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EMI Test Report

On Model Name: AC/DC Tri-Powered Portable Microwave Oven

Model Numbers: WBP-TP-660

Brand Name: WAVEBOX

FCC ID: XOFHXML0908

Prepared for The Frank Group

According to

FCC Part 18

Industrial, Scientific and Medical Equipment

FCC/OST MP-5(1986)

FCC methods of measurements of radio noise emission from industrial,scientific and medical equipment

Test Report#:	THE-0707-6391-FCC
Prepared by:	Eddy Chen
Reviewed by:	Jawen Yin
QC Manager:	Paul Chen

Test Report Released by: Paul J. Chen 2009, August 25

Paul Chen Date

Test Location

Tests performed in a Certified ANSI Semi-Anechoic Chamber and Shielded Room.

Test Site Location: *Guangdong Galanz Enterprise Co. Ltd*

25 South Ronggui Rd., Shunde, Foshan, Guangdong, China

Tel : 86-757-23612785

Fax : 86-757-23612537

FCC Registration Number: 580210

CNAS Number : L2244

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Internal Photos	Internal Photos	XOFHXML0908 _Internal Photos
Block Diagram	Block Diagram	XOFHXML0908_Block Diagram.pdf
Schematics	Circuit Diagram	XOFHXML0908 _Schematics.pdf
ID Label/Location	Label and Location	XOFHXML0908 _Label & Location.pdf
User Manual	User Manual	XOFHXML0908 _User Manual.pdf
Test setup photos	Test setup photos	XOFHXML0908 _Test Setup Photos

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Opinions and Interpretations

This test report relates to the abovementioned equipment under test (EUT). Without the permission of ECMG Worldwide Certification Solution Inc., Test Lab this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark on this or similar products. The manufacturer has sole responsibility of continued compliance of the device.

Statement of Measurement Uncertainty

The data and results referenced in the document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities that can account for a nominal measurement error. Furthermore, component and process variability of devices similar to that tested may result in additional deviation.

Administrative Data

Test Sample	*: AC/DC Tri-Powered Portable Microwave Oven*
Model Numbers	*: WBP-TP-660*
Model Tested	*: WBP-TP-660*
Brand Name	*: WAVEBOX*
Date Tested	*: 2009, August 15 to August18*
Applicant	*: The Frank Group*
	1065 Columbine Road, Asheville, NC 28803,USA.
Telephone	*: 828-279-4551*
Fax	*: 828-651-9433*
Manufacturer	*: Yuyao Huaxing Meile Electric Appliance Co., Ltd*
	No. 57 Changfengqiao Road, Yuyao ,Zhejiang 315400, PR China
Telephone	*: 86-574-62822198*
Fax	*: 86-574-62827247*

EUT Description

The Frank Group model tested WBP-TP-660 (referred to the EUT in this report) is a AC/DC Tri-Powered Portable Microwave Oven.

Power Supply	*AC Voltage , 120V / 60 Hz* *DC Voltage ,12V*
Rated Input Power	*660W in AC and DC direct* *240W in DC power oulet*
Rated Output Power	*425W in AC and DC direct* *155W in DC power oulet*
Operation Frequency	*2450±50MHz*
Magnetron Manufacturer	*LG*
Magnetron Model Number	*2M213*
Net Weight	*16.5lbs*

Test Summary

The Electromagnetic Compatibility requirements on model tested WBP-TP-660 for this test is stated below. All results listed in this report relate exclusively to this above-mentioned model as the Equipment Under Test. This report confers no approval or endorsement upon any other component, host or subsystem used in the test set-up.

Emission Tests				
Specifications	***Description***	***Test Results***	***Test Point***	***Remark***
FCC Part 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	*Radiation Hazard Measurement*	*Passed*	*AC Input Port DC Direct Port DC Outlet Port*	*Attachment 1*
FCC Part 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	*Input Power Measurement*	*Passed*	*AC Input Port DC Direct Port DC Outlet Port*	*Attachment 2*
FCC Part 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	*RF Output power Measurement*	*Passed*	*AC Input Port DC Direct Port DC Outlet Port*	*Attachment 3*
FCC Part 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	*Operating Frequency Measurement*	*Passed*	*AC Input Port DC Direct Port DC Outlet Port*	*Attachment 4*
FCC Part 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	*Conducted Emission*	*Passed by 9.82 dB of QP Passed by 5.36 dB of AV*	*AC Input Port*	*Attachment 5*
FCC Part 18:2007 FCC/OST MP-5:1986 ANSI C63.4: 2003	*Radiated Emission*	*Passed by 23.56 dB of QP Passed by 16.59 dB of AV*	*AC Input Port DC Direct Port DC Outlet Port*	*Attachment 6*

Load for Microwave Ovens

For all measurements the energy developed by the oven was absorbed by a dummy load consisting of a quantity of tag water in a beaker. If the oven was provided with a shelf or other utensil support, this support was in its initial normal position. For ovens rated at 1000watts or less power output, the beaker contained quantities of water as listed in the following subparagraphs. For ovens rated at more than 1000watts output, each quantity was increased by 50% for each 500watts or fraction thereof in excess of 1000 watts. Additional beakers were used if necessary.

