, Inc.**  
 Specification: **FCC 15.209**  
 Work Order #: **85484** Date: 9/20/2006  
 Test Type: **Maximized Emissions** Time: 16:03:48  
 Equipment: **Security Portal** Sequence#: 18  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: SCOUT 100 Version 2 Switch  
 S/N: A100062500152

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Security Portal*	SafeView, Inc.	SCOUT 100 Version 2 Switch	A100062500152

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The Scout 100 Version 2 Switch Security Portal is transmitting continuously. Radiated Emissions 1-18 GHz. No signals seen above 12.5 GHz. Notes: 1) Not sweeping, transmitting on MID channel from antenna 192. Disabled the brake, so we can rotate the mast to the pre-cal position for worst case emissions.

Modifications in at time of testing were:

- 1) Added a two-turn ferrite on the SCU serial line.
- 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
- 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
- 4) Changed the encoder cable to a custom made, shielded encoder cable.
- 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

The reason for each of these 5 modifications is as follows:

- 1) ferrite on serial line - addresses 60MHz broadband noise
- 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur
- 3) DB37 ferrite - addresses 153MHz discrete spur
- 4) custom shielded encoder cable - multiple discrete frequencies 30-1000MHz
- 5) 6 dB attenuators addresses the divided down VCO frequencies removing the 700 MHz peaks

**Transducer Legend:**

T1=Horn Antenna AN02061 sn1064 (Fremont)	T2=AMP AN02810 50GHz
T3=P05138 HF Cable 25ft	T4=ANP5201 1-40GHz
T5=ANP05200 1-40GHz	T6=HP-83017A, A/N 00785
T7=CAB HF 72" ANP05317 Pasternack	

**Measurement Data:** Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB $\mu$ V	T5	T6	T7		Table	dB $\mu$ V/m	dB $\mu$ V/m	dB	Ant
1	9343.941M	57.5	+37.9	-26.6	+5.0	+2.7	+0.0	46.8	54.0	-7.2	Horiz
			+2.4	-36.5	+4.4		189				121

2	9343.733M	57.5	+37.9 +2.4	-26.6 -36.5	+5.0 +4.4	+2.7 265	+0.0	46.8	54.0	-7.2	Vert 103
3	11544.790M	55.0	+39.6 +2.8	-28.3 -36.1	+5.5 +5.1	+3.1	+0.0	46.7	54.0 Noise floor	-7.3	Horiz 103
4	11619.310M	53.8	+39.4 +2.8	-28.4 -36.2	+5.5 +5.1	+3.1	+0.0 -11	45.1	54.0 Noise floor	-8.9	Horiz 103
5	11675.500M	53.8	+39.3 +2.8	-28.4 -36.2	+5.5 +5.1	+3.1	+0.0 -11	45.0	54.0 Noise floor	-9.0	Vert 99
6	11889.730M	54.2	+38.8 +2.8	-28.6 -36.3	+5.7 +5.1	+3.2	+0.0	44.9	54.0 Noise floor	-9.1	Vert 99

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Customer: **Safe View, Inc.**  
 Specification: **FCC 15.209**  
 Work Order #: **85484** Date: 9/20/2006  
 Test Type: **Maximized Emissions** Time: 17:32:54  
 Equipment: **Security Portal** Sequence#: 21  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: SCOUT 100 Version 2 Switch  
 S/N: A100062500152

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Security Portal*	SafeView, Inc.	SCOUT 100 Version 2 Switch	A100062500152

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The Scout 100 Version 2 Switch Security Portal is transmitting continuously. Radiated Emissions 1-18 GHz. No signals seen above 12.5 GHz. Notes: 1) Not sweeping, transmitting on HI channel from antenna 192. Disabled the brake, so we can rotate the mast to the pre-cal position for worst case emissions.

