




# FCC PART 18 TEST REPORT

For

## Continental Conair Limited

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Hong Kong

**FCC ID:U43WIH400**

<b>Report Type:</b> Class II Permissive Change	<b>Product Type:</b> Commercial Induction Range
<b>Report Number:</b> <u>RSZ190530550-00</u>	
<b>Report Date:</b> <u>2019-07-30</u>	
<b>Reviewed By:</b> <u>Lab Manager</u>	
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The information marked # is provided by the applicant, the laboratory is not responsible for its authenticity.

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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

Product	Commercial Induction Range
Model	WIH400
Voltage Range	AC 120V/60Hz
Highest operating frequency	65 kHz
Rated power	1800 Watts
Date of Test	2019-06-04
Sample serial number	190530550
Received date	2019-05-30
Sample/EUT Status	Good condition

### Objective

This report is prepared on behalf of *Continental Conair Limited* in accordance with Part 2-Subpart J, and Part 18-Subparts A, B and C of the Federal Communication Commissions rules and regulations.

The objective of the manufacturer is to determine compliance with FCC Part 18 limits.

This is a CIIPC application of the device, the difference between the original device and the current one described as following:

(1) Change the PCB Board.

Based on the change made to the device, all the test items were performed.

### Related Submittal(s)/Grant(s)

No related submittal(s).

### Test Methodology

All measurements contained in this report were conducted with MP-5, FCC Methods of Measurements of Radio Noise Emissions from ISM Equipment, February 1986. All measurements were performed at Bay Area Compliance Laboratory Corporation. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

**Measurement Uncertainty**

Parameter		uncertainty
Conducted Emissions		±1.95dB
Radiated Emissions	Below 1GHz	±4.75dB
	Above 1GHz	±4.88dB

*Note: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

**Test Facility**

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 342867, the FCC Designation No.: CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

**OPERATING CONDITION/TEST CONFIGURATION**

**Justification**

The EUT was operated at maximum (continuous) output power.

**EUT Exercise Software**

No exercise software was used.

**Special Accessories**

No special accessory was used.

**Equipment Modifications**

No modifications were made to the EUT tested.

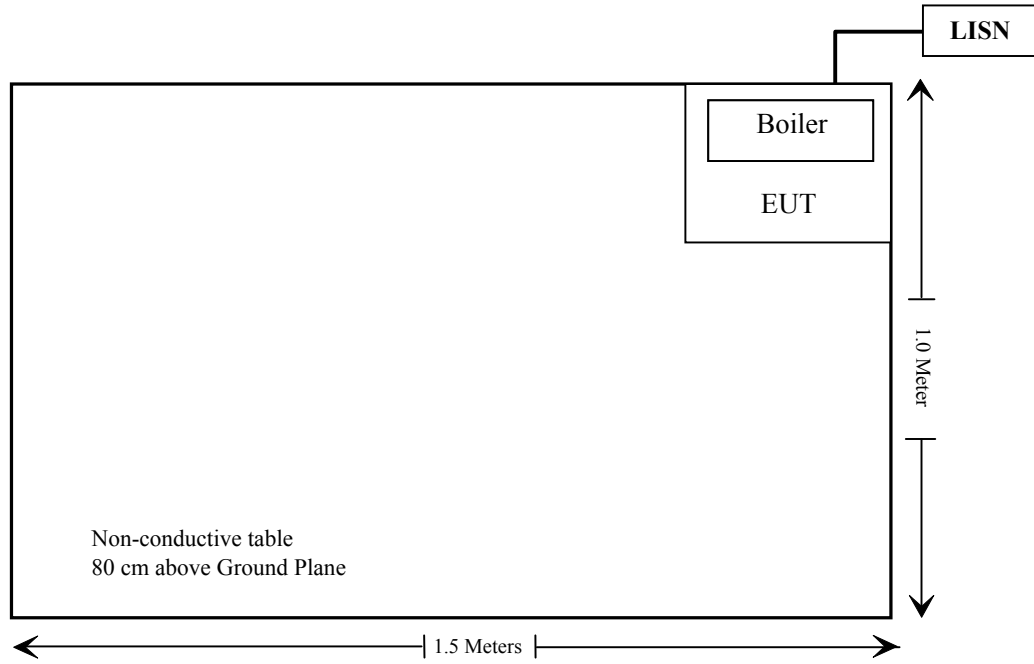
**Support Equipment List and Details**

Manufacturer	Description	Model	Serial Number
OUKE	Boiler	N/A	N/A

**External Cable List and Details**

Cable Description	Length (m)	From/Port	To
Un-shielding Un-detachable AC Cable	1.2	EUT	LISN