--Load for power output measurement: 1000 milliliters of water in the beaker located in the center of the oven.

--Load for frequency measurement: 1000 milliliters of water in the beaker located in the center of the oven.

--Load for measurement of radiation on second and third harmonic: Two loads, one of 700 and the other of 300 milliliters, of water are used. Each load is tested both with the beaker located in the center of the oven and with it in the right front corner.

--Load for all other measurements: 700 milliliters of water, with the beaker located in the center of the oven.

Equipment Modification

Any modifications installed previous to testing by The Frank Group will be incorporated in each production model sold or leased in United States.

There were no modifications installed by ECMG Worldwide Certification Solution Inc., test personnel.

EUT Sample Photos for model

Front&Top View

Rear View

DC Direct Power Cable

DC power outlet Cable

Inner View #1

Inner view #2

Inner view #3

Inner view #4

AC Power Cable

Test System Details

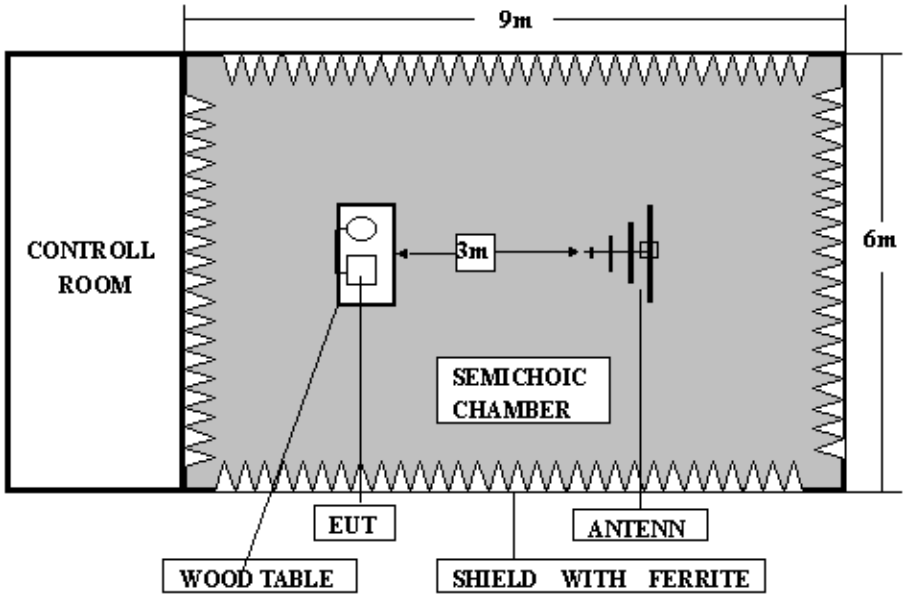
EUT	
Model Numbers:	WBP-TP-660
Model Tested:	WBP-TP-660
Description:	AC/DC Tri-Powered Portable Microwave Oven
Manufacturer:	Yuyao Huaxing Meile Electric Appliance Co., Ltd

Support Equipment
N/A

Cable Description

Description	From	To	Length (Meters)	Shielded (Y/N)	Ferrite (Y/N)
DC Power Outlet	EUT	Plug	1.5	N	N
DC Direct Power	EUT	Plug	2.4	N	N
AC Power Cable	EUT	Plug	1.2	N	N

Configuration of Tested System



ATTACHMENT 1 – RADIATION HAZARD TEST

CLIENT:	The Frank Group	**TEST STANDERD:**	FCC Part 18
MODEL NUMBERS:	WBP-TP-660	**PRODUCT:**	AC/DC Tri-Powered Portable Microwave Oven
MODEL TESTED:	WBP-TP-660	**EUT DESIGNATION:**	Home or Office
TEMPERATURE:	22℃	**HUMIDITY:**	60%RH
ATM PRESSURE:	101.1kPa	**GROUNDING:**	Through AC Power Cord
TESTED BY:	Eddy Chen	**DATE OF TEST:**	2009, August 15
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	The EUT was set up according to the FCC MP-5 and FCC Part 18 for Radiation Hazard Measurement. The measurement was using a microwave leakage meter to measure the Radiation leakage in the as-received condition with the oven door closed. A 1000ml water load in a beaker was located in the center of the oven and the Microwave oven was set to maximum power. While the oven operating, the microwave meter will check the leakage and then record the maximum leakage.		
TESTED RANGE:	N/A		
TEST VOLTAGE:	120VAC / 60Hz and DC 12V		
RESULTS:	There was no microwave leakage exceeding a power level of 0.28 mW/cm2 observed at any point 5cm or more from the external surface of the oven. A maximum of 1.0mW/cm2 is allowed in accordance with the applicable FCC standards. Hence, microwave leakage in the as-received condition with the oven door closed was below the maximum allowed. The test results relate only to the equipment under test provided by client.		
Changes or Modifications:	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
M. UNCERTAINTY:	0.0001 mW/cm2		

Test Data :

Test Point	*Measurement Value (mW/cm2)*	*Limits (mW/cm2)*	*Conclusion*
AC Input Mode	*0.24*	*1*	*Pass*
DC Direct Mode	*0.26*	*1*	*Pass*
DC Power Outlet Mode	*0.28*	*1*	*Pass*

Test equipments list:

Test Equipment	*Manufacturer*	*Model*	*Serial No.*	*Last Cal.*	*Cal. Due*
Microwave test instrument	*Holaday*	*HI-1710A*	*00049254*	*12/26/2008*	*12/25/2009*
Probe	*Holaday*	*HI-2623*	*00056803*	*12/26/2008*	*12/25/2009*
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).					

