



TESTING
CERT #803.01, 803.02, 803.05, 803.06

ALEPH AMERICA CORP. TEST REPORT

FOR THE

INTRUSION DETECTION UNIT, QT-40SL

**FCC PART 15 SUBPART B SECTIONS 15.107 & 15.109,
SUBPART C SECTIONS 15.207 & 15.245 AND RSS-210 ISSUE 7**

TESTING

DATE OF ISSUE: MAY 6, 2009

PREPARED FOR:

Aleph America Corp.
3921 Sandstone Drive Suite A
El Dorado Hills, CA 95762

P.O. No.: 06-5243
W.O. No.: 88766

PREPARED BY:

Mary Ellen Clayton
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Date of test: March 11 - May 5, 2009

Report No.: FC09-072

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ADMINISTRATIVE INFORMATION

DATE OF TEST: March 11 –
May 5, 2009

DATE OF RECEIPT: March 11, 2009

REPRESENTATIVE: Steve Aguilar

MANUFACTURER:
Aleph America Corp.
3921 Sandstone Drive Suite A
El Dorado Hills, CA 95762

TEST LOCATION:
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

TEST METHOD: ANSI C63.4 (2003), RSS-210 Issue 7 and RS GEN Issue 2

PURPOSE OF TEST: To perform the testing of the Intrusion Detection Unit, QT-40SL with the requirements for FCC Part 15 Subpart B Sections 15.107 & 15.109, Subpart C Sections 15.207 & 15.245 and RSS-210 devices.

APPROVALS

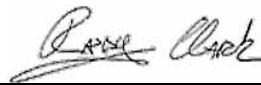
Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:


Mike Wilkinson, Senior EMC Engineer/Lab
Manager

TEST PERSONNEL:


Greg Johnson, EMC Engineer


Randy Clark, EMC Engineer

SUMMARY OF RESULTS

Test	Specification/Method	Results
Conducted Emissions	FCC Part 15 Subpart B Section 15.107	Pass
Radiated Emissions	FCC Part 15 Subpart B Section 15.109	Pass
Conducted Emissions	FCC Part 15 Subpart B Section 15.207	Pass
Carrier Output	FCC Part 15 Subpart C Section 15.245	Pass
Spurious Emissions	FCC Part 15 Subpart C Section 15.245	Pass
Occupied Bandwidth	RSS-210 Issue 7 and RSS GEN Issue 2	Pass
Site File No.	FCC 90477 IC 3082A-2	

CONDITIONS DURING TESTING

No modifications to the EUT were necessary during testing.

FCC 15.31(m) Number Of Channels

This device operates on a single channel.

FCC 15.33(a) Frequency Ranges Tested

15.107 Conducted Emissions: 150 kHz – 30 MHz

15.109 Radiated Emissions: 30 MHz – 1000 MHz

15.207 Conducted Emissions: 150 kHz – 30 MHz

15.245 Radiated Emissions: 9 kHz – 60 GHz

EUT Operating Frequency

The EUT was operating at 10.525 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. The following model has been tested by CKC Laboratories: **QT-40SL**

The manufacturer states that the following additional models are identical electrically to the one which was tested, or any differences between them do not affect their EMC characteristics, and therefore they meet the level of testing equivalent to the tested models:

QT-60
QT-40
QT-40B
QT-40BSL

EQUIPMENT UNDER TEST

Intrusion Detection Unit

Manuf: Aleph America Corp.
Model: QT-40SL
Serial: NA

PERIPHERAL DEVICES

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

Power Supply

Manuf: Topward Electronic Instrument Co.
Model: TPS-4000
Serial: 918520

MEASUREMENT UNCERTAINTIES

Uncertainty Value	Parameter
4.73 dB	Radiated Emissions
3.34 dB	Mains Conducted Emissions
3.30 dB	Disturbance Power

The reported measurement uncertainties are calculated based on the worst case of all laboratory environments from CKC Laboratories, Inc. test sites. Only those parameters which require estimation of measurement uncertainty are reported. The reported worst case measurement uncertainty is less than the maximum values derived in CISPR 16-4-2. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k=2$. Compliance is deemed to occur provided measurements are below the specified limits.

REPORT OF EMISSIONS MEASUREMENTS

TESTING PARAMETERS

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

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. 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 $\text{dB}\mu\text{V}/\text{m}$, the spectrum analyzer reading in $\text{dB}\mu\text{V}$ was corrected by using the following formula. This reading was then compared to the applicable specification limit.

SAMPLE CALCULATIONS		
	Meter reading	(dB μ V)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dB μ V/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. The following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. When conducted emissions testing was performed, a 10 dB external attenuator was used with internal offset correction in the analyzer.

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions 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 highest readings, this is indicated as a "QP" or an "Ave" on the appropriate rows of the data sheets. 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/receiver readings recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the measuring device called "peak hold," the measuring device had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

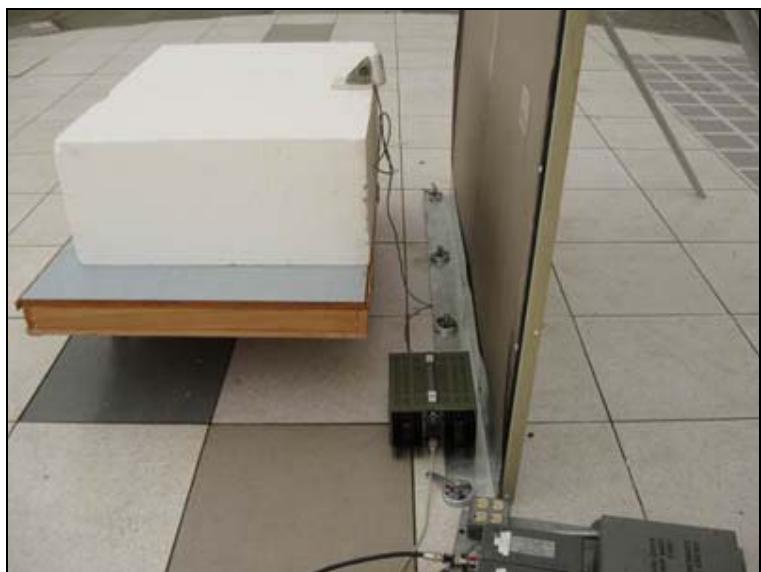
When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the quasi-peak detector.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer/receiver. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.

FCC 15.107 CONDUCTED EMISSIONS

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa CA, 95338 • 800-500-4EMC (4362)

Customer: **Aleph America Corp.**
 Specification: **FCC 15.107(a) Class B - AVE**
 Work Order #: **88766** Date: **3/16/2009**
 Test Type: **Conducted Emissions** Time: **11:20:55 AM**
 Equipment: **Intrusion Detection Unit** Sequence#: **4**
 Manufacturer: Aleph America Corp. Tested By: Greg Johnson
 Model: QT-40SL 120V 60Hz
 S/N:

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/07/2008	07/07/2010	AN02660
Site A conducted cable set	na	05/11/2007	05/11/2009	MACOND
TTE High Pass Filter	G7753	01/22/2008	01/22/2010	AN02609
LISN Model 8028-50-TS-24-BNC	901235 & 903750	05/04/2007	05/04/2009	AN00374
10 dB Attn	N/A	01/22/2009	01/22/2011	ANP05624

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Intrusion Detection Unit*	Aleph America Corp.	QT-40SL	

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electronic Instrument Co.	TPS-4000	918520

Test Conditions / Notes:

FCC 15.107
 The equipment is an intrusion detection system operating at 10.525GHz. The equipment is placed on a styrofoam support at 80cm table height. The power supply is connected to the LISN and is set to provide 12VDC to the equipment.

Frequency Range Investigated: 150kHz to 30 MHz.

