Application for FCC Certification
On behalf of

Hangzhou Grancom Information Technology Co., Ltd.

Product Name: Leak Gopher Receiver

Model No.: C9201T-W470-D05-T

FCC ID: 2ABVE04011300

Prepared For : Hangzhou Grancom Information Technology Co., Ltd.
7F, 1# Ruiding Building, No.200 Zhenhua Rd.,
Hangzhou, Zhejiang Province, P.R.China

Prepared By : Audix Technology (Shanghai) Co., Ltd.
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Report No. : ACI-F14026
Date of Test : Jan. 08 – Mar. 14, 2014
Date of Report : Mar. 15, 2014

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TEST REPORT FOR FCC CERTIFICATION

Applicant	:	Hangzhou Grancom Information Technology Co., Ltd.
Manufacturer	:	Hangzhou Lead Information Technology Co., Ltd.
EUT Description	:	Leak Gopher Receiver
		(A) Model No. : C9201T-W470-D05-T
		(B) Power Supply : AC 120V/60Hz

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART C OCTOBER 2013 AND ANSI C63.4:2003

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits radiated emission.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: C9201T-W470-D05-T), which was tested in 3m anechoic chamber on Jan. 08 – Mar. 14, 2014 to be technically compliant with the FCC official limits also.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report contains data that are not covered by the NVLAP accreditation.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Jan. 08 – Mar. 14, 2014 Date of Report : Mar. 15, 2014

Producer : Kathy Wang
KATHY WANG / Assistant

Review : Dio Yang
DIO YANG / Assistant Manager

For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : Sammy Chen
Authorized Signature EMC SAMMY CHEN/ Deputy Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description / Test Item	Test Standard	Meets Limit	Results
Conducted Emission Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2013 AND ANSI C63.4:2003	15.207	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART C OCTOBER 2013 AND ANSI C63.4:2003	15.209	Pass
Fundamental and Spurious	FCC RULES AND REGULATIONS PART 15 SUBPART C OCTOBER 2013 AND ANSI C63.4:2003	15.231 (e)	Pass
Bandwidth	FCC RULES AND REGULATIONS PART 15 SUBPART C OCTOBER 2013 AND ANSI C63.4:2003	15.231 (c)	Pass
Transmission Time limit	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2013 AND ANSI C63.4:2003	15.231 (e)	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	:	Leak Gopher Receiver
Type of EUT	:	☑ Production ☐ Pre-product ☐ Pro-type
Model No.	:	C9201T-W470-D05-T
Working Frequency	:	470.25MHz
Modulation	:	GFSK
Channel	:	Non-channelized
Antenna Type	:	Rod Antenna
Adaptor	:	Manufacturer : SPPS Model Number : SA/12PA/05FUS050200 Input : 100-240V~, 50/60Hz 0.5A Output : 5.0V ⎓ 2A
Applicant	:	Hangzhou Grancom Information Technology Co., Ltd. 7F, 1# Ruiding Building, No.200 Zhenhua Rd., Hangzhou, Zhejiang Province, P.R.China
Manufacturer	:	Hangzhou Lead Information Technology Co., Ltd. 7F, 1# Ruiding Building, No.200 Zhenhua Rd., Hangzhou, Zhejiang Province, P.R.China

2.2 Description of Test Facility

Site Description (Semi-Anechoic Chamber)	:	Sept. 17, 1998 file on Mar 16, 2012 Renewed Federal Communications Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, USA
Name of Firm	:	Audix Technology (Shanghai) Co., Ltd.
Site Location	:	3F 34Bldg 680 Guiping Rd., Caohejing Hi-Tech Park, Shanghai 200233, China
FCC registration Number	:	91789
Accredited by NVLAP, Lab Code	:	200371-0

2.3 Measurement Uncertainty

Conducted Emission Expanded Uncertainty: U = 2.77 dB

Radiated Emission Expanded Uncertainty (30-200MHz):

U = 4.17 dB (Horizontal)

U = 4.02 dB (Vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):

U = 3.38 dB (Horizontal)

U = 3.28 dB (Vertical)

Radiated Emission Expanded Uncertainty (Above 1GHz):

U = 4.68 dB (Horizontal)

U = 4.87 dB (Vertical)