Modifications in at time of testing were:

- 1) Added a two-turn ferrite on the SCU serial line.
- 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
- 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
- 4) Changed the encoder cable to a custom made, shielded encoder cable.
- 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

The reason for each of these 5 modifications is as follows:

- 1) ferrite on serial line - addresses 60MHz broadband noise
- 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur
- 3) DB37 ferrite - addresses 153MHz discrete spur
- 4) custom shielded encoder cable - multiple discrete frequencies 30-1000MHz
- 5) 6 dB attenuators addresses the divided down VCO frequencies removing the 700 MHz peaks

**Transducer Legend:**

T1=Horn Antenna AN02061 sn1064 (Fremont)	T2=AMP AN02810 50GHz
T3=P05138 HF Cable 25ft	T4=ANP5201 1-40GHz
T5=ANP05200 1-40GHz	T6=HP-83017A, A/N 00785
T7=CAB HF 72" ANP05317 Pasternack	

**Measurement Data:**

#	Freq MHz	Rdng dBµV	Reading listed by margin.				Test Distance: 3 Meters					
			T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant	
1	11619.480M	55.8	+39.4 +2.8	-28.4 -36.2	+5.5 +5.1	+3.1	+0.0	47.1	54.0	-6.9	Vert 100	
									Noise floor			

2	12425.710M	55.3	+39.6 +2.9	-29.1 -36.6	+6.0 +5.3	+3.3	+0.0	46.7	54.0 Noise floor	-7.3	Horiz 100
3	11199.010M	55.3	+39.2 +2.7	-28.1 -35.9	+5.3 +5.0	+3.1	+0.0 -11	46.6	54.0 Noise floor	-7.4	Vert 100
4	11796.910M	54.8	+39.0 +2.8	-28.5 -36.3	+5.6 +5.1	+3.1	+0.0 -11	45.6	54.0 Noise floor	-8.4	Horiz 100

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170  
 Customer: **Safe View, Inc.**  
 Specification: **FCC 15.209**  
 Work Order #: **85484** Date: 9/21/2006  
 Test Type: **Maximized Emissions** Time: 16:29:19  
 Equipment: **Security Portal** Sequence#: 37  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: SCOUT 100 Version 2 Switch S/N: A100062500152

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Security Portal*	SafeView, Inc.	SCOUT 100 Version 2 Switch	A100062500152

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The Scout 100 Version 2 Switch Security Portal is transmitting continuously. Radiated Emissions 18-26.5 GHz.  
 Notes: 1) Not sweeping, transmitting on LOW, MID, or HI channel (24.65, 27.0, 29.8 GHz) from antenna 192. Disabled the brake, so we can rotate the mast to the pre-cal position for worst case emissions. 2) Did not list signals from the transmitter fundamental.

Modifications in at time of testing were:

- 1) Added a two-turn ferrite on the SCU serial line.
- 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
- 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
- 4) Changed the encoder cable to a custom made, shielded encoder cable.
- 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

The reason for each of these 5 modifications is as follows:

- 1) ferrite on serial line - addresses 60MHz broadband noise
- 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur
- 3) DB37 ferrite - addresses 153MHz discrete spur
- 4) custom shielded encoder cable - multiple discrete frequencies 30-1000MHz
- 5) 6 dB attenuators addresses the divided down VCO frequencies removing the 700 MHz peaks

Signals detected in this range were determined to be noise floor readings, representing no EUT signals detected above this level.

**Transducer Legend:**

T1=AMP AN02810 50GHz	T2=ANP05200 1-40GHz
T3=Cable AN2718 40 GHz	T4=CAB HF 48" ANP05314 Pasternack
T5=18-26.5 WG F-C3	T6=Horn AN02695 Miteq Active 26-40GHz

**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1	T2	T3	T4	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			T5 dB	T6 dB	dB	dB					
1	26197.830M	27.2	-31.7	+4.2	+29.7	+5.6	+0.0	42.6	54.0	-11.4	Horiz
	Ave		+4.0	+3.6			9		MID, noise floor.		100
^	26197.830M	32.0	-31.7	+4.2	+29.7	+5.6	+0.0	47.4	54.0	-6.6	Horiz
			+4.0	+3.6			9		MID, noise floor.		100