Temperature: 19°

Relative Humidity: 39%

Transducer Legend:

T1=ANP05624 (10dB Attn)	T2=MACOND
T3=Filter 150kHz HP AN02609	T4=LISN - BK AN00374

Measurement Data:

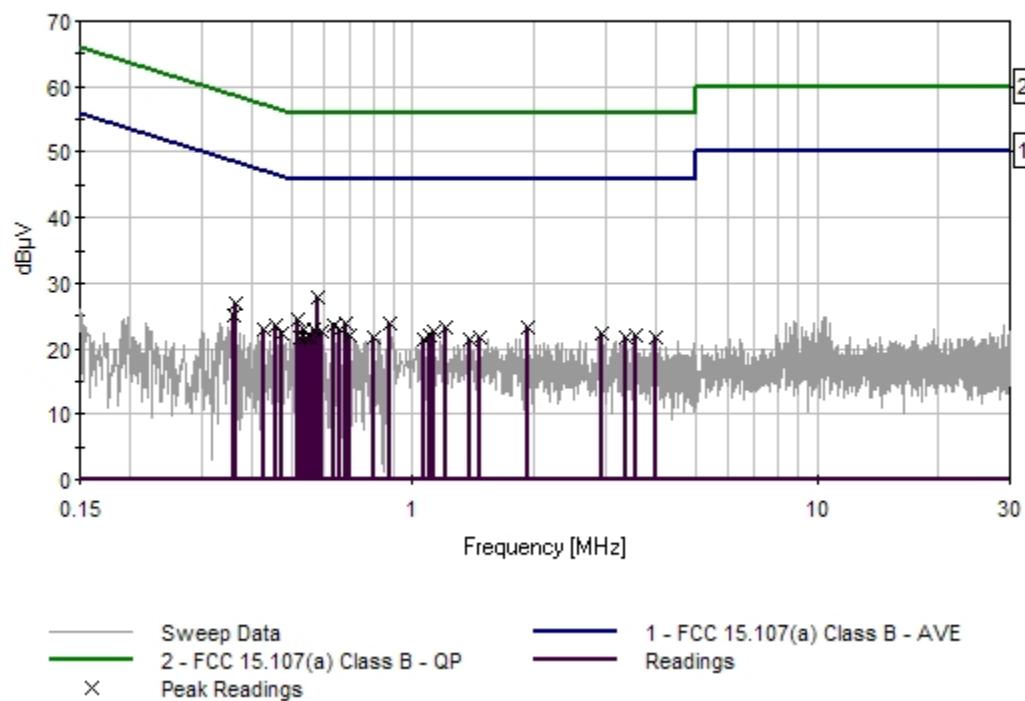
Reading listed by margin.

Test Lead: Line

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	579.052k	17.2	+9.8	+0.3	+0.3	+0.3	+0.0	27.9	46.0	-18.1	Line
2	521.602k	14.0	+9.6	+0.3	+0.3	+0.2	+0.0	24.4	46.0	-21.6	Line
3	365.253k	16.4	+9.7	+0.3	+0.2	+0.2	+0.0	26.8	48.6	-21.8	Line

4	685.224k	13.2	+9.8	+0.3	+0.3	+0.2	+0.0	23.8	46.0	-22.2	Line
5	877.205k	13.2	+9.7	+0.4	+0.3	+0.2	+0.0	23.8	46.0	-22.2	Line
6	639.410k	12.8	+9.8	+0.3	+0.3	+0.3	+0.0	23.5	46.0	-22.5	Line
7	1.932M	12.5	+9.7	+0.5	+0.2	+0.3	+0.0	23.2	46.0	-22.8	Line
8	1.200M	12.5	+9.8	+0.4	+0.2	+0.2	+0.0	23.1	46.0	-22.9	Line
9	569.598k	12.4	+9.7	+0.3	+0.3	+0.3	+0.0	23.0	46.0	-23.0	Line
10	539.055k	12.5	+9.7	+0.3	+0.3	+0.2	+0.0	23.0	46.0	-23.0	Line
11	459.790k	13.1	+9.6	+0.3	+0.3	+0.2	+0.0	23.5	46.7	-23.2	Line
12	660.499k	12.2	+9.8	+0.3	+0.3	+0.2	+0.0	22.8	46.0	-23.2	Line
13	592.869k	12.0	+9.8	+0.3	+0.3	+0.3	+0.0	22.7	46.0	-23.3	Line
14	1.128M	12.0	+9.8	+0.4	+0.2	+0.2	+0.0	22.6	46.0	-23.4	Line
15	2.944M	11.8	+9.7	+0.5	+0.1	+0.3	+0.0	22.4	46.0	-23.6	Line
16	361.617k	14.7	+9.7	+0.3	+0.2	+0.2	+0.0	25.1	48.7	-23.6	Line
17	3.552M	11.4	+9.7	+0.6	+0.1	+0.3	+0.0	22.1	46.0	-23.9	Line
18	696.132k	11.5	+9.8	+0.3	+0.3	+0.2	+0.0	22.1	46.0	-23.9	Line
19	1.107M	11.3	+9.8	+0.4	+0.2	+0.2	+0.0	21.9	46.0	-24.1	Line
20	475.788k	11.8	+9.6	+0.3	+0.3	+0.2	+0.0	22.2	46.4	-24.2	Line
21	554.327k	11.1	+9.7	+0.3	+0.3	+0.3	+0.0	21.7	46.0	-24.3	Line
22	1.464M	11.1	+9.7	+0.4	+0.2	+0.3	+0.0	21.7	46.0	-24.3	Line
23	527.420k	11.2	+9.7	+0.3	+0.3	+0.2	+0.0	21.7	46.0	-24.3	Line
24	3.348M	10.9	+9.7	+0.6	+0.1	+0.3	+0.0	21.6	46.0	-24.4	Line
25	4.011M	10.9	+9.7	+0.6	+0.1	+0.3	+0.0	21.6	46.0	-24.4	Line
26	427.793k	12.5	+9.7	+0.3	+0.2	+0.2	+0.0	22.9	47.3	-24.4	Line

27	541.237k	11.1	+9.7	+0.3	+0.3	+0.2	+0.0	21.6	46.0	-24.4	Line
28	802.304k	11.0	+9.7	+0.4	+0.3	+0.2	+0.0	21.6	46.0	-24.4	Line
29	1.069M	10.9	+9.8	+0.4	+0.2	+0.2	+0.0	21.5	46.0	-24.5	Line
30	1.379M	11.0	+9.7	+0.4	+0.2	+0.2	+0.0	21.5	46.0	-24.5	Line

CKC Laboratories, Inc. Date: 3/16/2009 Time: 11:20:55 AM Aleph America Corp. WO#: 88766
FCC 15.107(a) Class B - AVE Test Lead: Line 120V 60Hz Sequence#: 4 Ext ATTN: 0 dB


Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa CA, 95338 • 800-500-4EMC (4362)

Customer: **Aleph America Corp.**

Specification: **FCC 15.107(a) Class B - AVE**

Work Order #: **88766**

Date: 3/16/2009

Test Type: **Conducted Emissions**

Time: 11:31:46 AM

Equipment: **Intrusion Detection Unit**

Sequence#: 5

Manufacturer: Aleph America Corp.

Tested By: Greg Johnson

Model: QT-40SL

120V 60Hz

S/N:

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/07/2008	07/07/2010	AN02660
Site A conducted cable set	na	05/11/2007	05/11/2009	MACOND
TTE High Pass Filter	G7753	01/22/2008	01/22/2010	AN02609
LISN Model 8028-50- 901235 & 903750 TS-24-BNC		05/04/2007	05/04/2009	AN00374
10 dB Attn	N/A	01/22/2009	01/22/2011	ANP05624

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Intrusion Detection Unit*	Aleph America Corp.	QT-40SL	

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electronic Instrument Co.	TPS-4000	918520

Test Conditions / Notes:

FCC 15.107
The equipment is an intrusion detection system operating at 10.525GHz. The equipment is placed on a styrofoam support at 80cm table height. The power supply is connected to the LISN and is set to provide 12VDC to the equipment.
Frequency Range Investigated: 150kHz to 30 MHz.
Temperature: 19°
Relative Humidity: 39%

Transducer Legend:

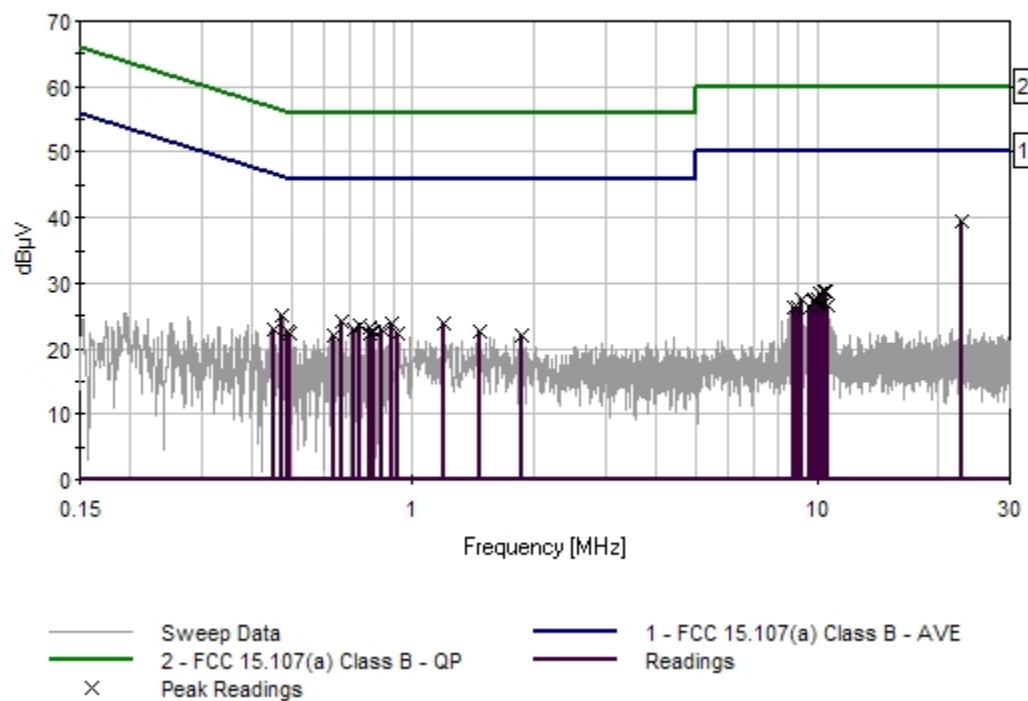
T1=ANP05624 (10dB Attn)	T2=MACOND
T3=Filter 150kHz HP AN02609	T4=LISN - WT AN00374

Measurement Data:

#	Freq MHz	Reading listed by margin.					Test Lead: Neutral				
		Rdng dB μ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	22.833M	26.9	+9.7	+1.3	+0.2	+1.3	+0.0	39.4	50.0	-10.6	Neutr
2	10.445M	17.5	+9.7	+0.9	+0.1	+0.6	+0.0	28.8	50.0	-21.2	Neutr
3	10.544M	17.4	+9.7	+0.9	+0.1	+0.6	+0.0	28.7	50.0	-21.3	Neutr

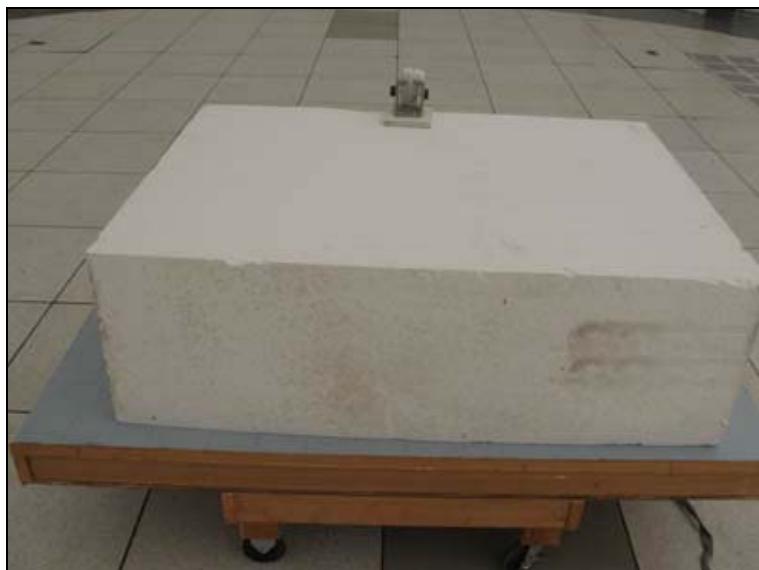
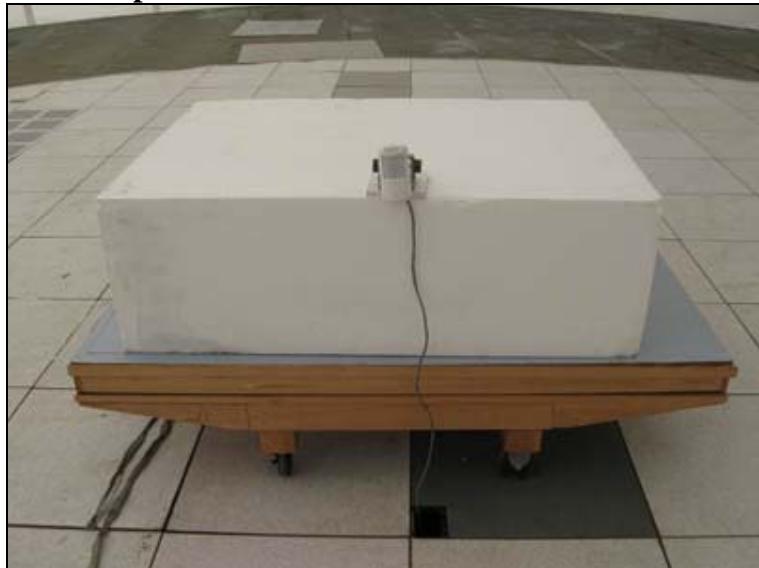
4	476.516k	14.5	+9.6	+0.3	+0.3	+0.3	+0.0	25.0	46.4	-21.4	Neutr
5	10.130M	17.3	+9.7	+0.9	+0.1	+0.5	+0.0	28.5	50.0	-21.5	Neutr
6	665.589k	13.3	+9.8	+0.3	+0.3	+0.3	+0.0	24.0	46.0	-22.0	Neutr
7	885.710k	13.3	+9.7	+0.4	+0.2	+0.2	+0.0	23.8	46.0	-22.2	Neutr
8	1.188M	13.2	+9.8	+0.4	+0.2	+0.2	+0.0	23.8	46.0	-22.2	Neutr
9	9.175M	16.3	+9.8	+0.9	+0.1	+0.5	+0.0	27.6	50.0	-22.4	Neutr
10	741.219k	12.5	+9.8	+0.4	+0.3	+0.4	+0.0	23.4	46.0	-22.6	Neutr
11	10.013M	16.2	+9.7	+0.9	+0.1	+0.5	+0.0	27.4	50.0	-22.6	Neutr
12	786.305k	12.4	+9.7	+0.4	+0.3	+0.4	+0.0	23.2	46.0	-22.8	Neutr
13	9.914M	15.9	+9.8	+0.9	+0.1	+0.5	+0.0	27.2	50.0	-22.8	Neutr
14	9.806M	15.8	+9.8	+0.9	+0.1	+0.5	+0.0	27.1	50.0	-22.9	Neutr
15	717.948k	12.0	+9.8	+0.4	+0.3	+0.4	+0.0	22.9	46.0	-23.1	Neutr
16	834.301k	12.2	+9.7	+0.4	+0.3	+0.3	+0.0	22.9	46.0	-23.1	Neutr
17	10.652M	15.3	+9.7	+0.9	+0.1	+0.6	+0.0	26.6	50.0	-23.4	Neutr
18	802.304k	11.7	+9.7	+0.4	+0.3	+0.4	+0.0	22.5	46.0	-23.5	Neutr
19	1.473M	12.0	+9.7	+0.4	+0.2	+0.2	+0.0	22.5	46.0	-23.5	Neutr
20	10.337M	15.3	+9.7	+0.9	+0.1	+0.5	+0.0	26.5	50.0	-23.5	Neutr
21	490.332k	12.1	+9.6	+0.3	+0.3	+0.3	+0.0	22.6	46.2	-23.6	Neutr
22	781.942k	11.6	+9.7	+0.4	+0.3	+0.4	+0.0	22.4	46.0	-23.6	Neutr
23	8.968M	15.1	+9.8	+0.9	+0.1	+0.5	+0.0	26.4	50.0	-23.6	Neutr
24	8.752M	15.2	+9.7	+0.8	+0.1	+0.5	+0.0	26.3	50.0	-23.7	Neutr
25	919.732k	11.7	+9.7	+0.4	+0.2	+0.2	+0.0	22.2	46.0	-23.8	Neutr
26	9.598M	14.9	+9.8	+0.9	+0.1	+0.5	+0.0	26.2	50.0	-23.8	Neutr

27	453.972k	12.4	+9.6	+0.3	+0.3	+0.3	+0.0	22.9	46.8	-23.9	Neutr
28	495.423k	11.7	+9.6	+0.3	+0.3	+0.3	+0.0	22.2	46.1	-23.9	Neutr
29	634.319k	11.3	+9.8	+0.3	+0.3	+0.3	+0.0	22.0	46.0	-24.0	Neutr
30	1.864M	11.4	+9.7	+0.5	+0.2	+0.2	+0.0	22.0	46.0	-24.0	Neutr

