

APPLICATION FOR CERTIFICATION

O Behalf of  
Technology Program INC.  
911 Alex

Model : 20306

Prepared for : Technology Program INC.  
420 S. Cleveland Ave Bourbonnais,  
IL 60914

Prepared By : Audix Technology (Shenzhen) Co., Ltd.  
No. 6 Ke Feng Rd., 52 Block,  
Shenzhen Science & Industrial Park,  
Nantou, Shenzhen, Guangdong, China

Tel: (0755)6639496

Report Number : ACS-F01176  
Date of Test : Nov.22~23, 2001  
Date of Report : Nov.29, 2001

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## TEST REPORT CERTIFICATION

Applicant : Technology Program INC.  
Manufacturer : Ningbo Youwon Technology Electronic Co., Ltd.  
EUT Description : 911 Alert  
(A) Model No. : 20306  
(B) Serial No. : 2001112901  
(C) Adaptor Input : AC 120V/60Hz  
(C) Adaptor Output : DC 6V, 1A

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C October 1998 & ANSI C63.4-1992

- The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) 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 both radiated and conducted emissions.

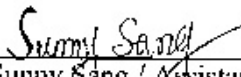
The measurement results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

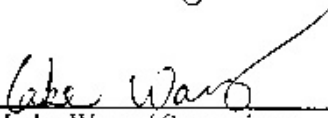
Date of Test :

Nov. 22~23, 2001

Prepared by :

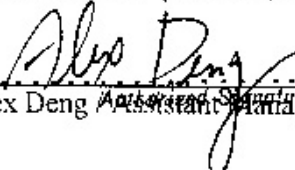
  
Sunny Sang / Assistant

Reviewer :

  
Lake Wang / Supervisor

For and on behalf of  
AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Approved & Authorized Signer :

  
Alex Deng / Assistant Manager

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

Description	:	911 Alex
Model Number	:	20306
Telephone	:	M/N: T812A S/N: TA320743 Manufacturer: Kencci Co., Ltd. Telephone Cable: Noshieded, Detachable, 2m
Adaptor	:	M/N: TEAD-41-071000U Input: AC 120V/50Hz Output: DC 6V, 1A Made In China
Applicant	:	Technology Program INC. 420 S. Cleveland Ave Bourbonnais, IL 60914
Manufacturer	:	Ningbo Youwon Technology Electronics Co., Ltd. 99 Baining Str. Jiangdong District, Ningbo, China
Date of Test	:	Nov.22~23, 2001

## 1.2. Test Facility

### Site Description

3m Anechoic Chamber : Certificated by FCC, USA  
Aug. 24, 2000

3m & 10m Open Site : Certificated by FCC, USA  
Jan. 29, 2001

EMC Lab. : Certificated by VCCI, Japan  
Oct. 29, 1998

Certificated by DATech, German  
Feb. 02, 1999

Certificated by NVLAP, USA  
Until Mar. 31, 2002  
NVLAP Code: 200372-0

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.

Site Location : No. 6, Ke Feng Rd., 52 Block,  
Shenzhen Science & Industrial Park,  
Nantou, Shenzhen, Guangdong, China