3	26201.170M	27.2	-31.7	+4.2	+29.7	+5.6	+0.0	42.5	54.0	-11.5	Horiz
	Ave		+4.0	+3.6			5		HI, noise floor.		100
^	26201.170M	32.2	-31.7	+4.2	+29.7	+5.6	+0.0	47.6	54.0	-6.4	Horiz
			+4.0	+3.6			5		HI, noise floor.		100
5	26202.840M	27.1	-31.7	+4.2	+29.7	+5.6	+0.0	42.5	54.0	-11.5	Vert
	Ave		+4.0	+3.6			364		MID, noise floor.		100
^	26202.840M	32.3	-31.7	+4.2	+29.7	+5.6	+0.0	47.7	54.0	-6.3	Vert
			+4.0	+3.6			364		MID, noise floor.		100
7	26151.920M	26.7	-31.6	+4.2	+29.7	+5.7	+0.0	42.5	54.0	-11.5	Vert
	Ave		+4.1	+3.7					LOW, noise floor.		100
^	26151.890M	31.3	-31.6	+4.2	+29.7	+5.7	+0.0	47.1	54.0	-6.9	Vert
			+4.1	+3.7					LOW, noise floor.		100
9	26144.410M	26.6	-31.6	+4.2	+29.7	+5.7	+0.0	42.4	54.0	-11.6	Vert
	Ave		+4.1	+3.7			214		MID, noise floor.		100
^	26144.410M	32.0	-31.6	+4.2	+29.7	+5.7	+0.0	47.8	54.0	-6.2	Vert
			+4.1	+3.7			214		MID, noise floor.		100
11	26105.180M	26.2	-31.6	+4.2	+29.7	+5.7	+0.0	42.2	54.0	-11.8	Horiz
	Ave		+4.2	+3.8			361		MID, noise floor.		100
^	26105.160M	31.3	-31.6	+4.2	+29.7	+5.7	+0.0	47.3	54.0	-6.7	Horiz
			+4.2	+3.8			361		MID, noise floor.		100
13	26299.670M	26.6	-31.7	+4.3	+29.8	+5.6	+0.0	42.1	54.0	-11.9	Vert
	Ave		+4.0	+3.5			358		HI, noise floor.		100
^	26299.670M	30.8	-31.7	+4.3	+29.8	+5.6	+0.0	46.3	54.0	-7.7	Vert
			+4.0	+3.5			358		HI, noise floor.		100
15	26280.800M	26.7	-31.7	+4.3	+29.8	+5.6	+0.0	42.0	54.0	-12.0	Horiz
	Ave		+3.9	+3.5			187		LOW, noise floor.		100
^	26280.800M	32.8	-31.7	+4.3	+29.8	+5.6	+0.0	48.2	54.0	-5.8	Horiz
			+3.9	+3.5			187		LOW, noise floor.		100

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **Safe View, Inc.**  
 Specification: **FCC 15.209**  
 Work Order #: **85484** Date: 9/22/2006  
 Test Type: **Maximized Emissions** Time: 11:15:57  
 Equipment: **Security Portal** Sequence#: 44  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: SCOUT 100 Version 2 Switch  
 S/N: A100062500152

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Security Portal*	SafeView, Inc.	SCOUT 100 Version 2 Switch	A100062500152

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The Scout 100 Version 2 Switch Security Portal is transmitting continuously. Radiated Emissions 26.5-40 GHz. Notes: 1) Not sweeping, transmitting on LOW, MID, or HI channel (24.65, 27.0, 29.8 GHz) from antenna 192. Disabled the brake, so we can rotate the mast to the pre-cal position for worst case emissions. 2) Did not list the transmitter fundamentals or in-band signals (24-30 GHz).