CKC Laboratories, Inc. Date: 3/16/2009 Time: 11:31:46 AM Aleph America Corp. WO#: 88766
FCC 15.107(a) Class B - AVE Test Lead: Neutral 120V 60Hz Sequence#: 5 Ext ATTN: 0 dB


FCC 15.109 RADIATED EMISSIONS

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa CA, 95338 • 800-500-4EMC (4362)

Customer: **Aleph America Corp.**
 Specification: **15.109 CLASS B**
 Work Order #: **88766**
 Test Type: **Maximized Emissions**
 Equipment: **Intrusion Detection Unit**
 Manufacturer: Aleph America Corp.
 Model: QT-40SL
 S/N:

Date: 3/13/2009
 Time: 15:05:07
 Sequence#: 10
 Tested By: Greg Johnson

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/07/2008	07/07/2010	AN02660
Antenna, Bilog	2455	12/22/2008	12/22/2010	AN01992
Site A 10 meter cable set		05/11/2007	05/11/2009	MA10M
HP-8447D Preamp	2727A05444	06/20/2008	06/20/2010	AN00062
6dB Attenuator	none	05/11/2007	05/11/2009	ANP05656

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Intrusion Detection Unit*	Aleph America Corp.	QT-40SL	

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electronic Instrument Co.	TPS-4000	918520

Test Conditions / Notes:

FCC 15.109 Class B
 The equipment is an intrusion detection system operating at 10.525GHz. The equipment is placed on a styrofoam support at 80cm table height. The signal and power cable is routed to the floor of the test facility. The power supply is located under the floor and is set to provide 12VDC to the equipment. Test distance correction factor applied in accordance with 15.31(f) of 20dB per decade.

Frequency Range Investigated: 30MHz to 1 GHz.

Temperature: 20°

Relative Humidity: 35%

No EUT measurements recorded within 20dB of the limit.

Transducer Legend:

T1=MA10M	T2=AMP-AN00062-062008
T3=ANT AN01992 25-1000MHz	T4=ATT ANP05656

Measurement Data:

Reading listed by margin.

Test Distance: 10 Meters

#	Freq MHz	Rdng dB μ V	dB	dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant

FCC 15.207 CONDUCTED EMISSIONS

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa CA, 95338 • 800-500-4EMC (4362)

Customer: **Aleph America Corp.**
 Specification: **FCC 15.207 - AVE**
 Work Order #: **88766**
 Test Type: **Conducted Emissions**
 Equipment: **Intrusion Detection Unit**
 Manufacturer: Aleph America Corp.
 Model: QT-40SL
 S/N:

Date: 3/16/2009
 Time: 11:20:55 AM
 Sequence#: 4
 Tested By: Greg Johnson
 120V 60Hz

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/07/2008	07/07/2010	AN02660
Site A conducted cable set	na	05/11/2007	05/11/2009	MACOND
TTE High Pass Filter	G7753	01/22/2008	01/22/2010	AN02609
LISN Model 8028-50- 901235 & 903750 TS-24-BNC	05/04/2007	05/04/2009	AN00374	
10 dB Attn	N/A	01/22/2009	01/22/2011	ANP05624

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Intrusion Detection Unit*	Aleph America Corp.	QT-40SL	

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electronic Instrument Co.	TPS-4000	918520

Test Conditions / Notes:

FCC 15.207
The equipment is an intrusion detection system operating at 10.525GHz. The equipment is placed on a styrofoam support at 80cm table height. The power supply is connected to the LISN and is set to provide 12VDC to the equipment.
Frequency Range Investigated: 150kHz to 30 MHz.
Temperature: 19°
Relative Humidity: 39%

Transducer Legend:

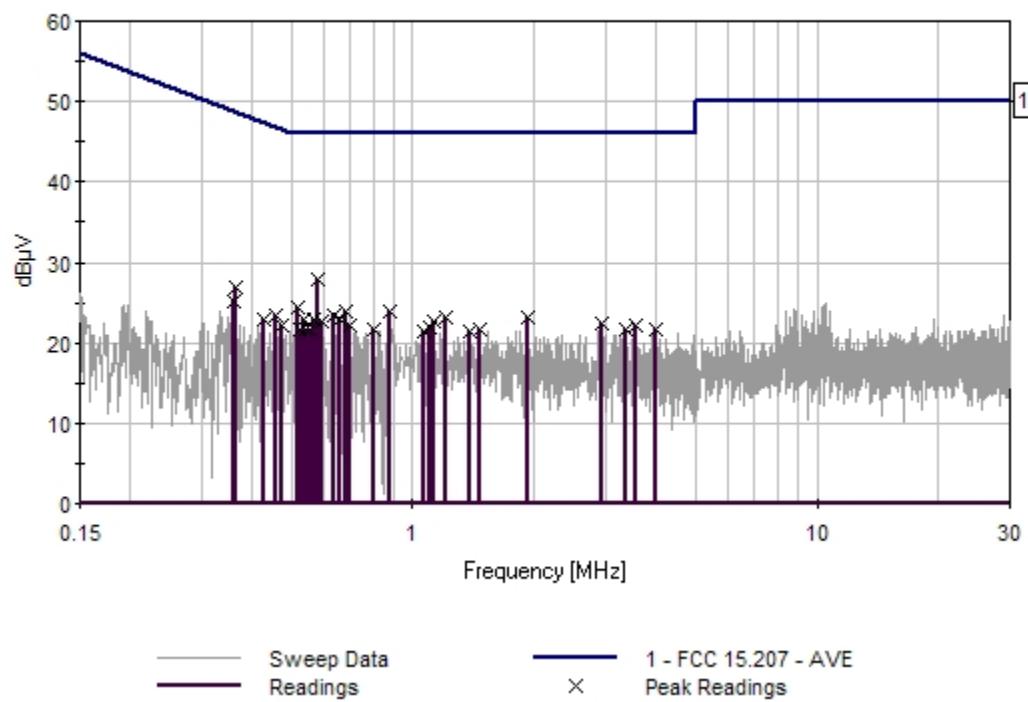
T1=ANP05624 (10dB Attn)	T2=MACOND
T3=Filter 150kHz HP AN02609	T4=LISN - BK AN00374

Measurement Data:

#	Freq MHz	Reading listed by margin.				Test Lead: Line					
		Rdng dB μ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	579.052k	17.2	+9.8	+0.3	+0.3	+0.3	+0.0	27.9	46.0	-18.1	Line
2	521.602k	14.0	+9.6	+0.3	+0.3	+0.2	+0.0	24.4	46.0	-21.6	Line

3	365.253k	16.4	+9.7	+0.3	+0.2	+0.2	+0.0	26.8	48.6	-21.8	Line
4	685.224k	13.2	+9.8	+0.3	+0.3	+0.2	+0.0	23.8	46.0	-22.2	Line
5	877.205k	13.2	+9.7	+0.4	+0.3	+0.2	+0.0	23.8	46.0	-22.2	Line
6	639.410k	12.8	+9.8	+0.3	+0.3	+0.3	+0.0	23.5	46.0	-22.5	Line
7	1.932M	12.5	+9.7	+0.5	+0.2	+0.3	+0.0	23.2	46.0	-22.8	Line
8	1.200M	12.5	+9.8	+0.4	+0.2	+0.2	+0.0	23.1	46.0	-22.9	Line
9	569.598k	12.4	+9.7	+0.3	+0.3	+0.3	+0.0	23.0	46.0	-23.0	Line
10	539.055k	12.5	+9.7	+0.3	+0.3	+0.2	+0.0	23.0	46.0	-23.0	Line
11	459.790k	13.1	+9.6	+0.3	+0.3	+0.2	+0.0	23.5	46.7	-23.2	Line
12	660.499k	12.2	+9.8	+0.3	+0.3	+0.2	+0.0	22.8	46.0	-23.2	Line
13	592.869k	12.0	+9.8	+0.3	+0.3	+0.3	+0.0	22.7	46.0	-23.3	Line
14	1.128M	12.0	+9.8	+0.4	+0.2	+0.2	+0.0	22.6	46.0	-23.4	Line
15	2.944M	11.8	+9.7	+0.5	+0.1	+0.3	+0.0	22.4	46.0	-23.6	Line
16	361.617k	14.7	+9.7	+0.3	+0.2	+0.2	+0.0	25.1	48.7	-23.6	Line
17	3.552M	11.4	+9.7	+0.6	+0.1	+0.3	+0.0	22.1	46.0	-23.9	Line
18	696.132k	11.5	+9.8	+0.3	+0.3	+0.2	+0.0	22.1	46.0	-23.9	Line
19	1.107M	11.3	+9.8	+0.4	+0.2	+0.2	+0.0	21.9	46.0	-24.1	Line
20	475.788k	11.8	+9.6	+0.3	+0.3	+0.2	+0.0	22.2	46.4	-24.2	Line
21	554.327k	11.1	+9.7	+0.3	+0.3	+0.3	+0.0	21.7	46.0	-24.3	Line
22	1.464M	11.1	+9.7	+0.4	+0.2	+0.3	+0.0	21.7	46.0	-24.3	Line
23	527.420k	11.2	+9.7	+0.3	+0.3	+0.2	+0.0	21.7	46.0	-24.3	Line
24	3.348M	10.9	+9.7	+0.6	+0.1	+0.3	+0.0	21.6	46.0	-24.4	Line
25	4.011M	10.9	+9.7	+0.6	+0.1	+0.3	+0.0	21.6	46.0	-24.4	Line
26	427.793k	12.5	+9.7	+0.3	+0.2	+0.2	+0.0	22.9	47.3	-24.4	Line