## 1.3. Test Uncertainty

Conducted Emission Uncertainty =  $\pm 2.66\text{dB}$

Radiated Emission Uncertainty =  $\pm 4.26\text{dB}$

## 2. POWER LINE CONDUCTED MEASUREMENT

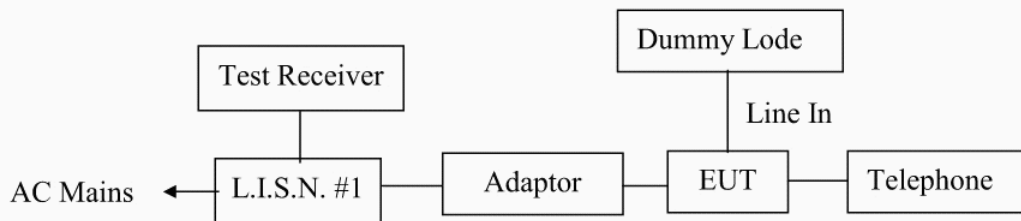
### 2.1. Test Equipment

The following test equipments are used during the power line conducted emission test:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS20	836600/006	Jun. 03, 01	1 Year
2.	L.I.S.N. #1	Kyoritsu	KNW-407	8-541-4	Jun. 03, 01	1 Year
3.	Terminator	EMCO	50Ω	No. 1	Jun. 03, 01	1 Year
4.	Terminator	EMCO	50Ω	No. 2	Jun. 03, 01	1 Year
5.	RF Cable	FUJIKURA	RG-55/U	LISN Cable	Sep. 27, 01	1/2 Year
6.	Coaxial Switch	Anritsu	MP59B	M73989	Jun. 03,01	1/2 Year

### 2.2. Block Diagram of Test Setup

#### 2.2.1. Block diagram of connection between the EUT and simulators



(EUT: 911 Alex)

### 2.3. Power Line Conducted Emission Test Limits

Frequency MHz	Maximum RF Line Voltage	
	μV	dB(μV)
0.45 ~ 30	250	48

Remarks: RF Line Voltage (dB(μV)) = 20 log RF Line Voltage (μV)

## 2.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

### 2.4.1. 911 Alex (EUT)

Model Number	: 20306
Serial Number	: F2001112901
Manufacturer	: Ningbo Youwon Technology Electronics Co., Ltd.

## 2.5. Operating Condition of EUT

2.5.1. Setup the EUT and simulator as shown as Section 2.2.

2.5.2. Turn on the power of all equipment.

Let the EUT work in test mode (ON) and measure it.

## 2.6. Test Procedure

The EUT is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm coupling impedance for the EUT. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.4-1992 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS20) is set at 10KHz.

The frequency range from 450KHz to 30MHz is checked.

The test result are reported on Section 2.7., all the scanning waveforms for Conducted Emission Test are attached in Appendix I.

## 2.7. Power Line Conducted Emission Test Results

**PASS.**

The frequency range from 450KHz to 30 MHz is investigated. All emissions not reported below are too low against the prescribed limits.

As the peak value is too low against the limit, So the Quasi-Peak value and average value have been omitted. The scanning waveforms are put in Appendix I.

### 3. RADIATED EMISSION MEASUREMENT

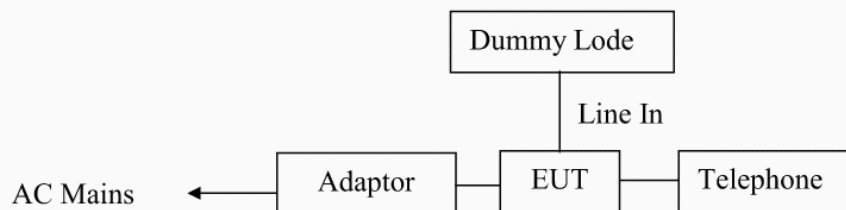
#### 3.1. Test Equipment

##### 3.1.1. For Anechoic Chamber

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	HP	85422E	3625A00181	Jun. 03, 01	1 Year
2.	Test Receiver	Rohde & Schwarz	ESVS20	830350/005	Jun. 03, 01	1 Year
3.	Amplifier	HP	8447D	2944A07794	Jun. 03, 01	1/2 Year
4.	Bilog Antenna	Chase	CBL6112A	2176	Sep. 25, 01	1 Year
5.	Computer	N/A	N/A	N/A	N/A	N/A
6.	Printer	NEC	P3800	568101448	N/A	N/A
7.	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.1	Aug.09, 01	1/2 Year
8.	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.2	Aug.09, 01	1/2 Year
9.	RF Cable	FUJIKURA	RG-55/U	3# Chamber No.3	Aug.09, 01	1/2 Year
10.	RF Cable	FUJIKURA	RG-55/U	3# Chamber No.4	Aug.09, 01	1/2 Year
11.	Coaxial Switch	Anritsu	MP59B	M74389	Jun. 03, 01	1/2 Year