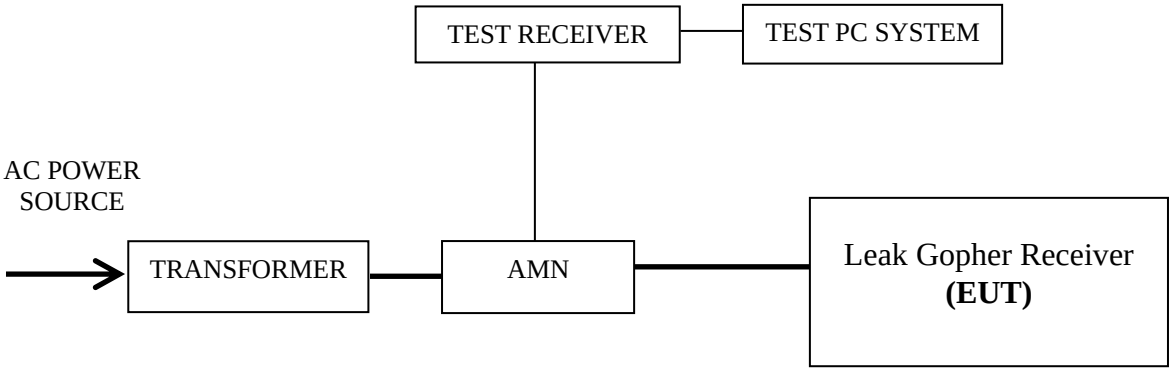
3 CONDUCTED EMISSION TEST

3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101303	Sep 11, 2013	Sep 10, 2014
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Jun 27, 2013	Jun 26, 2014
3.	Pulse Limiter	Yalian	TTS-1	001	Nov 26, 2013	May 27, 2014
4.	Software	Audix	E3	6.111206	--	--

3.2 Block Diagram of Test Setup



—— : Signal Line
▬▬ : Power Line

3.3 Conducted Emission Limits [FCC Part 15 Subpart C 15.207]

Frequency Range (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56*	56~46*
0.5 ~ 5	56	46
5 ~ 30	60	50
NOTE – *Decreases with the logarithm of the frequency.		

3.4 Test Configuration

The EUT (listed in Sec.2.1) was installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the EUT on the test mode, and then test.

3.6 Test Procedures

The EUT was connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2003 during conducted emission test.

The bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< PASS >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

NOTE 1 – Factor = Cable Loss + AMN Factor.
NOTE 2 – Emission Level = Meter Reading + Factor.
NOTE 3 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.
NOTE 4 – The worst emission is detected at 0.362 MHz (QP Value) with corrected signal level of 47.46 dB (μV) (limit is 58.69 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT	:	Leak Gopher Receiver	Temperature :	24℃	
Model No.	:	C9201T-W470-D05-T	Humidity :	44%RH	
Test Mode	:	Transmitting	Date of Test :	Jan. 08, 2014	

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.362	23.60	19.97	43.57	58.69	15.12	QP
	0.634	16.50	19.92	36.42	56.00	19.58	
	1.194	12.80	19.92	32.72	56.00	23.28	
	1.571	12.20	19.93	32.13	56.00	23.87	
	2.581	10.30	20.01	30.31	56.00	25.69	
	4.043	8.00	20.03	28.03	56.00	27.97	
	0.362	13.40	19.97	33.37	48.69	15.32	AV
	0.634	7.90	19.92	27.82	46.00	18.18	
	1.194	5.40	19.92	25.32	46.00	20.68	
	1.571	5.40	19.93	25.33	46.00	20.67	
	2.581	3.00	20.01	23.01	46.00	22.99	
	4.043	1.00	20.03	21.03	46.00	24.97	
Neutral	**0.362**	**27.50**	**19.96**	**47.46**	**58.69**	**11.23**	QP
	0.643	22.00	19.91	41.91	56.00	14.09	
	1.027	16.60	19.92	36.52	56.00	19.48	
	1.580	15.80	19.95	35.75	56.00	20.25	
	2.536	13.90	20.04	33.94	56.00	22.06	
	3.894	12.00	20.08	32.08	56.00	23.92	
	0.362	14.90	19.96	34.86	48.69	13.83	AV
	0.643	9.30	19.91	29.21	46.00	16.79	
	1.027	6.00	19.92	25.92	46.00	20.08	
	1.580	5.70	19.95	25.65	46.00	20.35	
	2.536	3.70	20.04	23.74	46.00	22.26	
	3.894	1.40	20.08	21.48	46.00	24.52	