27	541.237k	11.1	+9.7	+0.3	+0.3	+0.2	+0.0	21.6	46.0	-24.4	Line
28	802.304k	11.0	+9.7	+0.4	+0.3	+0.2	+0.0	21.6	46.0	-24.4	Line
29	1.069M	10.9	+9.8	+0.4	+0.2	+0.2	+0.0	21.5	46.0	-24.5	Line
30	1.379M	11.0	+9.7	+0.4	+0.2	+0.2	+0.0	21.5	46.0	-24.5	Line

CKC Laboratories, Inc. Date: 3/16/2009 Time: 11:20:55 AM Aleph America Corp. WO#: 88766
FCC 15.207 - AVE Test Lead: Line 120V 60Hz Sequence#: 4 Ext ATTN: 0 dB


Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa CA, 95338 • 800-500-4EMC (4362)

Customer: **Aleph America Corp.**

Specification: **FCC 15.207 - AVE**

Work Order #: **88766**

Date: 3/16/2009

Test Type: **Conducted Emissions**

Time: 11:31:46 AM

Equipment: **Intrusion Detection Unit**

Sequence#: 5

Manufacturer: Aleph America Corp.

Tested By: Greg Johnson

Model: QT-40SL

120V 60Hz

S/N:

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/07/2008	07/07/2010	AN02660
Site A conducted cable set	na	05/11/2007	05/11/2009	MACOND
TTE High Pass Filter	G7753	01/22/2008	01/22/2010	AN02609
LISN Model 8028-50- 901235 & 903750 TS-24-BNC		05/04/2007	05/04/2009	AN00374
10 dB Attn	N/A	01/22/2009	01/22/2011	ANP05624

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Intrusion Detection Unit*	Aleph America Corp.	QT-40SL	

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electronic Instrument Co.	TPS-4000	918520

Test Conditions / Notes:

FCC 15.207
The equipment is an intrusion detection system operating at 10.525GHz. The equipment is placed on a styrofoam support at 80cm table height. The power supply is connected to the LISN and is set to provide 12VDC to the equipment.
Frequency Range Investigated: 150kHz to 30 MHz.
Temperature: 19°
Relative Humidity: 39%

Transducer Legend:

T1=ANP05624 (10dB Attn)	T2=MACOND
T3=Filter 150kHz HP AN02609	T4=LISN - WT AN00374

Measurement Data:

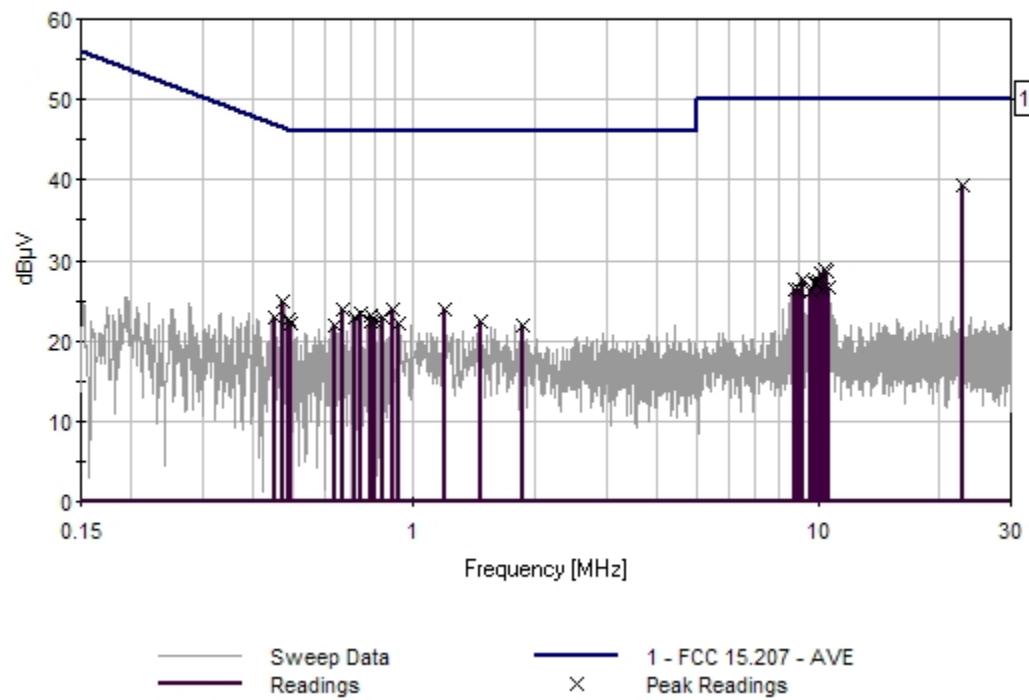
Reading listed by margin.

Test Lead: Neutral

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	22.833M	26.9	+9.7	+1.3	+0.2	+1.3	+0.0	39.4	50.0	-10.6	Neutr
2	10.445M	17.5	+9.7	+0.9	+0.1	+0.6	+0.0	28.8	50.0	-21.2	Neutr
3	10.544M	17.4	+9.7	+0.9	+0.1	+0.6	+0.0	28.7	50.0	-21.3	Neutr

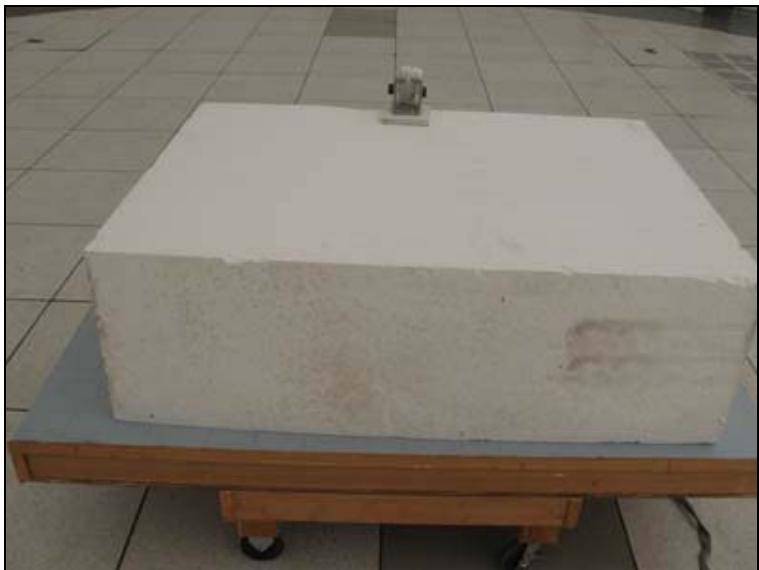
4	476.516k	14.5	+9.6	+0.3	+0.3	+0.3	+0.0	25.0	46.4	-21.4	Neutr
5	10.130M	17.3	+9.7	+0.9	+0.1	+0.5	+0.0	28.5	50.0	-21.5	Neutr
6	665.589k	13.3	+9.8	+0.3	+0.3	+0.3	+0.0	24.0	46.0	-22.0	Neutr
7	885.710k	13.3	+9.7	+0.4	+0.2	+0.2	+0.0	23.8	46.0	-22.2	Neutr
8	1.188M	13.2	+9.8	+0.4	+0.2	+0.2	+0.0	23.8	46.0	-22.2	Neutr
9	9.175M	16.3	+9.8	+0.9	+0.1	+0.5	+0.0	27.6	50.0	-22.4	Neutr
10	741.219k	12.5	+9.8	+0.4	+0.3	+0.4	+0.0	23.4	46.0	-22.6	Neutr
11	10.013M	16.2	+9.7	+0.9	+0.1	+0.5	+0.0	27.4	50.0	-22.6	Neutr
12	786.305k	12.4	+9.7	+0.4	+0.3	+0.4	+0.0	23.2	46.0	-22.8	Neutr
13	9.914M	15.9	+9.8	+0.9	+0.1	+0.5	+0.0	27.2	50.0	-22.8	Neutr
14	9.806M	15.8	+9.8	+0.9	+0.1	+0.5	+0.0	27.1	50.0	-22.9	Neutr
15	717.948k	12.0	+9.8	+0.4	+0.3	+0.4	+0.0	22.9	46.0	-23.1	Neutr
16	834.301k	12.2	+9.7	+0.4	+0.3	+0.3	+0.0	22.9	46.0	-23.1	Neutr
17	10.652M	15.3	+9.7	+0.9	+0.1	+0.6	+0.0	26.6	50.0	-23.4	Neutr
18	802.304k	11.7	+9.7	+0.4	+0.3	+0.4	+0.0	22.5	46.0	-23.5	Neutr
19	1.473M	12.0	+9.7	+0.4	+0.2	+0.2	+0.0	22.5	46.0	-23.5	Neutr
20	10.337M	15.3	+9.7	+0.9	+0.1	+0.5	+0.0	26.5	50.0	-23.5	Neutr
21	490.332k	12.1	+9.6	+0.3	+0.3	+0.3	+0.0	22.6	46.2	-23.6	Neutr
22	781.942k	11.6	+9.7	+0.4	+0.3	+0.4	+0.0	22.4	46.0	-23.6	Neutr
23	8.968M	15.1	+9.8	+0.9	+0.1	+0.5	+0.0	26.4	50.0	-23.6	Neutr
24	8.752M	15.2	+9.7	+0.8	+0.1	+0.5	+0.0	26.3	50.0	-23.7	Neutr
25	919.732k	11.7	+9.7	+0.4	+0.2	+0.2	+0.0	22.2	46.0	-23.8	Neutr
26	9.598M	14.9	+9.8	+0.9	+0.1	+0.5	+0.0	26.2	50.0	-23.8	Neutr