Modifications in at time of testing were:

- 1) Added a two-turn ferrite on the SCU serial line.
- 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
- 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
- 4) Changed the encoder cable to a custom made, shielded encoder cable.
- 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

The reason for each of these 5 modifications is as follows:

- 1) ferrite on serial line - addresses 60MHz broadband noise
- 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur
- 3) DB37 ferrite - addresses 153MHz discrete spur
- 4) custom shielded encoder cable - multiple discrete frequencies 30-1000MHz
- 5) 6 dB attenuators addresses the divided down VCO frequencies removing the 700 MHz peaks

Signals detected in this range were determined to be noise floor readings, representing no EUT signals detected above this level.

**Transducer Legend:**

T1=AMP AN02810 50GHz	T2=ANP05200 1-40GHz
T3=CAB HF 48" ANP05314 Pasternack	T4=Horn AN02695 Miteq Active 26-40GHz
T5=Cable AN2715 40 GHz	T6=26.5-40 WG F-C3

**Measurement Data:** Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	39972.970M Ave	26.1	-30.3 +18.1	+5.4 +5.0	+6.9	+9.0	+0.0 -11	40.2	54.0 LOW, Noise floor	-13.8	Horiz 100
^	39973.040M	31.2	-30.3 +18.1	+5.4 +5.0	+6.9	+9.0	+0.0 -11	45.3	54.0 LOW, Noise floor	-8.7	Horiz 100
3	39970.720M Ave	26.0	-30.3 +18.1	+5.4 +5.0	+6.9	+9.0	+0.0 -11	40.1	54.0 MID, Noise floor	-13.9	Vert 100
^	39970.790M	31.5	-30.3 +18.1	+5.4 +5.0	+6.9	+9.0	+0.0 -11	45.6	54.0 MID, Noise floor	-8.4	Vert 100
5	39970.820M Ave	26.0	-30.3 +18.1	+5.4 +5.0	+6.9	+9.0	+0.0	40.1	54.0 HI, Noise floor	-13.9	Vert 100
^	39970.820M	31.7	-30.3 +18.1	+5.4 +5.0	+6.9	+9.0	+0.0	45.8	54.0 HI, Noise floor	-8.2	Vert 100
7	39912.160M Ave	26.0	-30.4 +18.1	+5.4 +5.0	+6.9	+8.8	+0.0 -11	39.8	54.0 HI, Noise floor	-14.2	Horiz 100
^	39912.180M	31.5	-30.4 +18.1	+5.4 +5.0	+6.9	+8.8	+0.0 -11	45.3	54.0 HI, Noise floor	-8.7	Horiz 100
9	39754.490M Ave	26.1	-30.4 +18.0	+5.4 +5.1	+6.9	+8.3	+0.0 370	39.4	54.0 LOW, Noise floor	-14.6	Vert 100
^	39754.520M	31.7	-30.4 +18.0	+5.4 +5.1	+6.9	+8.3	+0.0 370	45.0	54.0 LOW, Noise floor	-9.0	Vert 100
11	39709.450M Ave	26.2	-30.5 +18.0	+5.4 +5.1	+6.9	+8.2	+0.0 -11	39.3	54.0 LOW, Noise floor	-14.7	Horiz 100
^	39709.450M	31.3	-30.5 +18.0	+5.4 +5.1	+6.9	+8.2	+0.0 -11	44.4	54.0 LOW, Noise floor	-9.6	Horiz 100
13	39563.040M Ave	26.6	-30.6 +18.0	+5.4 +5.2	+6.9	+7.7	+0.0 369	39.2	54.0 LOW, Noise floor	-14.8	Horiz 100
^	39563.110M	31.5	-30.6 +18.0	+5.4 +5.2	+6.9	+7.7	+0.0 369	44.1	54.0 LOW, Noise floor	-9.9	Horiz 100
15	39650.880M Ave	26.3	-30.5 +18.0	+5.4 +5.1	+6.9	+8.0	+0.0 361	39.2	54.0 MID, Noise floor	-14.8	Horiz 100
^	39650.950M	32.7	-30.5 +18.0	+5.4 +5.1	+6.9	+8.0	+0.0 361	45.6	54.0 MID, Noise floor	-8.4	Horiz 100
17	39466.190M Ave	26.8	-30.6 +17.9	+5.5 +5.2	+6.9	+7.4	+0.0 370	39.1	54.0 LOW, Noise floor	-14.9	Horiz 100
^	39466.260M	32.2	-30.6 +17.9	+5.5 +5.2	+6.9	+7.4	+0.0 370	44.5	54.0 LOW, Noise floor	-9.5	Horiz 100

