



**FCC 47 CFR PART 74 SUBPART H**

**TEST REPORT**

**For**

**UHF Wireless Microphone**

**PA-8010UR/ PA-8010Q/ PA-8010UD/ PA-8010UDR/ SE-808/ SE-900/  
SE-3000/ SE-1360/ SE-2019/ SE-2022**

**Trade Name: N/A**

*Issued to*

**ENPING SOUND-EXPLORER ACOUSTICS SCIENCE AND  
TECHNOLOGY EXPAND CO., LTD. (PROSOUND TECHNOLOGY CORP)  
PINGSHI INDUSTRIAL ESTATE ENPING CITY  
GUANGDONG PROVINCE CHINA**

*Issued by*

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## 1. TEST RESULT CERTIFICATION

**Applicant:** ENPING SOUND-EXPLORER ACOUSTICS SCIENCE AND TECHNOLOGY EXPAND CO., LTD. (PROSOUND TECHNOLOGY CORP)  
PINGSHI INDUSTRIAL ESTATE ENPING CITY GUANGDONG PROVINCE CHINA

**Equipment Under Test:** UHF Wireless Microphone

**Trade Name:** N/A

**Model:** PA-8010UR/ PA-8010Q/ PA-8010UD/ PA-8010UDR/ SE-808/ SE-900/ SE-3000/ SE-1360/ SE-2019/ SE-2022

**Date of Test:** May 20-July 05, 2005

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
FCC 47 CFR Part 74 Subpart H	No non-compliance noted

### We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 74H.

The test results of this report relate only to the tested sample EUT identified in this report.

*Reviewed and Approved by:*

Clinton Kao  
Manager of the EMC testing Division  
Compliance Certification Services (SZ) Inc.



## 2. EUT DESCRIPTION

<b>Product</b>	UHF Wireless Microphone
<b>Trade Name</b>	N/A
<b>Model Number</b>	PA-8010UR/ PA-8010Q/ PA-8010UD/ PA-8010UDR/ SE-808/ SE-900/ SE-3000/ SE-1360/ SE-2019/ SE-2022
<b>Model Discrepancy</b>	The same products have the different model names.

**Remark:** This submittal(s) (test report) is intended for FCC ID: TB5PA8010UR filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 95, Subpart C Rules.



### **3. TEST METHODOLOGY**

The tests documented in this report were performed in accordance with ANSI C63.4 and FCC CFR 47 Rules Part 74 Subpart H.

#### **3.1 EUT CONFIGURATION**

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

#### **3.2 EUT EXERCISE**

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to its specifications, the EUT must comply with the requirements under the FCC Rules Part 74 Subpart H.

#### **3.3 GENERAL TEST PROCEDURES**

##### **Conducted Emissions**

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

##### **Radiated Emissions**

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4.

#### **3.4 MODIFICATION**

N/A

### 3.5 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

- (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	( <sup>2</sup> )
13.36 - 13.41	322 - 335.4		

<sup>1</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

<sup>2</sup> Above 38.6

- (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

### 3.6 DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz, which worst case was in normal link mode only.

The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis).

The worst emission was found in lie-down position (Y axis) and the worst case was recorded.



## **4. INSTRUMENT CALIBRATION**

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.



## **5. FACILITIES AND ACCREDITATIONS**

### **5.1 FACILITIES**

All measurement facilities used to collect the measurement data are located at

No. 6, Jinao industrial park, No.35 Jukeng Road, Dashuikeng Village, Guanlan Town, Baoan District, Shenzhen, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

### **5.2 EQUIPMENT**

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

### **5.3 LABORATORY ACCREDITATIONS AND LISTING**

The test facilities used to perform radiated and conducted emissions tests are accredited by National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code: 200577-0 to perform Electromagnetic Interference tests according to FCC PART 95 AND CISPR 22 requirements. No part of this report may be used to claim or imply product endorsement by NVLAP or any agency of the US Government.





## 6. SETUP OF EQUIPMENT UNDER TEST

### 6.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

### 6.2 SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	Series No.	FCC ID	Data Cable	Power Cord
1	N.A						

**Remark:**

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.*
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.*

## 7. FCC PART 74 REQUIREMENTS

### 7.1 MAXIMUM TRANSMITTER POWER

#### LIMIT

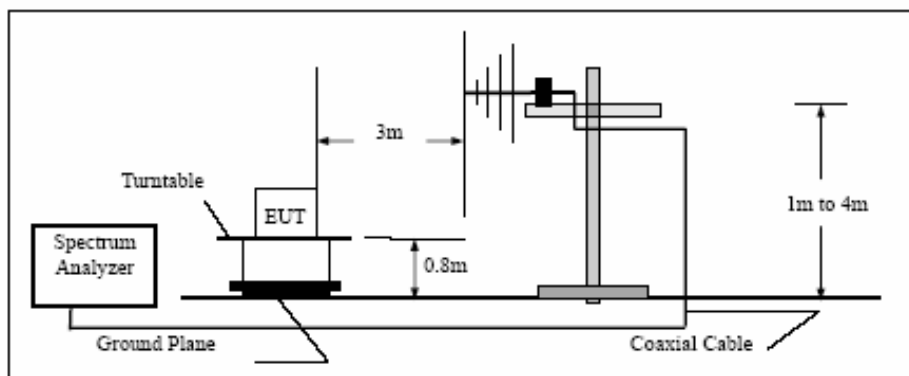
According to FCC Part 74 Section 74.861(e) – 1: The power of the measured unmodulated carrier power at the output of the transmitter power amplifier may not exceed 250mW