27	453.972k	12.4	+9.6	+0.3	+0.3	+0.3	+0.0	22.9	46.8	-23.9	Neutr
28	495.423k	11.7	+9.6	+0.3	+0.3	+0.3	+0.0	22.2	46.1	-23.9	Neutr
29	634.319k	11.3	+9.8	+0.3	+0.3	+0.3	+0.0	22.0	46.0	-24.0	Neutr
30	1.864M	11.4	+9.7	+0.5	+0.2	+0.2	+0.0	22.0	46.0	-24.0	Neutr

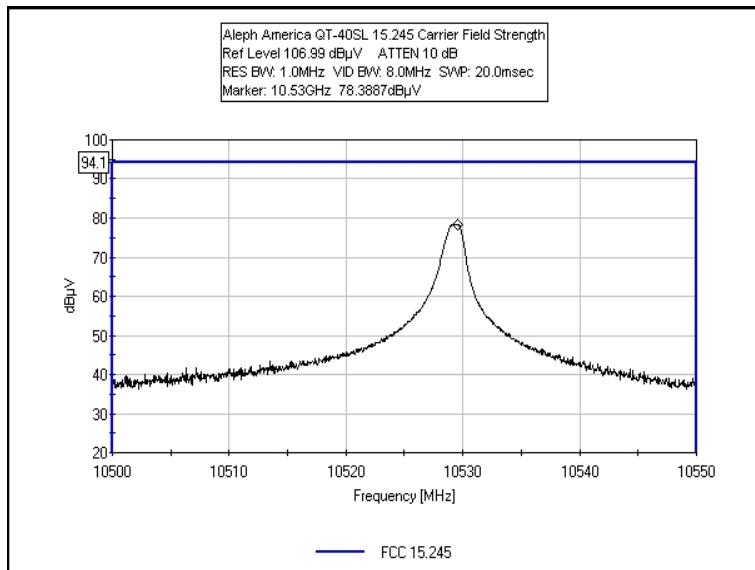
CKC Laboratories, Inc. Date: 3/16/2009 Time: 11:31:46 AM Aleph America Corp. WO#: 88766
FCC 15.207 - AVE Test Lead: Neutral 120V 60Hz Sequence#: 5 Ext ATTN: 0 dB


FCC 15.245 CARRIER OUTPUT

Test Setup Photos



Test Data



Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa CA, 95338 • 800-500-4EMC (4362)

Customer: **Aleph America Corp.**

Specification: **FCC 15.245**

Work Order #: **88766**

Date: 3/12/2009

Test Type: **Radiated Scan**

Time: 11:06:43

Equipment: **Intrusion Detection Unit**

Sequence#: 1

Manufacturer: Aleph America Corp.

Tested By: Randal Clark

Model: QT-40SL

S/N:

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/07/2008	07/07/2010	02660
Cable 10' 40 GHz Gore	NA	04/23/2007	04/23/2009	ANP04290
EMCO 3115 Horn Antenna	9006-3413	06/06/2008	06/06/2010	327

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Intrusion Detection Unit*	Aleph America Corp.	QT-40SL	

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electronic Instrument Co.	TPS-4000	918520

Test Conditions / Notes:

FCC 15.245

The equipment is an intrusion detection system operating at 10.525GHz. The equipment is placed on a styrofoam support at 80cm table height. The signal and power cable is routed to the floor of the test facility. The power supply is located under the floor and is set to provide 12VDC to the equipment. The limit employed for all frequencies outside of the authorized band is that of 15.209. Voltage variations performed via DC power supply $\pm 15\%$ of Nominal DC input.

Frequency Range Investigated: Carrier.

Temperature: 18°

Relative Humidity: 38%

Transducer Legend:

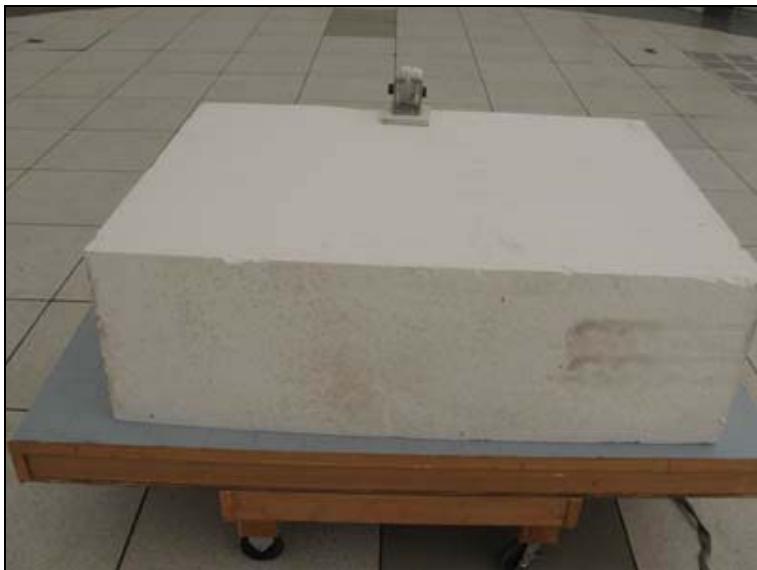
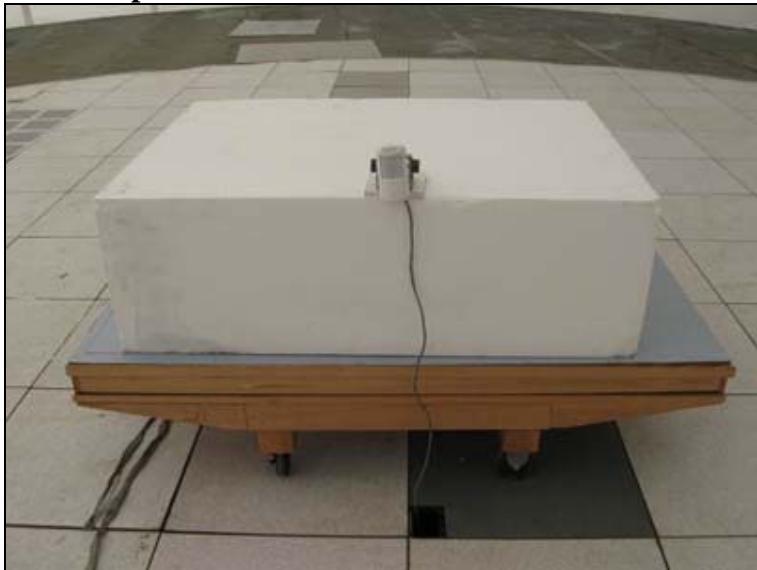
T1=Cable WL Gore 10' 40 GHz AN P004290	T2=ANT AN00327 1GHz-18GHz
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Measurement Data:

#	Freq MHz	Rdng dB μ V	Reading listed by margin.			Test Distance: 1 Meter				
			T1 dB	T2 dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	10529.660M	78.7	+5.7	+38.2		-10.0	112.6	128.0	-15.4	Horiz Nominal Voltage
2	10529.420M	78.6	+5.7	+38.2		-10.0	112.5	128.0	-15.5	Horiz +15% DC Voltage
3	10529.460M	78.5	+5.7	+38.2		-10.0	112.4	128.0	-15.6	Horiz -15% DC Voltage
4	10529.540M	53.7	+5.7	+38.2		-10.0	87.6	128.0	-40.4	Vert

FCC 15.245 SPURIOUS EMISSIONS

Test Setup Photos



Test Data Sheets

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa CA, 95338 • 800-500-4EMC (4362)

Customer: **Aleph America Corp.**
 Specification: **FCC 15.245**
 Work Order #: **88766**
 Test Type: **Maximized Emissions**
 Equipment: **Intrusion Detection Unit**
 Manufacturer: Aleph America Corp.
 Model: QT-40SL
 S/N:

Date: 3/13/2009
 Time: 15:57:11
 Sequence#: 5
 Tested By: Greg Johnson

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/07/2008	07/07/2010	02660
Site A 10 meter cable set		05/11/2007	05/11/2009	MA10M
Loop Ant	1074	05/01/2007	05/01/2009	AN00226

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Intrusion Detection Unit*	Aleph America Corp.	QT-40SL	

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electronic Instrument Co.	TPS-4000	918520

Test Conditions / Notes:

FCC 15.245

The equipment is an intrusion detection system operating at 10.525GHz. The equipment is placed on a styrofoam support at 80cm table height. The signal and power cable is routed to the floor of the test facility. The power supply is located under the floor and is set to provide 12VDC to the equipment. The limit employed for all frequencies below 17.7GHz is that of 15.209. Test distance correction factor applied in accordance with 15.31(f) of 40dB per decade.

Frequency Range Investigated: 9kHz to 30MHz.

Temperature: 19°

Relative Humidity: 39%

The EUT displayed no measurable emissions all readings are noise floor measurements.

Transducer Legend:

T1=MA10M	T2=Mag Loop - AN 00226 - 9kHz-30M
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Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	877.900k	31.0	+0.3	+10.1		-40.0	1.4	28.7	-27.3	Horiz
2	718.300k	29.8	+0.3	+10.0		-40.0	0.1	30.5	-30.4	Horiz
3	1.848M	22.8	+0.4	+10.0		-40.0	-6.8	29.5	-36.3	Vert

4	5.023M	21.7	+0.6	+9.9	-40.0	-7.8	29.5	-37.3	Horiz
5	128.200k	48.1	+0.1	+9.9	-80.0	-21.9	25.4	-47.3	Horiz
6	461.500k	36.5	+0.2	+9.9	-80.0	-33.4	14.3	-47.7	Horiz
7	266.400k	41.1	+0.2	+9.8	-80.0	-28.9	19.1	-48.0	Horiz
8	20.600M	10.0	+1.8	+8.5	-40.0	-19.7	29.5	-49.2	Horiz
9	264.900k	39.1	+0.2	+9.8	-80.0	-30.9	19.1	-50.0	Vert
10	17.496k	45.8	+0.1	+13.3	-80.0	-20.8	42.7	-63.5	Vert
11	9.600k	46.0	+0.0	+16.6	-80.0	-17.4	47.9	-65.3	Vert
12	27.930k	41.3	+0.1	+11.5	-80.0	-27.1	38.7	-65.8	Vert
13	59.531k	33.4	+0.1	+10.2	-80.0	-36.3	32.1	-68.4	Vert

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa CA, 95338 • 800-500-4EMC (4362)

Customer: **Aleph America Corp.**

Specification: **FCC 15.245**

Work Order #: **88766**

Date: 3/13/2009

Test Type: **Maximized Emissions**

Time: 15:05:07

Equipment: **Intrusion Detection Unit**

Sequence#: 3

Manufacturer: Aleph America Corp.

Tested By: Greg Johnson

Model: QT-40SL

S/N:

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/07/2008	07/07/2010	AN02660
Antenna, Bilog	2455	12/22/2008	12/22/2010	AN01992
Site A 10 meter cable set		05/11/2007	05/11/2009	MA10M
HP-8447D Preamp	2727A05444	06/20/2008	06/20/2010	AN00062
6dB Attenuator	none	05/11/2007	05/11/2009	ANP05656

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Intrusion Detection Unit*	Aleph America Corp.	QT-40SL	

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electronic Instrument Co.	TPS-4000	918520

Test Conditions / Notes:

FCC 15.245

The equipment is an intrusion detection system operating at 10.525GHz. The equipment is placed on a styrofoam support at 80cm table height. The signal and power cable is routed to the floor of the test facility. The power supply is located under the floor and is set to provide 12VDC to the equipment. The limit employed for all frequencies below 17.7GHz is that of 15.209. Test distance correction factor applied in accordance with 15.31(f) of 20dB per decade.

Frequency Range Investigated: 30MHz to 1 GHz.

Temperature: 19°

Relative Humidity: 39%

The EUT displayed no measurable emissions; all readings are noise floor measurements.

Transducer Legend:

T1=MA10M	T2=AMP-AN00062-062008
T3=ANT AN01992 25-1000MHz	T4=ATT ANP05656

Measurement Data: Reading listed by margin.

Test Distance: 10 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	634.160M	26.0	+6.8	-30.5	+20.6	+5.8	+10.0	38.7	46.0	-7.3	Horiz

2	595.960M	26.7	+6.6	-30.6	+20.1	+5.8	+10.0	38.6	46.0	-7.4	Horiz
3	45.865M	30.4	+2.2	-30.7	+11.6	+5.8	+10.0	29.3	40.0	-10.7	Vert
4	86.610M	32.0	+2.3	-30.8	+8.4	+5.8	+10.0	27.7	40.0	-12.3	Horiz
5	87.550M	31.0	+2.3	-30.8	+8.5	+5.8	+10.0	26.8	40.0	-13.2	Vert
6	73.260M	31.7	+2.2	-30.8	+6.9	+5.8	+10.0	25.8	40.0	-14.2	Horiz
7	146.860M	28.3	+2.8	-30.4	+11.9	+5.8	+10.0	28.4	43.5	-15.1	Horiz
8	129.550M	28.4	+2.6	-30.5	+11.6	+5.8	+10.0	27.9	43.5	-15.6	Vert
9	68.075M	29.7	+2.2	-30.8	+6.6	+5.8	+10.0	23.5	40.0	-16.5	Vert
10	110.260M	27.9	+2.4	-30.6	+10.5	+5.8	+10.0	26.0	43.5	-17.5	Horiz
11	173.760M	27.5	+3.1	-30.1	+9.5	+5.8	+10.0	25.8	43.5	-17.7	Vert
12	250.860M	25.7	+3.7	-29.8	+12.7	+5.8	+10.0	28.1	46.0	-17.9	Horiz
13	201.760M	25.6	+3.3	-30.0	+9.0	+5.8	+10.0	23.7	43.5	-19.8	Vert

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa CA, 95338 • 800-500-4EMC (4362)

Customer: **Aleph America Corp.**

Specification: **FCC 15.245**

Work Order #: **88766**

Date: 3/12/2009

Test Type: **Radiated Scan**

Time: 14:55:27

Equipment: **Intrusion Detection Unit**

Sequence#: 2

Manufacturer: Aleph America Corp.

Tested By: Randal Clark

Model: QT-40SL

S/N:

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/07/2008	07/07/2010	02660
Cable 10' 40 GHz Gore	NA	04/23/2007	04/23/2009	ANP04290
EMCO 3115 Horn Antenna	9006-3413	06/06/2008	06/06/2010	327
Semflex Cable 3m 40GHz	NA	04/23/2007	04/23/2009	ANP01403
Preamp HP83051A	3332A00309	11/13/2008	11/13/2010	AN02115
ARA MWH-1826/B Horn Antenna	1005	11/12/2008	11/12/2010	AN02046
ARA MWH-2640/B Horn Antenna	01012	11/13/2008	11/13/2010	AN02045

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Intrusion Detection Unit*	Aleph America Corp.	QT-40SL	

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electronic Instrument Co.	TPS-4000	918520

Test Conditions / Notes:

FCC 15.245

The equipment is an intrusion detection system operating at 10.525GHz. The equipment is placed on a styrofoam support at 80cm table height. The signal and power cable is routed to the floor of the test facility. The power supply is located under the floor and is set to provide 12VDC to the equipment. The limit employed for all frequencies below 17.7GHz is that of 15.209.