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170  
 Customer: **Safe View, Inc.**  
 Specification: **FCC 15.209**  
 Work Order #: **85484** Date: 9/28/2006  
 Test Type: **Radiated Scan/Maximized** Time: 13:24:14  
 Equipment: **Security Portal** Sequence#: 49  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: SCOUT 100 Version 2 Switch  
 S/N: A100062500152

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Security Portal*	SafeView, Inc.	SCOUT 100 Version 2 Switch	A100062500152

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The Scout 100 Version 2 Switch Security Portal is transmitting continuously. Radiated Emissions 40-60 GHz.  
 Notes: 1) Not sweeping, transmitting on LO, MID, or HI channel (24.65, 27.0, 29.8 GHz) from antenna 192. Disabled the brake, so we can rotate the mast to the pre-cal position for worst case emissions. The mast is reversed so antennas are facing out for easier access. 2) Measurement range is 40-60 GHz. 3) RBW=VBW=30 kHz to reduce noise floor. 4) Antenna placed 0.1 meter directly in front of the antenna that was determined to be the emitter by checking the fundamental.

Modifications in at time of testing were:

- 1) Added a two-turn ferrite on the SCU serial line.
- 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
- 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
- 4) Changed the encoder cable to a custom made, shielded encoder cable.
- 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

The reason for each of these 5 modifications is as follows:

- 1) ferrite on serial line - addresses 60MHz broadband noise
- 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur
- 3) DB37 ferrite - addresses 153MHz discrete spur
- 4) custom shielded encoder cable - multiple discrete frequencies 30-1000MHz
- 5) 6 dB attenuators addresses the divided down VCO frequencies removing the 700 MHz peaks

Signals detected in this range were determined to be noise floor readings, representing no EUT signals detected above this level.

**Transducer Legend:**

T1=P5314 40-120GHz	T2=Horn 40-60GHz 02347 M19RH
T3=Mixer 40-60GHz 02347 M19HWA	

**Measurement Data:**

Reading listed by margin.

Test Distance: 0.1 Meter

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	59600.000M Ave	-6.4	+2.3	+41.7	+35.1		-30.0	42.7	54.0	-11.3	Vert
									Hi channel, noise floor.		
^	59600.030M	3.2	+2.3	+41.7	+35.1		-30.0	52.3	54.0	-1.7	Vert
									Hi channel, noise floor.		
3	59600.000M Ave	-6.7	+2.3	+41.7	+35.1		-30.0	42.4	54.0	-11.6	Horiz
									Hi channel, noise floor.		
^	59600.000M	3.2	+2.3	+41.7	+35.1		-30.0	52.3	54.0	-1.7	Horiz
									Hi channel, noise floor.		
5	54000.000M Ave	-6.5	+2.2	+40.9	+32.0		-30.0	38.6	54.0	-15.4	Vert
									Mid channel, noise floor.		
^	54000.000M	4.3	+2.2	+40.9	+32.0		-30.0	49.4	54.0	-4.6	Vert
									Mid channel, noise floor.		
7	49400.000M Ave	-6.2	+2.1	+40.1	+30.4		-30.0	36.4	54.0	-17.6	Vert
									Low channel, noise floor.		
^	49400.000M	6.5	+2.1	+40.1	+30.4		-30.0	49.1	54.0	-4.9	Vert
									Low channel, noise floor.		