#### MEASUREMENT EQUIPMENT USED

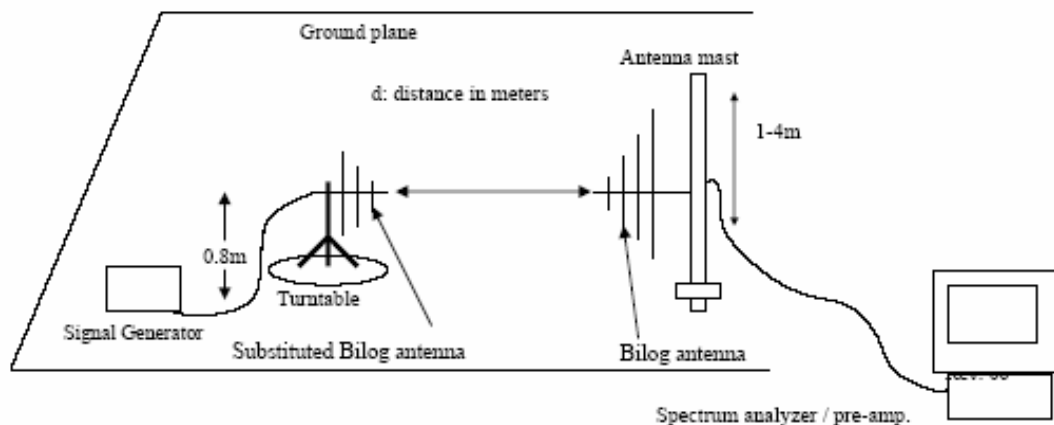
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Advantest	R3132	120901472	06/07/2006
EMI Test Receiver	HP	8546A	3448A00232	06/07/2006
Pre-amplifier	HP	8447D	2944A0799	06/07/2006
Bi-log Antenna	EMCO	3142	9910-1436	06/07/2006
Bi-log Antenna	Schaffner	CBL6143	5082	06/07/2006

*Remark: Each piece of equipment is scheduled for calibration once a year.*

#### Test Configuration



#### SUBSTITUTION METHOD:





## **TEST PROCEDURE**

1. On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.
2. The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the transmitter.
3. The output of the antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
4. The transmitter shall be switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
5. The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.
6. The transmitter shall then be rotated through 360 ° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
7. The test antenna shall be raised and lowered again through the specified range of height until the measuring receiver detects a maximum signal level.
8. The maximum signal level detected by the measuring receiver shall be noted.
9. Replace the antenna with a proper Antenna (substitution antenna).
10. The substitution antenna shall be oriented for vertical polarization and, if necessary, the length of the substitution antenna shall be adjusted to correspond to the frequency of transmitting.
11. The substitution antenna shall be connected to a calibrated signal generator.
12. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
13. The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
14. The input signal to substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
15. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
16. The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.
17. The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.

**TEST RESULTS***No non-compliance noted***Test Data****The Output Power of Wireless Microphone**

Testing channel: CH LOW								
Freq. (MHz)	Antenna Polarity	Reading (dBuV)	SG O/P (dBm)	Ant. Gain (dB)	Cable (dB)	Corrected Power		Limit (mW)
						(dBm)	(mW)	
471.3	V	94.64	-2.4	11.32	1.38	7.54	5.675	50
471.3	H	71.04	-21.2	11.32	1.38	-3.72	0.424	
Testing channel: CH MID								
Freq. (MHz)	Antenna Polarity	Reading (dBuV)	SG O/P (dBm)	Ant. Gain (dB)	Cable (dB)	Corrected Power		Limit (mW)
						(dBm)	(mW)	
478.9	V	95.28	-1.69	11.35	1.41	8.25	6.683	50
478.9	H	69.22	-22.18	11.35	1.41	-3.99	0.399	
Testing channel: CH HIGH								
Freq. (MHz)	Antenna Polarity	Reading (dBuV)	SG O/P (dBm)	Ant. Gain (dB)	Cable (dB)	Corrected Power		Limit (mW)
						(dBm)	(mW)	
486.3	V	93.69	-2.87	11.37	1.44	7.06	5.081	50
486.3	H	70.26	-21.43	11.37	1.44	-8.62	0.137	

$$\text{Corrected Power(dBm)} = \text{SG output power(dBm)} - \text{losses(dB)} + \text{antenna gain(dBd)}$$