#### 3.2. Block Diagram of Test Setup

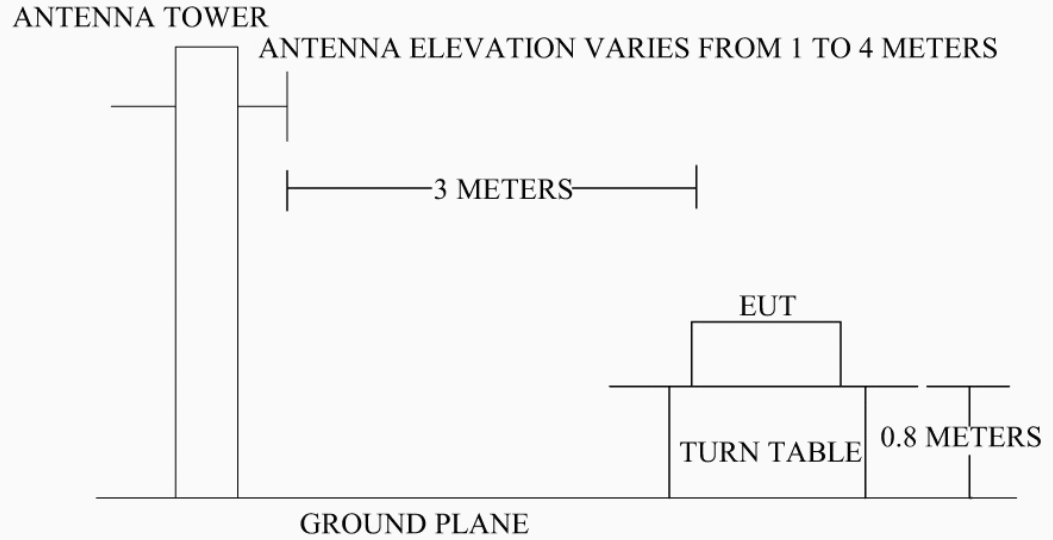
##### 3.2.1. diagram of connection between the EUT and simulators



(EUT: 911 Alex)



### 3.2.2. In Anechoic Chamber 3 Test Setup Diagram



### 3.3. Radiated Emission Limit (Class B)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
Fundamental Frequency	3	$50 \times 10^3$	94.0
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

- Remark :
- (1) Emission level  $(\text{dB})\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$
  - (2) The smaller limit shall apply at the cross point between two frequency bands.
  - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

### 3.4. EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

#### 3.4.1. 911 Alex (EUT)

Model Number : 20306  
Serial Number : 2001112901  
Manufacturer : Ningbo Youwon Technology Electronics Co., Ltd.

### 3.5. Operating Condition of EUT

1. Setup the EUT as shown in Section 3.2..
2. Let the EUT work in test modes (ON) and measure it.

### 3.6. Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-1992 on radiated emission measurement.

The bandwidth of the EMI test receiver (R&S ESVS20) is set at 120KHz in the 30-1000MHz and 1MHz had been set in above 1000MHz Range.

The frequency range from 30MHz to 1000MHz is checked.

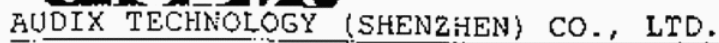
The test modes (ON) are tested in Anechoic Chamber and all the scanning waveforms are attached in Appendix I.