**Block Diagram of Test Setup**



## SUMMARY OF TEST RESULT

FCC Rules	Description of Test	Results
§18.307	AC Line Conducted Emissions	Compliance
§18.305	Field Strength	Compliance

**TEST EQUIPMENT LIST**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
<b>CONDUCTED EMISSIONS</b>					
Rohde & Schwarz	EMI Test Receiver	ESCS30	100176	2018-07-11	2019-07-11
Rohde & Schwarz	LISN	ENV216	3560.6650.12-101613-Yb	2019-01-25	2020-01-25
Rohde & Schwarz	Transient Limiter	ESH3Z2	DE25985	2019-03-02	2020-03-02
Rohde & Schwarz	CE Test software	EMC 32	V8.53.0	NCR	NCR
Unknown	Conducted Emission Cable	78652	UF A210B-1-0720-504504	2018-11-12	2019-11-12
<b>RADIATED EMISSIONS</b>					
ETS-LINDGREN	Passive Loop antenna	6512	29604	2018-07-14	2021-07-13
Sonoma Instrument	Amplifier	310N	186238	2018-11-12	2019-11-12
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K03-101746-zn	2018-07-11	2019-07-11
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2017-12-22	2020-12-21
R&S	Auto test Software	EMC32	V9.10	NCR	NCR

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

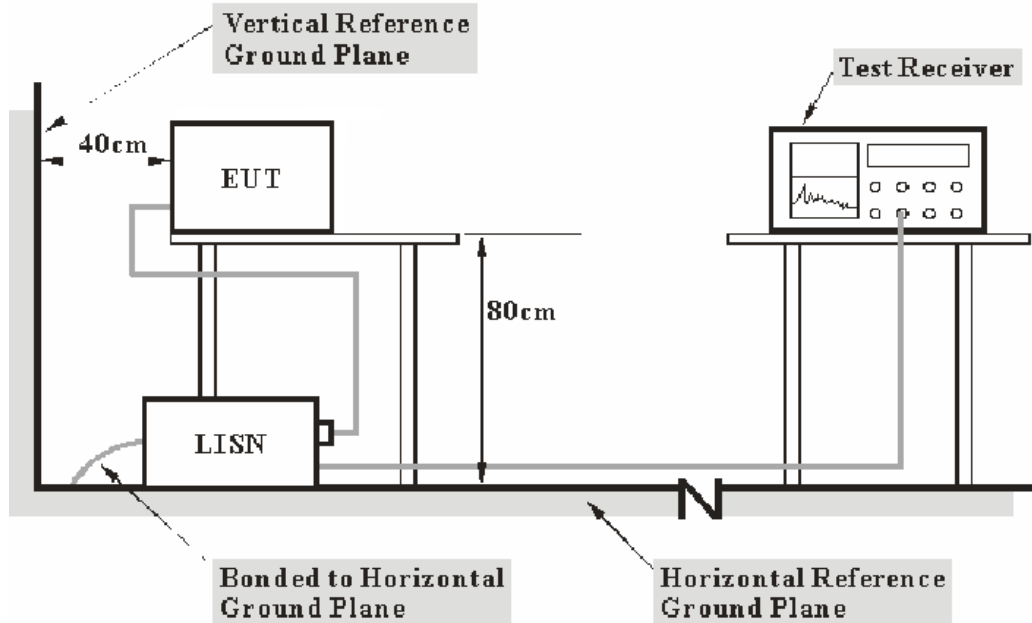


## CONDUCTED EMISSIONS

### Applicable Standard

FCC §18.307

### EUT Setup



- Note: 1. Support units were connected to second LISN.  
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with MP-5: 1986 measurement procedure. Specification used was with the FCC Part 18.