TEST ENGINEER: ERIC TANG

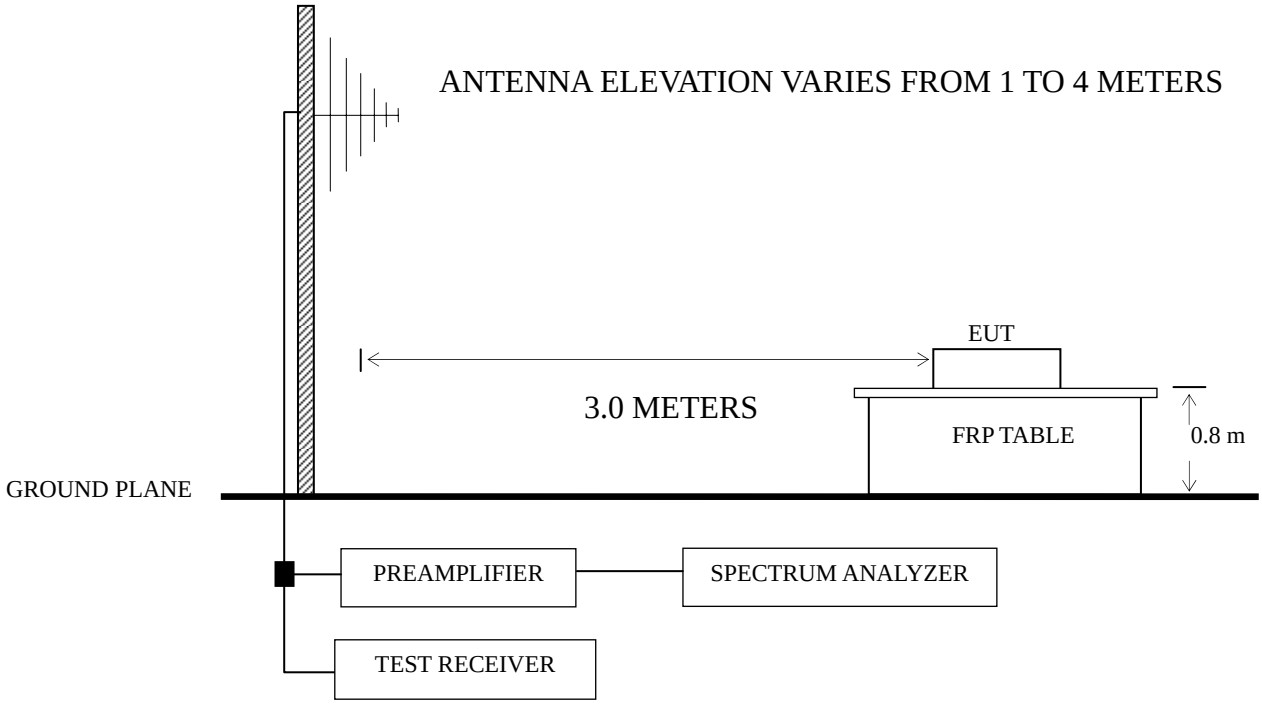
4 RADIATED EMISSION TEST

4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101302	Sep 03, 2013	Sep 02, 2014
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 18, 2013	Mar 17, 2014
3.	Preamplifier	HP	8449B	3008A00864	Mar 20, 2013	Mar 19, 2014
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 03, 2013	May 02, 2014
5.	Horn Antenna	EMCO	3115	9607-4878	May 11, 2013	May 10, 2014
6.	Spectrum Analyzer	Agilent	E7405A	MY45106600	Nov 11, 2013	Nov 10, 2014
7.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Sep 18, 2013	Mar 17, 2014
8.	Software	Audix	E3	6.2007-9-10	--	--

4.2 Block Diagram of Test Setup



■ : 50 ohm Coaxial Switch

4.3 Radiated Emission Limit [FCC Part 15 Subpart C 15.209]

Frequency (MHz)	Distance (m)	Field strength limits (μV/m)	
		(μV/m)	dB (μV/m)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB (μV/m) = 20 lg Emission Level (μV/m)
NOTE 2 - The tighter limit applies at the band edges.
NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.
NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT

4.4 Test Configuration

The EUT was installed as show on Sec. 3.2 in radiated emission test to meet FCC requirement and operating in a manner that tend to maximize its emission level in a normal application.

4.5 Operating Condition of EUT

4.5.1 Setup the EUT as shown in Sec. 3.2.

4.5.2 Turn on the power of all equipment.

4.5.3 Set the EUT on the test modes, and then test.

4.6 Test Procedures

Radiated emission test applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp is necessary for this measurement. For measurement above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.