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170  
 Customer: **Safe View, Inc.**  
 Specification: **FCC 15.209**  
 Work Order #: **85484** Date: 9/28/2006  
 Test Type: **Radiated Scan/Maximized** Time: 14:16:24  
 Equipment: **Security Portal** Sequence#: 50  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: SCOUT 100 Version 2 Switch  
 S/N: A100062500152

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Security Portal*	SafeView, Inc.	SCOUT 100 Version 2 Switch	A100062500152

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The Scout 100 Version 2 Switch Security Portal is transmitting continuously. Radiated Emissions 60-90 GHz. Notes: 1) Not sweeping, transmitting on LO, MID, or HI channel (24.65, 27.0, 29.8 GHz) from antenna 192. Disabled the brake, so we can rotate the mast to the pre-cal position for worst case emissions. The mast is reversed so antennas are facing out for easier access. 2) Measurement range is 60-90 GHz. 3) RBW reduced during measurements to reduce noise floor. 4) Antenna placed 0.1 meter directly in front of the antenna that was determined to be the emitter by checking the fundamental.

Modifications in at time of testing were:

- 1) Added a two-turn ferrite on the SCU serial line.
- 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
- 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
- 4) Changed the encoder cable to a custom made, shielded encoder cable.
- 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

The reason for each of these 5 modifications is as follows:

- 1) ferrite on serial line - addresses 60MHz broadband noise
- 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur
- 3) DB37 ferrite - addresses 153MHz discrete spur
- 4) custom shielded encoder cable - multiple discrete frequencies 30-1000MHz
- 5) 6 dB attenuators addresses the divided down VCO frequencies removing the 700 MHz peaks

Signals detected in this range were determined to be noise floor readings, representing no EUT signals detected above this level.

**Transducer Legend:**

T1=P5314 40-120GHz	T2=Horn 60-90GHz 02348 M12RH
T3=Mixer 60-90GHz 02348 M12HWA	

**Measurement Data:** Reading listed by margin. Test Distance: 0.1 Meter

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	73949.980M	-11.3	+2.1	+43.6	+43.4		-30.0	47.8	54.0	-6.2	Horiz
										Low channel, noise floor.	

2	73949.970M	-11.5	+2.1	+43.6	+43.4	-30.0	47.6	54.0	-6.4	Vert
								Low channel, noise floor.		
3	89400.300M	-10.7	+2.3	+45.2	+40.6	-30.0	47.4	54.0	-6.6	Vert
								Hi channel, noise floor.		
4	81000.180M	-10.8	+2.2	+44.4	+40.6	-30.0	46.4	54.0	-7.6	Vert
								Mid channel, noise floor.		

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **Safe View, Inc.**  
 Specification: **FCC 15.209**  
 Work Order #: **85484** Date: 9/28/2006  
 Test Type: **Radiated Scan/Maximized** Time: 14:41:37  
 Equipment: **Security Portal** Sequence#: 51  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: SCOUT 100 Version 2 Switch  
 S/N: A100062500152

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Security Portal*	SafeView, Inc.	SCOUT 100 Version 2 Switch	A100062500152

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The Scout 100 Version 2 Switch Security Portal is transmitting continuously. Radiated Emissions 90-100 GHz. Notes: 1) Not sweeping, transmitting on LO, MID, or HI channel (24.65, 27.0, 29.8 GHz) from antenna 192. Disabled the brake, so we can rotate the mast to the pre-cal position for worst case emissions. The mast is reversed so antennas are facing out for easier access. 2) Measurement range is 90-100 GHz. 3) RBW reduced during measurements to reduce noise floor. 4) Antenna placed 0.1 meter directly in front of the antenna that was determined to be the emitter by checking the fundamental. Since the Mid and Hi channels were beyond 100 GHz and no signals were observed, these were not reported.