The socket was connected to a 120 VAC/ 60Hz power source.

### EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 9 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
9 kHz – 150 kHz	200 Hz
150 kHz – 30 MHz	9 kHz

## Test Procedure

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

## Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC PART 18,

Refer to CISPR16-4-2:2011 and CISPR 16-4-1:2009, the measured level complies with the limit if

$$L_m + U_{(L_m)} \leq L_{lim} + U_{cispr}$$

In BAACL.,  $U_{(L_m)}$  is less than  $U_{cispr}$ , if  $L_m$  is less than  $L_{lim}$ , it implies that the EUT complies with the limit.

## Test Data

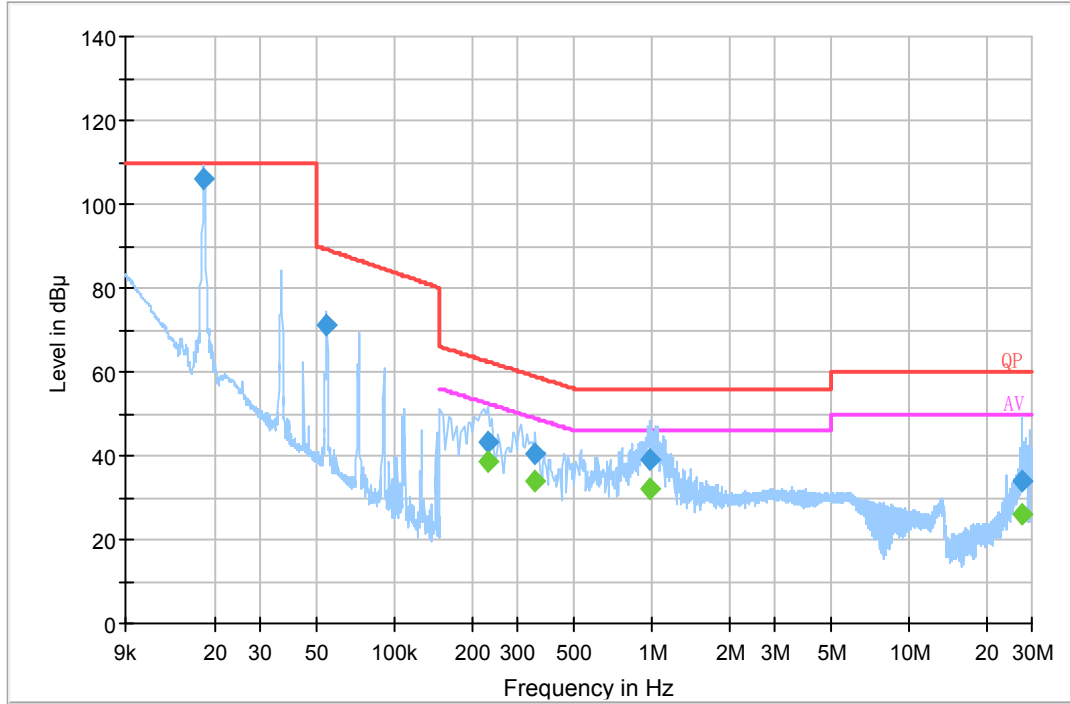
### Environmental Conditions

<b>Temperature:</b>	25 °C
<b>Relative Humidity:</b>	50 %
<b>ATM Pressure:</b>	101.0 kPa