The EUT was placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) or Horn Antenna was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESCI was set at 120 kHz from 30MHz to 1000MHz.

The bandwidth of the VBW was set at 1MHz and RBW was set at 1MHz for peak emission measurement above 1GHz for Spectrum Agilent E7405A.

The frequency range from 30 MHz to 5 GHz (Up to 10^{th} harmonics from fundamental frequency) was checked.

All the test results are listed in Sec.3.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

No.	Operation	Data Page
1.	Transmitting	P14
2.	Receiving	P15

NOTE 1 – Level = Read Level + Antenna Factor + Cable Loss (<1GHz)

NOTE 2 – Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor (>1GHz)

NOTE 3 –The emission levels which not reported are too low against the official limit.

NOTE 4 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 5 – All reading are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.
For above 1 GHz test, if the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.

EUT	:	Leak Gopher Receiver	Temperature :	22℃
Model No.	:	C9201T-W470-D05-T	Humidity :	60%RH
Test Mode	:	Transmitting	Date of Test :	Jan 22 - 29, 2014

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	32.91	10.84	16.55	0.67	--	28.06	40.00	11.94	QP
	127.00	12.37	12.25	1.41	--	26.03	43.50	17.47	
	429.64	13.45	17.50	2.75	--	33.70	46.00	12.30	
	548.95	11.52	19.83	3.04	--	34.39	46.00	11.61	
	709.00	12.49	19.70	3.50	--	35.69	46.00	10.31	
	830.25	**13.38**	**20.70**	**3.88**	**--**	**37.96**	**46.00**	**8.04**	
	1055.22	48.37	24.17	4.49	37.03	40.00	74.00	34.00	PK
	1669.37	47.22	27.94	4.05	36.16	43.05	74.00	30.95	
	1975.59	46.66	30.84	4.39	35.92	45.97	74.00	28.03	
	3672.30	46.60	32.05	6.02	35.56	49.11	74.00	24.89	
	4488.39	46.12	32.23	6.89	35.56	49.68	74.00	24.32	
	5575.03	44.31	34.04	7.77	35.82	50.30	74.00	23.70	
Vertical	**51.34**	**27.27**	**7.16**	**0.85**	**--**	**35.28**	**40.00**	**4.72**	QP
	85.29	23.42	7.83	1.09	--	32.34	40.00	7.66	
	282.20	17.15	12.50	2.38	--	32.03	46.00	13.97	
	413.15	16.02	16.80	2.72	--	35.54	46.00	10.46	
	571.26	12.39	18.82	3.13	--	34.34	46.00	11.66	
	833.16	12.87	20.70	3.88	--	37.45	46.00	8.55	
	1099.62	47.68	24.39	4.18	36.97	39.28	74.00	34.72	PK
	1660.42	47.08	27.84	4.05	36.17	42.80	74.00	31.20	
	2114.79	46.23	30.36	4.50	35.91	45.18	74.00	28.82	
	3973.53	45.76	33.28	5.80	35.41	49.43	74.00	24.57	
	4392.92	45.64	32.43	6.76	35.52	49.31	74.00	24.69	
	5565.05	43.79	34.04	7.77	35.82	49.78	74.00	24.22	

TEST ENGINEER: NEAL WANG

EUT	:	Leak Gopher Receiver	Temperature :	22℃
Model No.	:	C9201T-W470-D05-T	Humidity :	60%RH
Test Mode	:	Receiving	Date of Test :	Jan 22 - 29, 2014