### 3.7. Radiated Emission Noise Measurement Result

**PASS.**

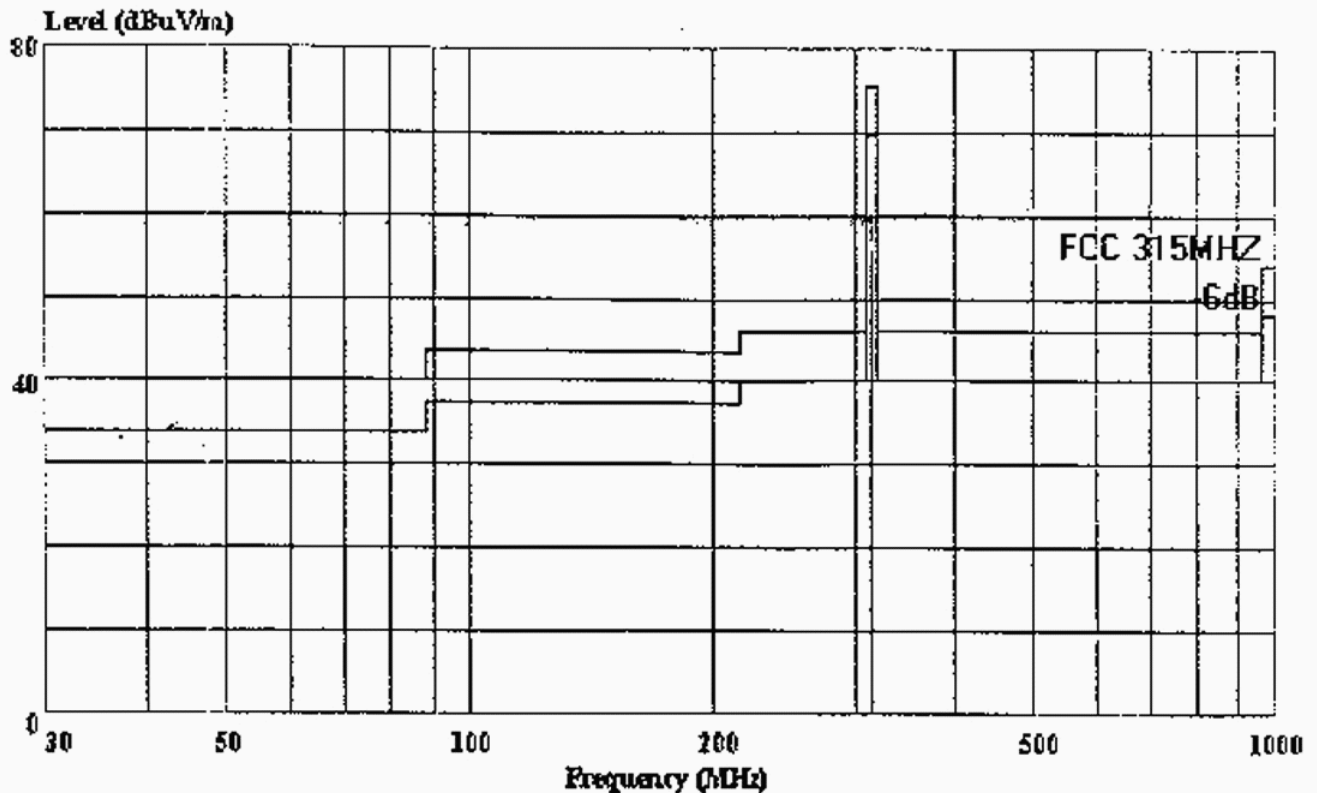
The frequency range from 30MHz to 1000MHz is investigated.

Please see the following pages.



Shenzhen Science & Ind. Park  
Tel: 0755-6639495~7  
Fax: 0755-6632877

Data#: 5      File#: Ning Youwon.EMI      Date: 2001-11-23      Time: 08:32:52



**AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. (3# Chamber)**

Trace:

Ref Trace:

Condition: FCC 315MHZ 3m 2598FACTOR HORIZONTAL

EUT : 911 Alert

M/N : 20306

Power : AC Adaptor Input 120V/60Hz DC 6V

Test Engineer: Edwarehu

Memo : On

: H:1.1M

 $\therefore D: 10^4$ 

Page: 1

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Probe Factor	Cable Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	
1	314.875	55.98	-19.62	75.60	37.40	18.58	14.23	4.35	Average