## 7.2 MODULATION CHARACTERISTICS

### LIMIT

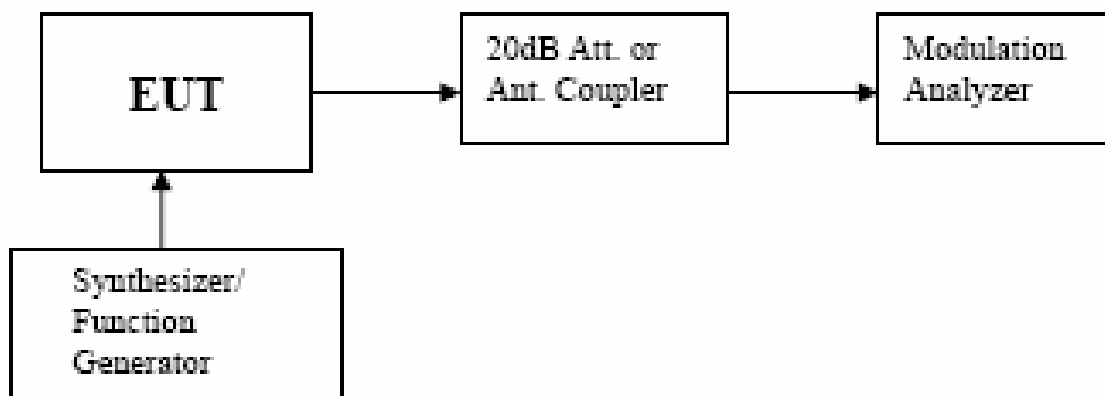
1. According to CFR 47 section 2.1047(a), for Voice Modulation Communication Equipment, the frequency response of the audio modulation circuit over a range of 100 to 5000Hz shall be measured.
2. According to CFR 47 section 74.861(e)-3, any form of modulation may be used. A maximum deviation of  $\pm 75$  KHz is permitted when frequency modulation is employed.

### MEASUREMENT EQUIPMENT USED

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Audio Signal Generator	Good Will	GAG-809	A630525	06/10/2005
Modulation Analyzer	HP	8920B	US36142090	06/10/2005

*Remark: Each piece of equipment is scheduled for calibration once a year.*

### Test Configuration





## **TEST PROCEDURE**

### **A. Modulation Limit**

1. Configure the EUT as shown in figure 1, adjust the audio input for 60% of rated system deviation at 1 KHz using this level as a reference (0dB) and vary the input level from -20 to +20dB. Record the frequency deviation obtained as a function of the input level.
2. Repeat step 1 with input frequency changing to 300, 1000, 3000, and 14000 Hz in sequence.

### **B. Audio Frequency Response**

1. Configure the EUT as shown in figure 1.
2. Adjust the audio input for 20% of rated system deviation at 1 KHz using this level as a reference (0 dB).
3. Vary the Audio frequency from 100 Hz to 30 KHz and record the frequency deviation.

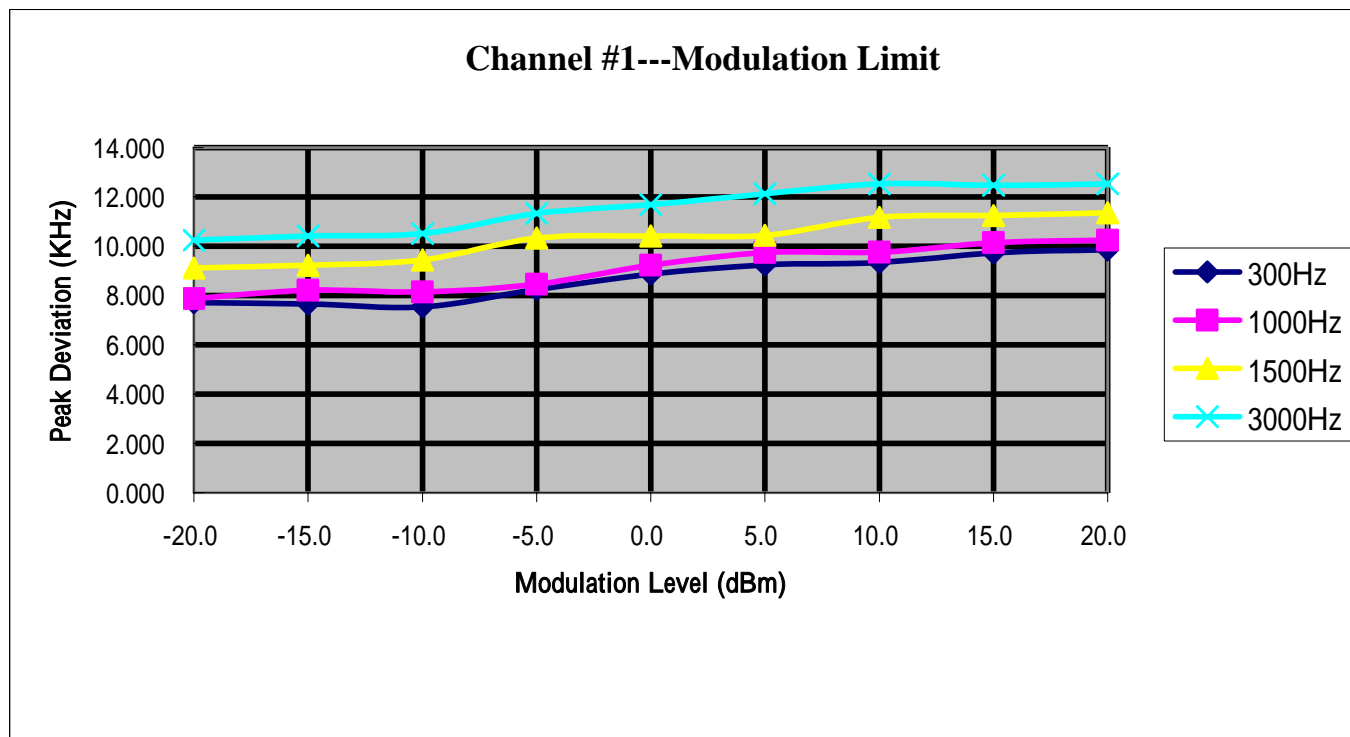


## TEST RESULTS

No non-compliance noted.