Frequency Range Investigated: 1 to 40 GHz.

Temperature: 19°

Relative Humidity: 39%

Transducer Legend:

T1=Cable WL Gore 10' 40 GHz AN P004290	T2=Amp 50 GHz AN02115
T3=Cable Semiflex ANP01403	T4=ANT- AN02045-010808 26-40GHz
T5=ANT-AN02046-111308-18-26GHz	

#	Freq MHz	Rdng dB μ V	Reading listed by margin.				Test Distance: 1 Meter				
			T1 T5	T2	T3	T4	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	31586.970M	45.2	+10.2 +0.0	-33.2	+9.2	+37.4	-10.0	58.8	77.5	-18.7	Vert
^	31586.970M	73.6	+10.2 +0.0	-33.2	+9.2	+37.4	-10.0	87.2	77.5	+9.7	Vert
3	31587.210M	42.4	+10.2 +0.0	-33.2	+9.2	+37.4	-10.0	56.0	77.5	-21.5	Horiz
^	31587.210M	69.8	+10.2 +0.0	-33.2	+9.2	+37.4	-10.0	83.4	77.5	+5.9	Horiz
5	21058.080M	50.7	+8.2 +32.8	-32.7	+6.8	+0.0	-10.0	55.8	77.5	-21.7	Horiz
^	21058.080M	78.4	+8.2 +32.8	-32.7	+6.8	+0.0	-10.0	83.5	77.5	+6.0	Horiz
7	21058.110M	48.1	+8.2 +32.8	-32.7	+6.8	+0.0	-10.0	53.2	77.5	-24.3	Vert
^	21058.110M	75.4	+8.2 +32.8	-32.7	+6.8	+0.0	-10.0	80.5	77.5	+3.0	Vert

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa CA, 95338 • 800-500-4EMC (4362)

Customer: **Aleph America Corp.**

Specification: **FCC 15.245**

Work Order #: **88766**

Date: **5/5/2009**

Test Type: **Radiated Scan**

Time: **13:49:57**

Equipment: **Intrusion Detection Unit**

Sequence#: **10**

Manufacturer: **Aleph America Corp.**

Tested By: **Randal Clark**

Model: **QT-40SL**

S/N:

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer 8564E	3623A00539	10/16/2008	10/16/2010	AN01406
Horn Antenna and Harmonic Mixer 40-60 GHz	M19HWA	04/29/2009	04/29/2011	AN02347

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Intrusion Detection Unit*	Aleph America Corp.	QT-40SL	

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electronic Instrument Co.	TPS-4000	918520

Test Conditions / Notes:

FCC 15.245

The equipment is an intrusion detection system operating at 10.525GHz. The equipment is placed on a styrofoam support at 80cm table height. The signal and power cable is routed to the floor of the test facility. The power supply is located under the floor and is set to provide 12VDC to the equipment. The limit employed for all frequencies below 17.7GHz is that of 15.209.

Frequency Range Investigated: 40 to 60 GHz.

Temperature: 20°

Relative Humidity: 33%

Transducer Legend:

T1=ANT-AN02347-042909

Measurement Data: Reading listed by margin.

Test Distance: 0.5 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	52851.700M Ave	52.9	+32.1			-16.0	68.9	77.5	-8.6	Vert
^	52851.700M	67.3	+32.1			-16.0	83.4	77.5	+5.9	Vert
3	52645.000M	50.1	+32.1			-16.0	66.2	77.5	-11.3	Vert
								77.5		Noise Floor
4	52851.700M Ave	48.3	+32.1			-16.0	64.4	77.5	-13.1	Horiz
^	52851.700M	52.9	+32.1			-16.0	68.9	77.5	-8.6	Horiz
6	42116.000M	42.1	+35.7			-16.0	61.8	77.5	-15.7	Vert
								77.5		Noise Floor

RSS-210 OCCUPIED BANDWIDTH

Test Conditions

Test Location: CKC Laboratories, Inc. • 5046 Sierra Pines Dr. • Mariposa CA, 95338 • 800-500-4EMC (4362)

Customer: **Aleph America Corp.**
 Specification: **FCC 15.245**
 Work Order #: **88766** Date: **3/12/2009**
 Test Type: **Radiated Scan** Time: **11:06:43**
 Equipment: **Intrusion Detection Unit** Sequence#: **1**
 Manufacturer: Aleph America Corp. Tested By: Randal Clark
 Model: QT-40SL
 S/N:

Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
E4446A	US44300507	07/07/2008	07/07/2010	02660
Cable 10' 40 GHz Gore	NA	04/23/2007	04/23/2009	ANP04290
EMCO 3115 Horn Antenna	9006-3413	06/06/2008	06/06/2010	327

Equipment Under Test (= EUT):*

Function	Manufacturer	Model #	S/N
Intrusion Detection Unit*	Aleph America Corp.	QT-40SL	

Support Devices:

Function	Manufacturer	Model #	S/N
Power Supply	Topward Electronic Instrument Co.	TPS-4000	918520

Test Conditions / Notes:

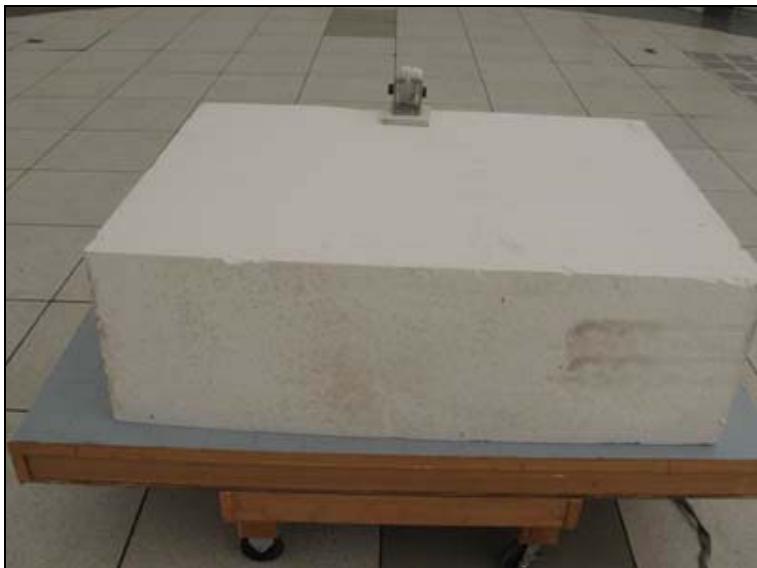
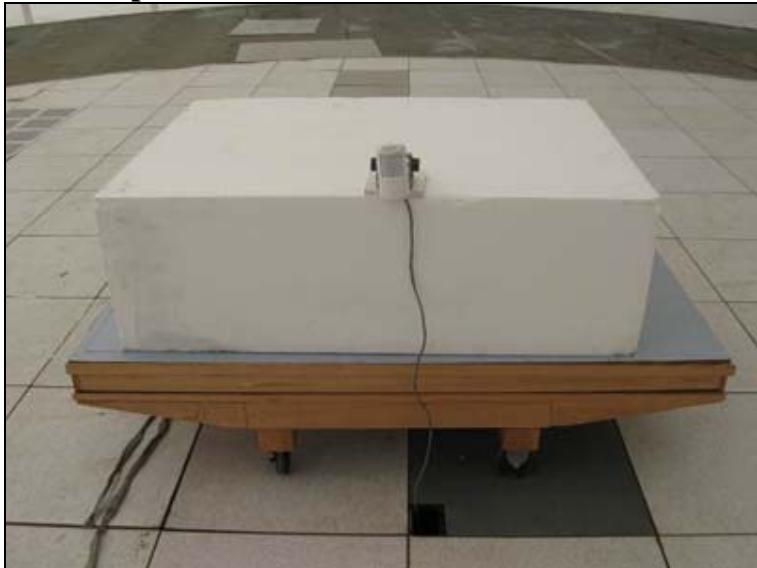
FCC 15.245 The equipment is an intrusion detection system operating at 10.525GHz. The equipment is placed on a styrofoam support at 80cm table height. The signal and power cable is routed to the floor of the test facility. The power supply is located under the floor and is set to provide 12VDC to the equipment.

Frequency Range Investigated: Carrier.

Temperature: 18°

Relative Humidity: 38%

Test Setup Photos



Plots