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	**54.25**	**15.69**	**6.74**	**0.86**	**--**	**23.29**	**40.00**	**16.71**	QP
	83.35	11.35	7.55	1.08	--	19.98	40.00	20.02	
	282.20	10.23	12.50	2.38	--	25.11	46.00	20.89	
	429.64	7.19	17.50	2.75	--	27.44	46.00	18.56	
	551.86	3.23	19.90	3.07	--	26.20	46.00	19.80	
	823.46	4.85	20.50	3.79	--	29.14	46.00	16.86	
	1170.79	48.67	24.78	3.66	36.88	40.23	74.00	33.77	PK
	1584.84	46.94	27.08	4.00	36.25	41.77	74.00	32.23	
	2168.51	46.20	30.01	4.56	35.92	44.85	74.00	29.15	
	3031.63	46.22	29.63	5.81	35.98	45.68	74.00	28.32	
	4103.77	45.22	33.17	6.07	35.43	49.03	74.00	24.97	
	5321.27	44.31	32.52	7.10	35.77	48.16	74.00	25.84	
Vertical	**54.25**	**27.22**	**6.74**	**0.86**	**--**	**34.82**	**40.00**	**5.18**	QP
	86.26	24.00	7.91	1.10	--	33.01	40.00	6.99	
	282.20	16.37	12.50	2.38	--	31.25	46.00	14.75	
	429.64	14.78	17.50	2.75	--	35.03	46.00	10.97	
	544.10	13.45	19.70	3.04	--	36.19	46.00	9.81	
	825.40	13.39	20.50	3.88	--	37.77	46.00	8.23	
	1280.52	47.26	25.44	3.63	36.72	39.61	74.00	34.39	PK
	1895.83	46.06	30.22	4.28	35.97	44.59	74.00	29.41	
	2566.30	46.10	28.37	4.97	35.96	43.48	74.00	30.52	
	3652.61	46.29	31.96	6.02	35.58	48.69	74.00	25.31	
	4577.73	44.85	31.82	6.67	35.58	47.76	74.00	26.24	
	5893.45	43.84	33.70	8.30	35.88	49.96	74.00	24.04	

TEST ENGINEER: NEAL WANG

5 FUNDAMENTAL AND SPURIOUS EMISSIONS TEST

5.1 Test Equipment

The following test equipments are used during the fundamental and spurious emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101302	Sep 03, 2013	Sep 02, 2014
2.	Preamplifier	Agilent	8447D	2944A10548	Sep 18, 2013	Mar 17, 2014
3.	Preamplifier	HP	8449B	3008A00864	Mar 20, 2013	Mar 19, 2014
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 03, 2013	May 02, 2014
5.	Horn Antenna	EMCO	3115	9607-4878	May 11, 2013	May 10, 2014
6.	Spectrum Analyzer	Agilent	E7405A	MY45106600	Nov 11, 2013	Nov 10, 2014
7.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Sep 18, 2013	Mar 17, 2014
8.	Software	Audix	E3	6.2007-9-10	--	--

5.2 Block Diagram of Test Setup

Same as Sec 3.2

5.3 Fundamental and Spurious Emission Limit (FCC Part 15 Subpart C 15.231(e))

Frequency (MHz)	Distance (m)	Field strength limits of fundamental	Field strength limits of spurious emissions
		(μV/m)	(μV/m)
Above 470	3	5000	500

NOTE 1 - Emission Level dB (μV/m) = 20 lg Emission Level (μV/m)
NOTE 2 - The tighter limit applies at the band edges.
NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
NOTE 4 - The fundamental frequency of the EUT is 470.25MHz, Emission Level dB (μV/m)=20lg(5000)= 74 dB (μV/m) and the limit of the Harmonic and spurious emissions is 54 dB (μV/m).

5.4 Test Configuration

The EUT was installed as show on Sec. 3.2 in fundamental and spurious emission test to meet ANSI C63.4:2003 requirements and operating in a manner that tend to maximize emission level in a normal application.

5.5 Operating Condition of EUT

5.5.1 Setup the EUT as shown in Sec. 3.2.

5.5.2 Turn on the power of all equipment.

5.5.3 Set the EUT on the test modes, and then test.

5.6 Test Procedures

Radiated emission test applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp is necessary for this measurement. For measurement above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.

The EUT was placed on a FRP turntable that is 0.8 meter above ground. The turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (Calibrated Bilog Antenna) or Horn antenna was used as receiving antenna. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESCI was set at 120 kHz from 30MHz to 1000MHz.

The bandwidth of the VBW was set at 1MHz and RBW was set at 1MHz for peak emission measurement above 1GHz for Spectrum Agilent E7405A.

The frequency range from 30 MHz to 5 GHz (Up to 10^{th} harmonics from fundamental frequency) was checked.

5.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the higher harmonic not reported below are too low against the FCC limit.

No.	Operation	Data Page
1.	Transmitting	P19

NOTE 1 - All reading are Quasi-Peak values below or equal to 1GHz and Peak values above 1GHz.
NOTE 2 - The emission levels which not reported are too low against the official limit.
NOTE 3 - Factor = Antenna Factor + Cable Loss (<1GHz)
NOTE 4 - Factor = Antenna Factor + Cable Loss - Preamp Factor (>1GHz)
NOTE 5 - Level = Read Level + Factor - Correction factor
NOTE 6 - Correction factor is calculated by averaging the sum of the pulse train. Correction factor is measured as follows:
Turn on the EUT and set the spectrum to the fundamental frequency and set the span to 0 Hz to detect the pulse train. Adjust the sweep time to observe the pulse train and determine the number and width of the pulses, as well as the period of the train.