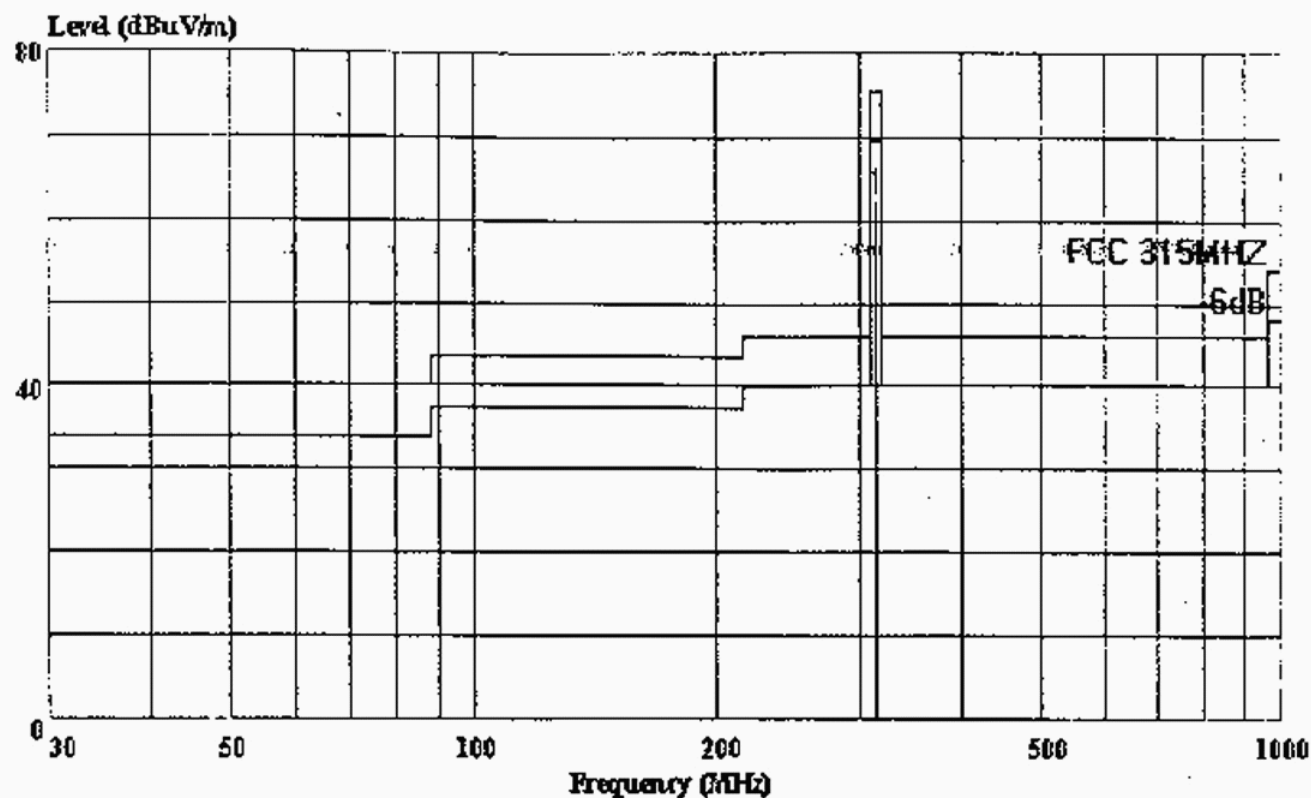
AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Shenzhen Science & Ind. Park

Tel: 0755-6639495~7

Fax: 0755-6632877

Data#: 6 File#: Ning Youwon.EMI Date: 2001-11-23 Time: 08:34:58



AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. (3# Chamber)

Trace:

Ref Trace:

Condition: FCC 315MHZ 3m 2598FACTOR HORIZONTAL

EUT : 911 Alert

M/N : 20306

Power : AC Adaptor Input 120V/60Hz DC 6V

Test Engineer: Edwarehu

Memo : On

: H:1.1M

: D:10'

Page: 1

Freq	Level	Over	Limit	Read	Factor	Probe	Cable	Remark
		Limit	Line			Factor	Loss	
MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB	
1	314.875	62.20	-13.40	75.60	43.62	18.58	14.23	4.35 Peak