*The testing was performed by Haiguo Li on 2019-06-04.*

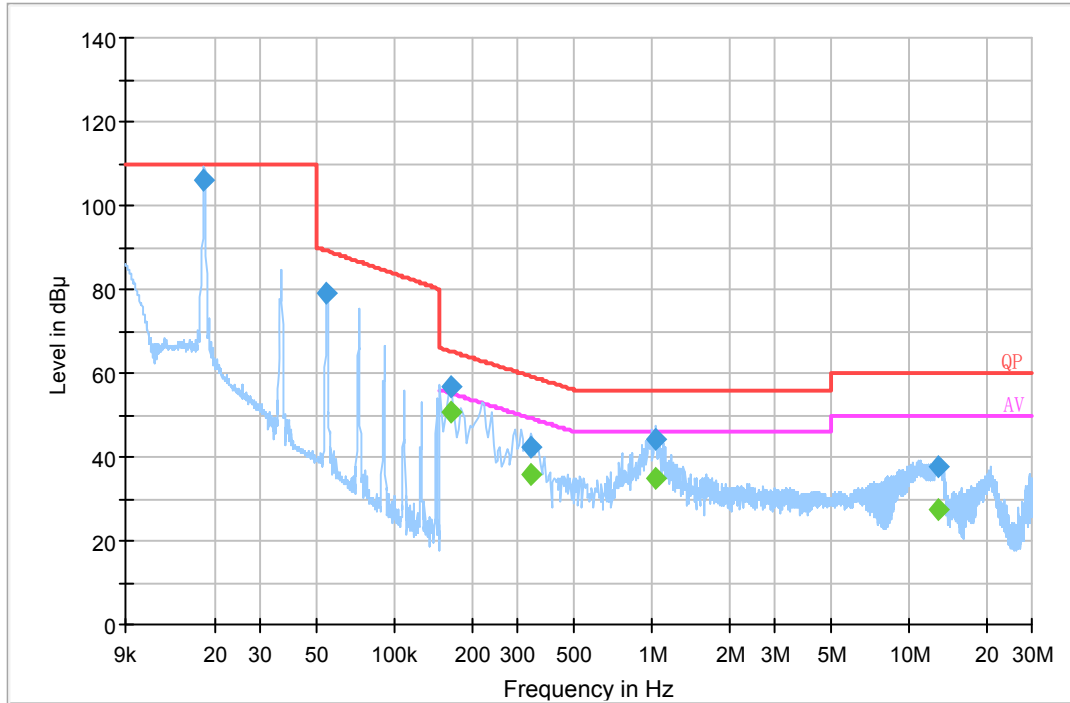
EUT operation mode: Max power

AC 120V/60Hz, Line



Frequency (MHz)	Corrected Amplitude (dBµV)	Corrected Factor (dB)	Limit (dBµV)	Margin (dB)	Remark (PK/QP/Ave.)
0.018184	106.2	20.4	110.0	3.80	QP
0.054567	71.0	19.9	89.2	18.2	QP
0.230000	43.2	19.8	62.4	19.2	QP
0.354000	40.5	19.9	58.9	18.4	QP
0.986000	38.9	19.9	56.0	17.1	QP
27.686000	33.8	20.2	60.0	26.2	QP
0.230000	38.4	19.8	52.4	14.0	Ave.
0.354000	34.0	19.9	48.9	14.9	Ave.
0.986000	32.0	19.9	46.0	14.0	Ave.
27.686000	25.9	20.2	50.0	24.1	Ave.

**AC 120V/60Hz, Neutral**



Frequency (MHz)	Corrected Amplitude (dBµV)	Corrected Factor (dB)	Limit (dBµV)	Margin (dB)	Remark (PK/QP/Ave.)
0.018184	106.2	20.6	110.0	3.80	QP
0.054676	79.1	19.8	89.2	10.1	QP
0.166000	56.7	19.8	65.2	8.50	QP
0.338000	42.6	19.8	59.3	16.7	QP
1.042000	44.1	19.8	56.0	11.9	QP
12.970000	37.8	19.9	60.0	22.2	QP
0.166000	50.5	19.8	55.2	4.70	Ave.
0.338000	35.8	19.8	49.3	13.5	Ave.
1.042000	35.0	19.8	46.0	11.0	Ave.
12.970000	27.4	19.9	50.0	22.6	Ave.