### A. Modulation limit

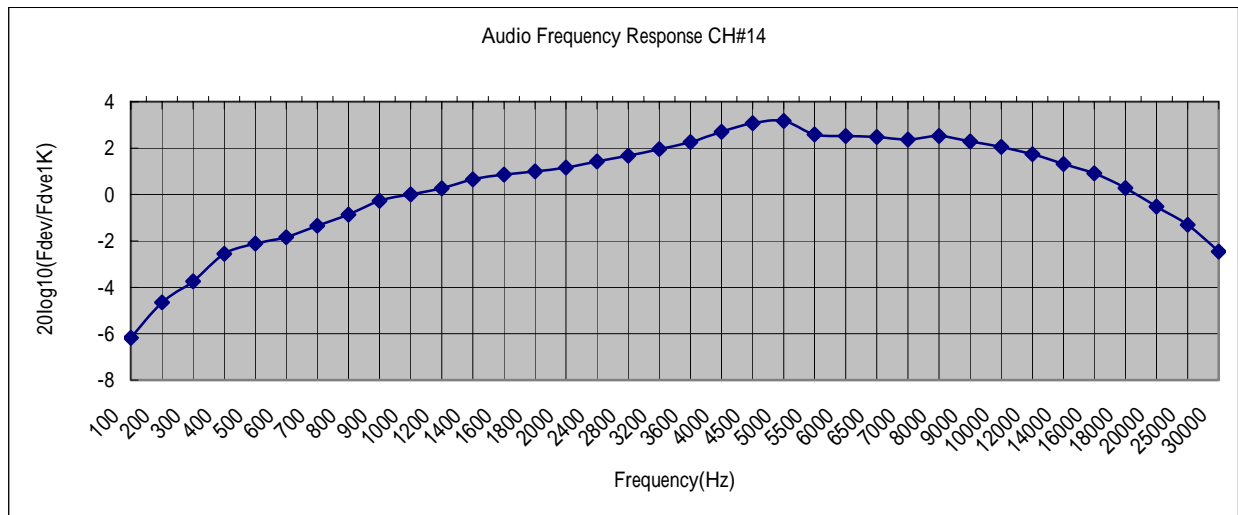
Modulation Level (dBm)	Peak Freq. Deviation (300Hz)	Peak Freq. Deviation (1000Hz)	Peak Freq. Deviation (1500Hz)	Peak Freq. Deviation (3000Hz)
-20.00	7.721	7.876	9.121	10.241
-15.00	7.652	8.215	9.233	10.412
-10.00	7.541	8.136	9.442	10.518
-5.00	8.237	8.461	10.334	11.325
0.00	8.865	9.234	10.419	11.691
5.00	9.241	9.748	10.443	12.124
10.00	9.339	9.763	11.178	12.532
15.00	9.724	10.136	11.248	12.468
20.00	9.862	10.236	11.355	12.531



**B. Audio Frequency response**

Frequency (Hz)	Deviation (KHz)
100	3.112
200	3.712
300	4.123
400	4.722
500	4.967
600	5.128
700	5.426
800	5.744
900	6.142
1000	6.340
1200	6.533
1400	6.831
1600	6.996
1800	7.116
2000	7.253
2400	7.468
2800	7.686
3200	7.951
3600	8.232
4000	8.654
4500	9.028
5000	9.132
5500	9.211
6000	9.357
6500	9.466
7000	9.536
8000	9.983
9000	10.014
10000	10.078
12000	10.066
14000	10.072
16000	10.036
18000	9.438
20000	8.672
25000	8.051
30000	7.132





## 7.3 FREQUENCY TOLERANCE MEASUREMENT

### LIMIT

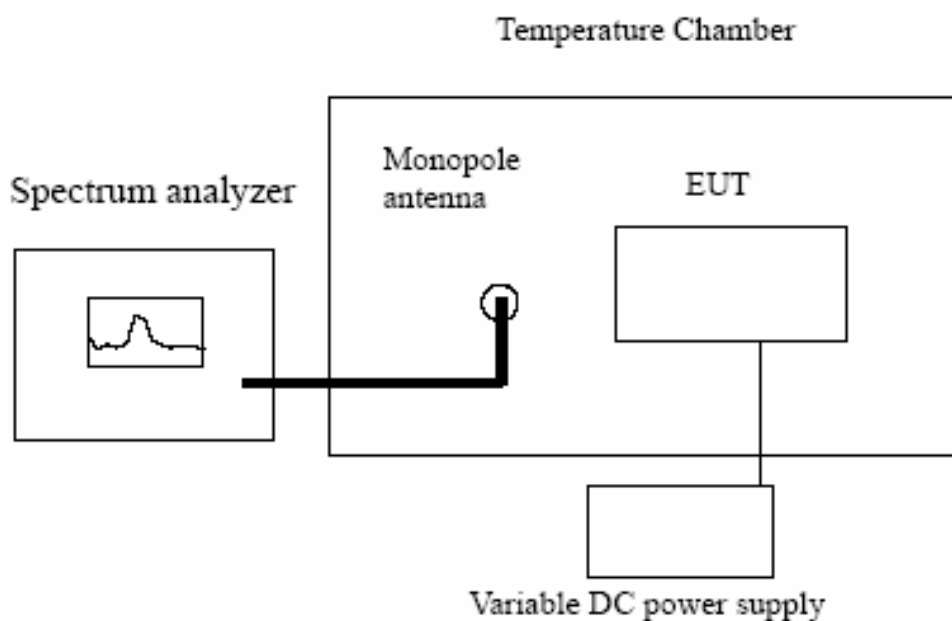
- a). According to FCC Part 2 Section 2.1055(a)(1), the frequency stability shall be measured with variation of ambient temperature from  $-30$  to  $+50$  centigrade.
- b). According to FCC Part 2 Section 2.1055(d)(2), for hand carried battery powered equipment, the frequency stability shall be measured with reducing primary supply voltage to the battery operating end point, which is specified by the manufacture.
- c). According to FCC Part 74 Section 74.861(e)-4, the frequency tolerance must be maintained within 0.005%.