Modifications in at time of testing were:

- 1) Added a two-turn ferrite on the SCU serial line.
- 2) Taped AC line cable down to the chassis and added two clamp-on ferrites on AC line to the motor controller.
- 3) Added a clamp-on ferrite to each of the DB37 cables at the ISU end of the cables.
- 4) Changed the encoder cable to a custom made, shielded encoder cable.
- 5) A 6 dB attenuator was installed on both antenna masts at the FDIV.

The reason for each of these 5 modifications is as follows:

- 1) ferrite on serial line - addresses 60MHz broadband noise
- 2) AC line with ferrites to motor controller - addresses discrete 60MHz and 80MHz spur
- 3) DB37 ferrite - addresses 153MHz discrete spur
- 4) custom shielded encoder cable - multiple discrete frequencies 30-1000MHz
- 5) 6 dB attenuators addresses the divided down VCO frequencies removing the 700 MHz peaks

Signals detected in this range were determined to be noise floor readings, representing no EUT signals detected above this level.



**Transducer Legend:**

T1=P5314 40-120GHz	T2=Horn 90-110GHz 02349 M08RH
T3=Mixer 90-110GHz 02349 M08HWA	

**Measurement Data:**

Reading listed by margin.

Test Distance: 0.1 Meter

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	98409.720M	-16.5	+2.0	+46.0	+44.9	-30.0	46.4	54.0	-7.6	Horiz
								Low channel, noise floor.		
2	98399.000M	-16.8	+2.0	+46.0	+44.9	-30.0	46.1	54.0	-7.9	Vert
								Low channel, noise floor.		

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • 510-249-1170

Customer: **Safe View, Inc.**  
 Specification: **FCC 15.209**  
 Work Order #: **85484** Date: 9/27/2006  
 Test Type: **Band Edge** Time: 17:40:19  
 Equipment: **Security Portal** Sequence#: 46  
 Manufacturer: SafeView, Inc. Tested By: Art Rice  
 Model: SCOUT 100 Version 2 Switch  
 S/N: A100062500152

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Security Portal*	SafeView, Inc.	SCOUT 100 Version 2 Switch	A100062500152

**Support Devices:**

Function	Manufacturer	Model #	S/N
Computer/Monitor	MPC	CLIENTPRO 474	4007670-0001
Computer Power Supply	Lite-on Technology Corp.	PA-1221-03	5Y00045302
Keyboard	MPC	SK-1688	C0602086090
Mouse	Microsoft	Basic Optical Mouse 1.0A	none

**Test Conditions / Notes:**

The Scout 100 V2 Switch Security Portal antenna mast is in normal position so antennas are facing to the inside of the EUT. Low channel=24.65 GHz. Mid channel=27 GHz. Hi channel=29.8 GHz. Measuring Peak Carrier Power per DA 06-1589 paragraph 8b. RBW=100 kHz, VBW=3 MHz, Span=1 GHz. Sweep time=auto. Measuring Average RMS Power per DA 06-1589 paragraph 8a. RBW=1 MHz, VBW=3 MHz, Span=0 Hz. Sweep time=1 sec. Emissions reported represent worst case polarization. Measuring CW peak values at low and high channel. Measuring sweeping average values at lower and upper band edges. Transmitting on antenna 192. Transmitter is transmitting continuously during this testing. Measurements were taken with the EMC antennas inside of the EUT.

**Transducer Legend:**

T1=Horn AN02695 Miteq Active 26-40GHz	T2=ANT 18-26GHz Active Horn
T3=CAB HF 72" ANP05315 Pasternack	

**Measurement Data:** Reading listed by margin. Test Distance: 1 Meter

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	30000.000M Ave	25.3	+4.1	+0.0	+7.9	-10.0	27.3	54.0	-26.7	Vert
Upper Band Edge										
1	24250.000M	43.0	+0.0	-17.2	+7.2	-10.0	23.0	54.0	-31.0	Vert
Lower Band Edge										