**Note:**

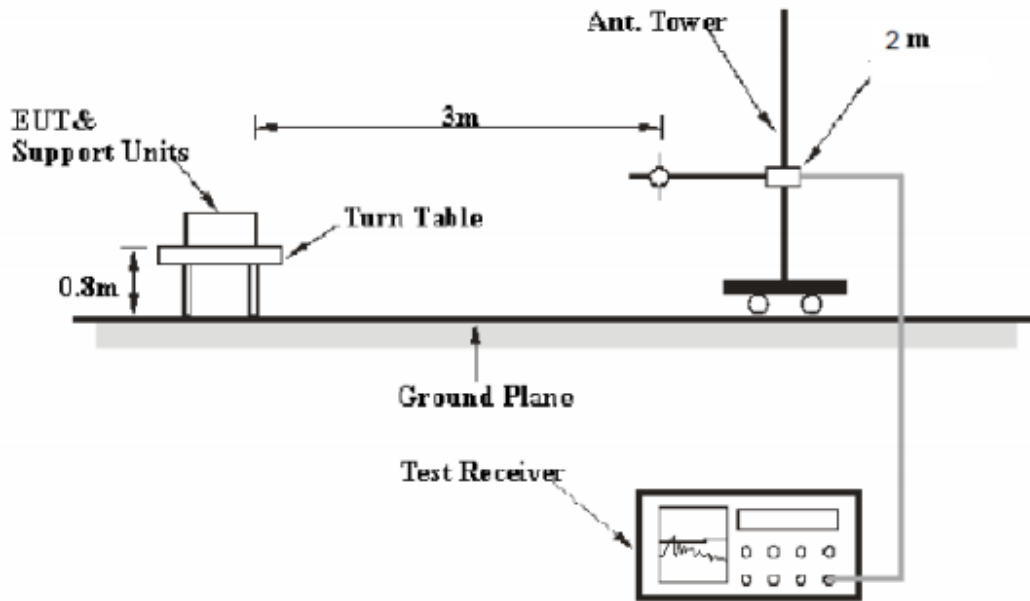
- 1) Corrected Amplitude = Reading + Correction Factor
- 2) Correction Factor = LISN VDF + Cable Loss + Transient Limiter Attenuation
- 3) Margin = Limit – Corrected Amplitude

## RADIATED EMISSIONS

### Applicable Standard

FCC §18.305 and FCC §18.309

### EUT Setup



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the FCC MP - 5. The specification used was the FCC part 18 limits.

The socket was connected to 120 VAC/60 Hz power source.

### EMI Test Receiver Setup and Spectrum Analyzer Setup

The system was investigated from 9 kHz to 30 MHz.

During the radiated emission test, the EMI test receiver and Spectrum Analyzer were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	200 Hz	1 kHz	200 Hz	QP
150 kHz – 30 MHz	9 kHz	30 kHz	9kHz	QP

## Test Procedure

Maximizing procedure was performed on the six (6) highest emissions to ensure that the EUT complied with all installation combinations.

The EUT was in the normal (naïve) operating mode during the final qualification test to represent the worst results.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

## Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 18,

Refer to CISPR16-4-2:2011 and CISPR 16-4-1:2009, the measured level complies with the limit if

$$L_m + U_{(Lm)} \leq L_{lim} + U_{cispr}$$

In BA CL.,  $U_{(Lm)}$  is less than  $U_{cispr}$ , if  $L_m$  is less than  $L_{lim}$ , it implies that the EUT complies with the limit.

## Test Data and Plots

### Environmental Conditions

Temperature:	25 °C
Relative Humidity:	50 %
ATM Pressure:	101.0 kPa

*The testing was performed by Andy Yu and Leo Huang on 2019-06-04.*

**9 KHz – 30 MHz: Max power**

Frequency (MHz)	Corrected Amplitude (dB $\mu$ V/m)	Detector (PK/QP/AV)	Direction (Degree)	Height (m)	Antenna Factor	Limit (dB $\mu$ V/m)	Margin (dB)
1.28	61.25	QP	109	2	46.2	103.52	42.27
3.41	56.82	QP	116	2	40.9	103.52	46.7
5.92	55.67	QP	72	2	36.4	103.52	47.85
10.64	53.68	QP	69	2	32.3	103.52	49.84
11.71	54.26	QP	287	2	32.3	103.52	49.26
12.06	56.38	QP	191	2	32.3	103.52	47.14

**Note:** The radiation limits (3m distance)= $20*\log 1500+40*\log 30/3=103.52$  dB $\mu$ V/m

**\*\*\*\*\* END OF REPORT \*\*\*\*\***