### MEASUREMENT EQUIPMENT USED

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Advantest	R3132	120901472	06/07/2006
Temperature Chamber	Shihin	BM50-CB	908	06/29/2006

*Remark: Each piece of equipment is scheduled for calibration once a year.*

### Test Configuration





## **TEST PROCEDURE**

### **A. Frequency stability versus environmental temperature**

1. Setup the configuration per figure 1 for frequencies measurement inside an environment chamber, Install new battery in the EUT.
2. Turn on EUT and set SA center frequency to the EUT radiated frequency. Set SA Resolution Bandwidth to 1KHz and Video Resolution Bandwidth to 1KHz and Frequency Span to 50KHz. Record this frequency as reference frequency.
3. Set the temperature of chamber to 50 °C. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. While maintaining a constant temperature inside the chamber, turn the EUT on and measure the EUT operating frequency.
4. Repeat step 2 with a 10 °C decreased per stage until the lowest temperature -30 °C is measured, record all measured frequencies on each temperature step.

### **B. Frequency stability versus input voltage**

1. Setup the configuration per figure 1 for frequencies measured at temperature if it is within 15 °C to 25 °C. Otherwise, an environment chamber set for a temperature of 20 °C shall be used. Install new battery in the EUT.
2. Set SA center frequency to the EUT radiated frequency. Set SA Resolution Bandwidth to 1KHz and Video Resolution Bandwidth to 1KHz. Record this frequency as reference frequency.
3. For battery operated only device, supply the EUT primary voltage at the operating end point which is specified by manufacturer and record the frequency.



## TEST RESULTS

*No non-compliance noted*

### Test Data

Reference frequency: 471.30000MHz			
Limit: $\pm 0.005\%$			
Environment Temperature ( )	Power supply	Frequency deviation measured with time elapse (30 minutes)	
		(MHz)	(%)
50	NEW BATTERY	471.29975	-0.000053
40	NEW BATTERY	471.29990	-0.000064
30	NEW BATTERY	471.30000	0
20	NEW BATTERY	471.30010	0.000021
10	NEW BATTERY	471.30015	0.000031
0	NEW BATTERY	471.30018	0.000038
-10	NEW BATTERY	471.30019	0.000040
-20	NEW BATTERY	471.30022	0.000046
-30	NEW BATTERY	471.30025	0.000053

Reference frequency: 478.900000MHz			
Limit: $\pm 0.005\%$			
Environment Temperature ( )	Power supply	Frequency deviation measured with time elapse (30 minutes)	
		(MHz)	(%)
50	NEW BATTERY	478.89971	-0.000061
40	NEW BATTERY	478.89989	-0.000022
30	NEW BATTERY	478.90000	0
20	NEW BATTERY	478.90002	0.000014
10	NEW BATTERY	478.90007	0.000015
0	NEW BATTERY	478.90011	0.000022
-10	NEW BATTERY	478.90025	0.000052
-20	NEW BATTERY	478.90026	0.000053
-30	NEW BATTERY	478.90029	0.000054



Reference frequency: 483.60000MHz			
Limit: $\pm 0.005\%$			
Environment Temperature ( )	Power supply	Frequency deviation measured with time elapse (30 minutes)	
		(MHz)	(%)
50	NEW BATTERY	486.29992	-0.000016
40	NEW BATTERY	486.29986	-0.000028
30	NEW BATTERY	486.30000	0
20	NEW BATTERY	486.30001	0.000002
10	NEW BATTERY	486.30008	0.000016
0	NEW BATTERY	486.30011	0.000022
-10	NEW BATTERY	486.30016	0.000033
-20	NEW BATTERY	486.30023	0.000047
-30	NEW BATTERY	486.30025	0.000051