Mode	T_{on+off}	T_{on}	Formula	Correction Factor
Transmitting	9.708ms	1.848ms	$\|20\lg[T_{on} / T_{on+off}]\|$	14.41 dB

(See Appendix I)

NOTE 7 - EUT configured in Lying, Side & Stand direction were all evaluated. The emission levels recorded below is data of EUT configured in **Lying** direction, for Lying direction was the maximum emission direction during the test.

EUT	:	Leak Gopher Receiver	Temperature :	22℃
Model No.	:	C9201T-W470-D05-T	Humidity :	60% RH
Test Mode		Transmitting	Date of Test :	Mar. 14, 2014

Polarization	Frequency (MHz)	Read Level dB (μV)	Factor (dB/m)	Correction factor (dB)	Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	**470.25**	**63.00**	**20.16**	**14.41**	**68.75**	**74.00**	**5.25**
	940.50	33.08	24.50	14.41	43.17	54.00	10.83
	1410.75	45.67	-6.81	14.41	24.45	54.00	29.55
	1881.00	46.56	-1.66	14.41	30.49	54.00	23.51
	2351.25	43.77	-2.33	14.41	27.03	54.00	26.97
	2821.50	44.33	-1.44	14.41	28.48	54.00	25.52
	3291.75	44.91	0.80	14.41	31.30	54.00	22.70
	3762.00	45.90	2.89	14.41	34.38	54.00	19.62
Vertical	**470.25**	**67.68**	**20.16**	**14.41**	**73.43**	**74.00**	**0.57**
	940.50	37.13	24.50	14.41	47.22	54.00	6.78
	1410.75	45.57	-6.81	14.41	24.35	54.00	29.65
	1881.00	45.51	-1.66	14.41	29.44	54.00	24.56
	2351.25	44.02	-2.33	14.41	27.28	54.00	26.72
	2821.50	44.15	-1.44	14.41	28.30	54.00	25.70
	3291.75	45.37	0.80	14.41	31.76	54.00	22.24
	3762.00	45.11	2.89	14.41	33.59	54.00	20.41

TEST ENGINEER: NEAL WANG

6 BANDWIDTH MEASUREMENT

6.1 Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	Jun 14, 2013	Jun 13, 2014

6.2 Bandwidth Limit (FCC Part 15 Subpart C 15.231 (c))

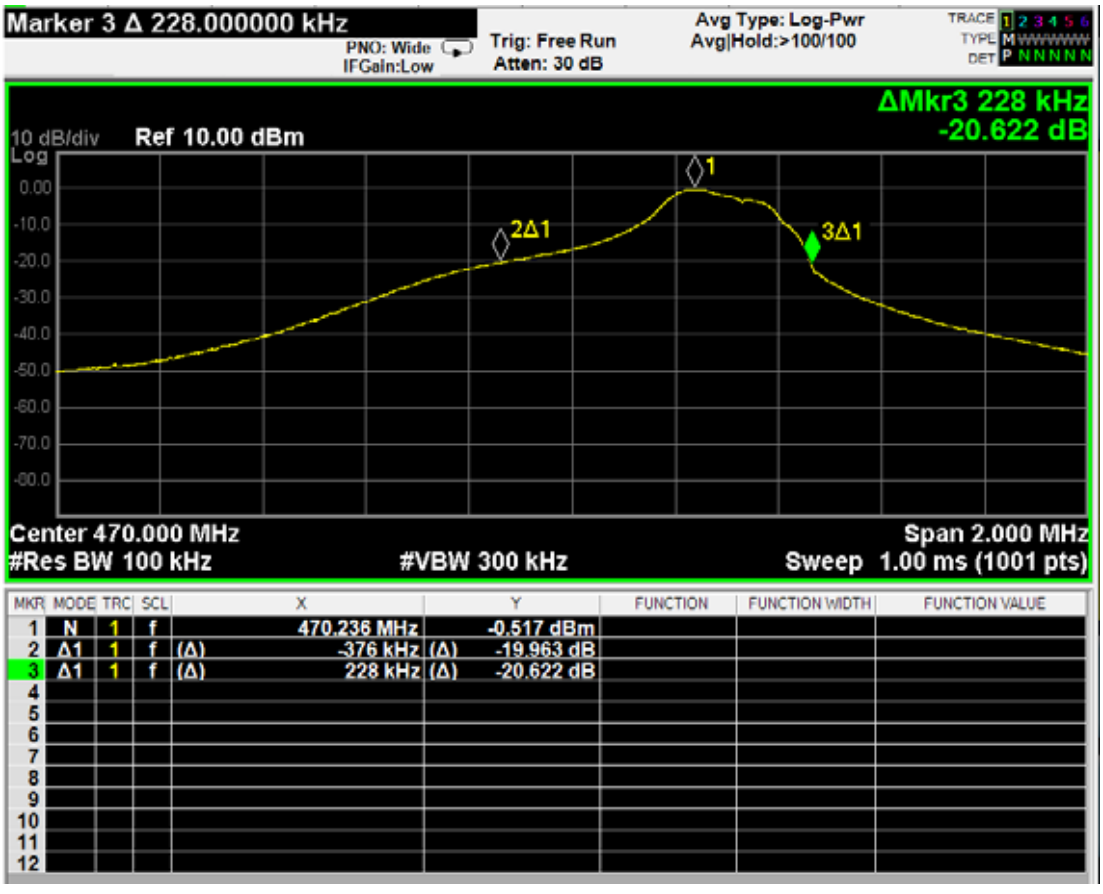
The bandwidth of the emission shall be no wider than 0.25% of the center frequency. Bandwidth is determined at the point 20dB down from the modulated carrier. Bandwidth Limit is:

Limit= 0.25% × 470.25(MHz) = 1.176(MHz)

6.3 Test Results

<PASS>

The 20dB Bandwidth is 604 kHz.



7 TRANSMISSION TIME LIMIT

7.1 Test Equipment

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
2.	Spectrum Analyzer	Agilent	N9010A	MY52221182	Jun 14, 2013	Jun 13, 2014

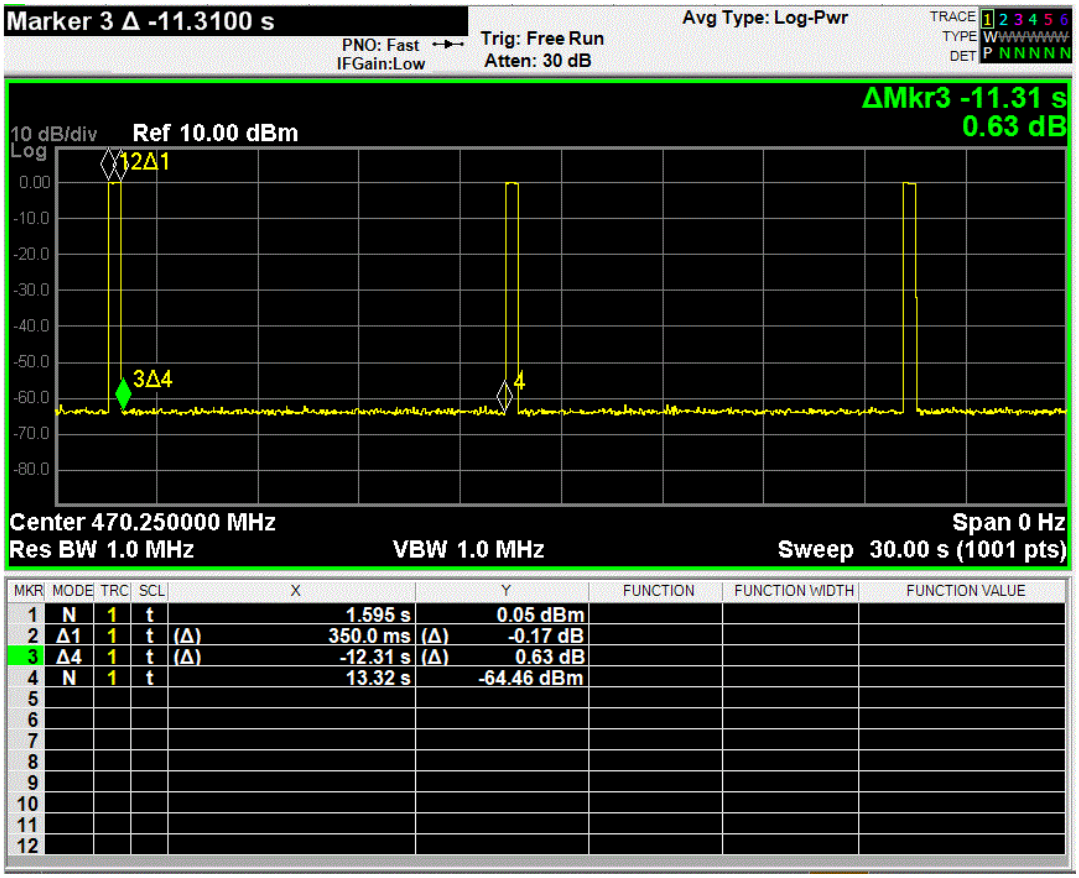
7.2 Limit (FCC Part 15 Subpart C 15.231 (e))

The duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.

7.3 Test Results

<PASS>

The transmission duration is 350ms.
The silent period between transmissions is 12.31s.

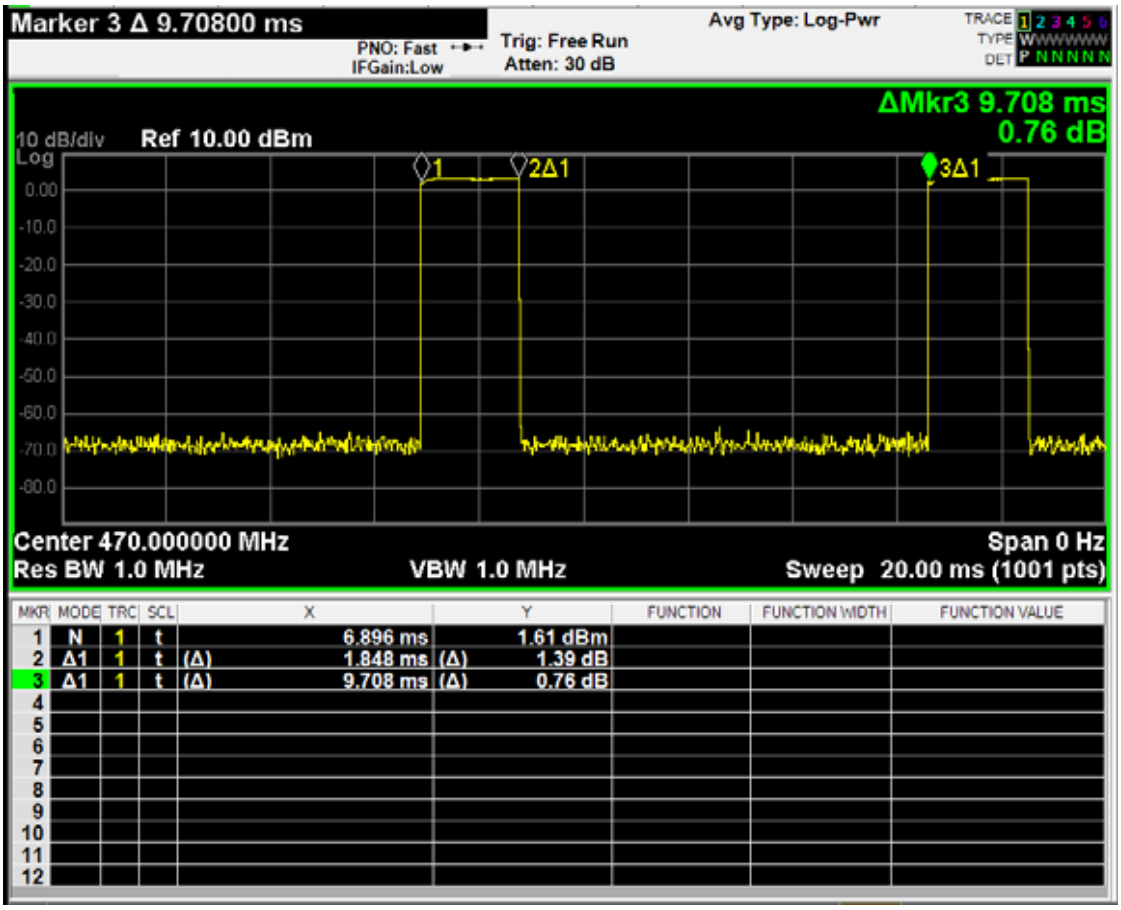


8 DEVIATION TO TEST SPECIFICATIONS

None.

APPENDIX I

PLOT OF THE DUTY CYCLE



Duty Cycle

T_{on} = 1.848ms
T_{on+off} = 9.708ms