## EMISSION BANDWIDTH MEASUREMENT

### LIMIT

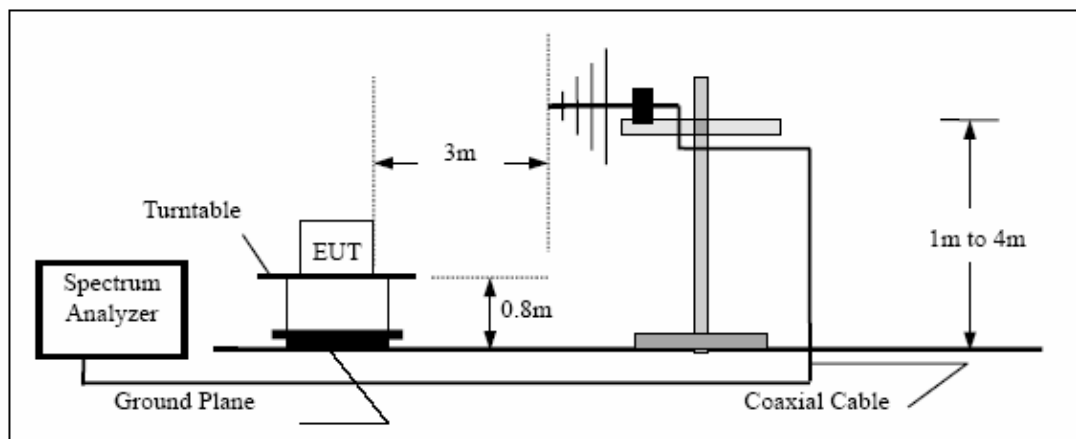
According to FCC Part 74 Section 74.861(e)-5: The operation bandwidth shall not exceed 200KHz.

### MEASUREMENT EQUIPMENT USED

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Advantest	R3132	120901472	06/07/2006
EMI Test Receiver	HP	8546A	3448A00232	06/07/2006
Pre-amplifier	HP	8447D	2944A07999	06/07/2006
Bi-log Antenna	EMCO	3142	9910-1436	06/07/2006
Bi-log Antenna	Schaffner	CBL6143	5082	06/07/2006

*Remark: Each piece of equipment is scheduled for calibration once a year.*

### Test Configuration



### TEST PROCEDURE

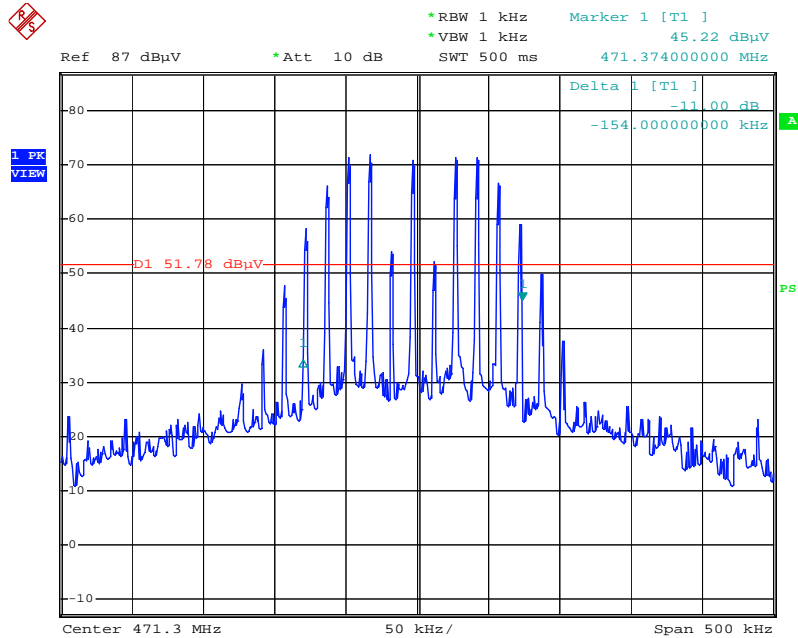
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set EUT as normal operation
3. Set SPA Center Frequency = fundamental frequency , RBW,VBW= 1 KHz, Span =200 KHz.
4. Set SPA Max hold. Mark peak, -26dB.



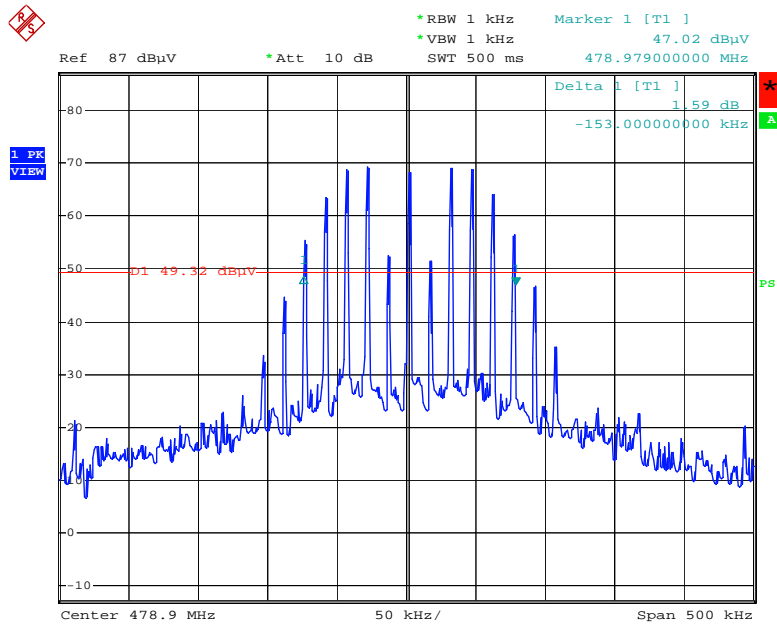
## TEST RESULTS

No non-compliance noted

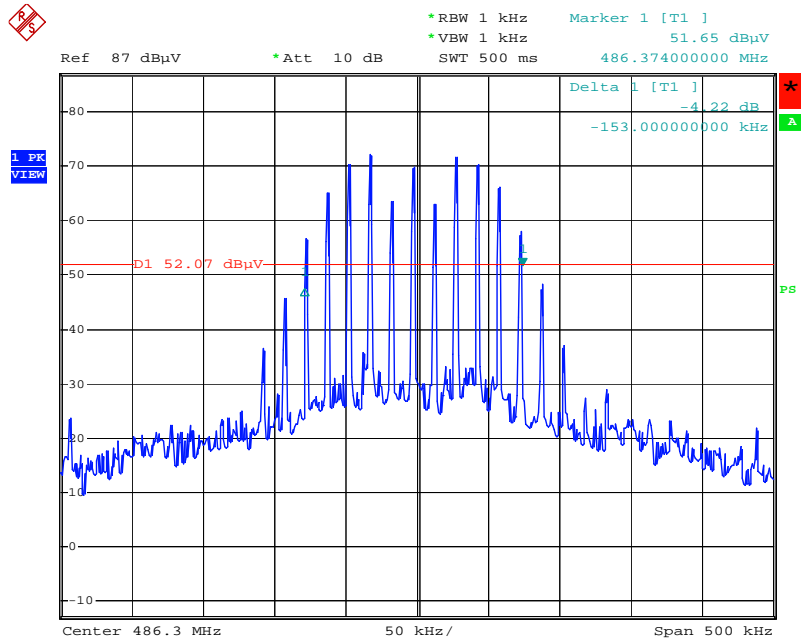
### Test Plot (EMISSION BANDWIDTH)



Date: 26.AUG.2005 08:56:59



Date: 26.AUG.2005 08:59:55

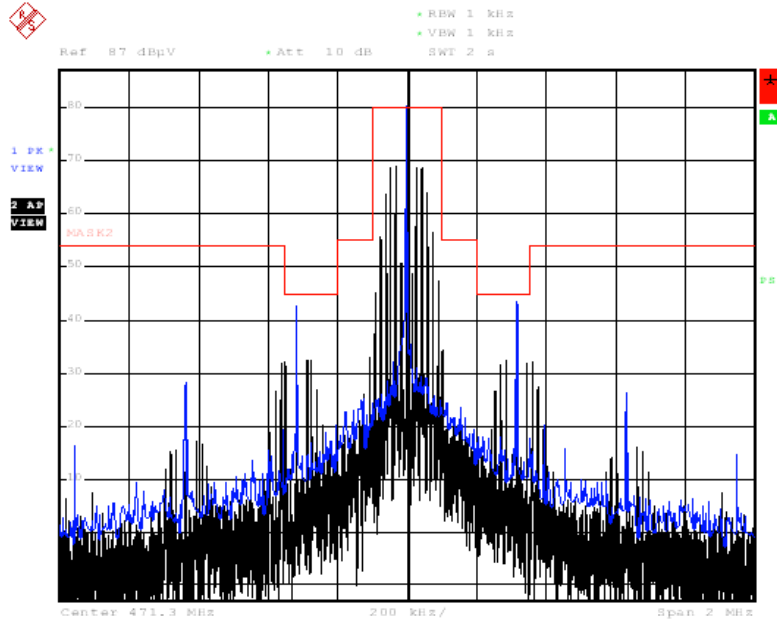


Date: 26.AUG.2005 09:01:20

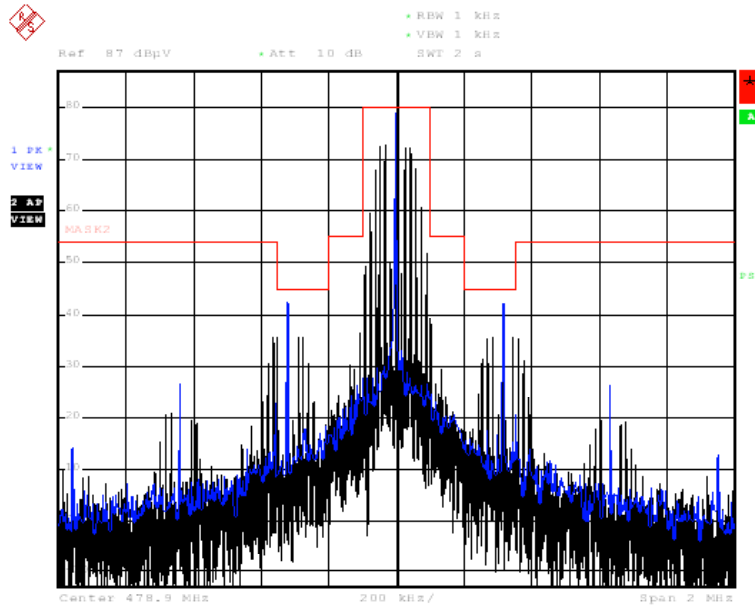




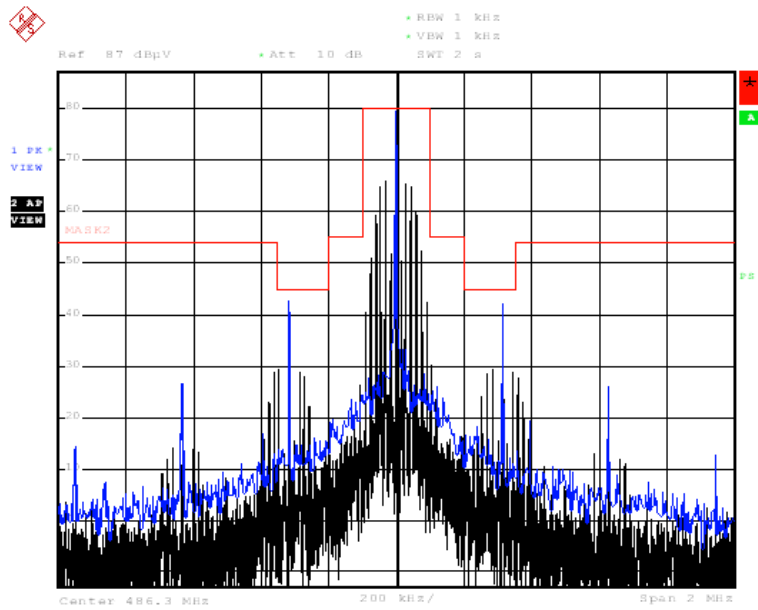
### Test Plot (EMISSION MASK)



Date: 26.AUG.2005 08:54:14



Date: 26.AUG.2005 08:51:45



Date: 26.AUG.2005 08:47:06

## 7.4 UNWANTED RADIATION

### LIMIT

According to Section 74.861(e)-6, The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

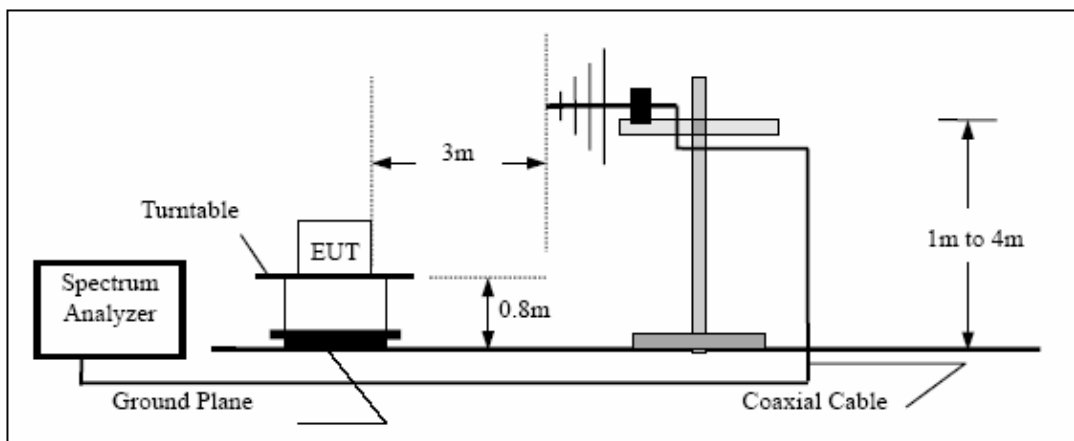
- 1). On any frequency removed from the operating frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB;
- 2). On any frequency removed from the operating frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB;
- 3). On any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth: at least  $43 + 10 \log_{10}(\text{TP})$  dB

### MEASUREMENT EQUIPMENT USED

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Advantest	R3132	120901472	06/07/2006
EMI Test Receiver	HP	8546A	3448A00232	06/07/2006
Pre-amplifier	HP	8447D	2944A07999	06/07/2006
Bi-log Antenna	EMCO	3142	9910-1436	06/07/2006
Bi-log Antenna	Schaffner	CBL6143	5082	06/07/2006
Horn Antenna	ARA	DRG-118/A	104	06/07/2006

**Remark:** Each piece of equipment is scheduled for calibration once a year.

### Test Configuration





## **TEST PROCEDURE**

1. On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.
2. The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the transmitter.
3. The output of the antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
4. The transmitter shall be switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
5. The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.
6. The transmitter shall then be rotated through 360 ° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
7. The test antenna shall be raised and lowered again through the specified range of height until the measuring receiver detects a maximum signal level.
8. The maximum signal level detected by the measuring receiver shall be noted.
9. The measurement shall be repeated with the test antenna set to horizontal polarization.
10. Replace the antenna with a proper Antenna (substitution antenna).
11. The substitution antenna shall be oriented for vertical polarization and, if necessary, the length of the substitution antenna shall be adjusted to correspond to the frequency of transmitting.
12. The substitution antenna shall be connected to a calibrated signal generator.
13. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
14. The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
15. The input signal to substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
16. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
17. The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.



## **TEST RESULTS**

*No non-compliance noted*

### **Test Data**

Frequency (MHz)	Reading level (dBuv)	Antenna Polarization	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
***								
***								

*Notes:(Calculation)*

Limit (dBm)=  $43+10\log P[\text{watts}] = -13\text{dBm}$

## **APPENDIX 1**

### **PHOTOGRAPHS OF TEST SETUP**

#### **Radiated Emission Set up Photos**