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Radiation Hazard Test Set-up :

ATTACHMENT 2 – INPUT POWER MEASUREMENT

CLIENT:	The Frank Group	**TEST STANDERD:**	FCC Part 18
MODEL NUMBERS:	WBP-TP-660	**PRODUCT:**	AC/DC Tri-Powered Portable Microwave Oven
MODEL TESTED:	WBP-TP-660	**EUT DESIGNATION:**	Home or Office
TEMPERATURE:	22℃	**HUMIDITY:**	60%RH
ATM PRESSURE:	101.1kPa	**GROUNDING:**	Through AC Power Cord
TESTED BY:	Eddy Chen	**DATE OF TEST:**	2009, August 15
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	The EUT was set up according to the FCC MP-5 and FCC Part 18 for Input power Measurement. The input power and current was measured using a power analyzer. A 1000ml water load in a beaker was located in the center of the oven and the Microwave oven was set to maximum power. While the oven is operating, use a voltmeter and an ampmeter to test the AC input voltage and current		
TESTED RANGE:	N/A		
TEST VOLTAGE:	120VAC / 60Hz and DC 12V		
RESULTS :	Based on the measured input power, the EUT was found to be operating within the intended specifications. The test results relate only to the equipment under test provided by client.		
Changes or Modifications:	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
M. UNCERTAINTY :	± 5W		

Test Data:

Test Point	*Input Voltage (V/Hz)*	*Input Current (amps)*	*Measured Input Power (watts)*	*Rated Input Power (watts)*
AC Input Mode	*120/60*	*6.02*	*628.6*	*660*
DC Direct Mode	*12/0*	*50.20*	*602.4*	*660*
DC Power Outlet Mode	*12/0*	*17.80*	*213.6*	*240*

Test equipments list :

Test Equipment	*Manufacturer*	*Model*	*Serial No.*	*Last Cal.*	*Cal. Due*
Power frequency test system	*Ainuo*	*AN8716PX*	*058704273*	*06/12/2009*	*06/12/2010*
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).					

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Input Power Test Set-Up :

ATTACHMENT 3 – RF OUTPUT POWER MEASUREMENT

CLIENT:	The Frank Group	**TEST STANDERD:**	FCC Part 18
MODEL NUMBERS:	WBP-TP-660	**PRODUCT:**	AC/DC Tri-Powered Portable Microwave Oven
MODEL TESTED:	WBP-TP-660	**EUT DESIGNATION:**	Home or Office
TEMPERATURE:	22℃	**HUMIDITY:**	60%RH
ATM PRESSURE:	101.1kPa	**GROUNDING:**	Through AC Power Cord
TESTED BY:	Eddy Chen	**DATE OF TEST:**	2009, August 15
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	The EUT was set up according to the FCC MP-5 and FCC Part 18C for RF output power Measurement. The Caloric Method was used to determine maximum RF output power. The initial temperature of the water load was measured. A 1000ml water load in a beaker was located in the center of the oven. The oven was operated at maximum output power for 120 seconds, the temperature of the water was re-measured. RF Output Power = (4.2joules/calorie)(volume in milliliters)(temperature rise) / (time in seconds) = 4.2 joules/calorie × 1000 × (Final Temp – Initial Temp) / 120		
TESTED RANGE:	N/A		
TEST VOLTAGE:	120VAC / 60Hz and DC 12V		
RESULTS:	The test results relate only to the equipment under test provided by client.		
Changes or Modifications:	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
M. UNCERTAINTY:	± 0.3℃		

AC Input Mode:

Quality of Water (ml)	Starting Temperature (℃)	Final Temperature (℃)	Elapsed Time (Seconds)	RF Output Power (watts)
1000	18.5	27.8	120	325.5

DC Direct Mode:

Quality of Water (ml)	Starting Temperature (℃)	Final Temperature (℃)	Elapsed Time (Seconds)	RF Output Power (watts)
1000	18.6	27.7	120	318.5

DC Power Outlet Mode:

Quality of Water (ml)	Starting Temperature (℃)	Final Temperature (℃)	Elapsed Time (Seconds)	RF Output Power (watts)
1000	18.7	22.1	120	119.0

Test equipments list :

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
Data Acquisition	TES	TES-1310	020907011	12/03/2009	12/03/2010
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).					

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RF Output Power Test Set-Up :

ATTACHMENT 4 – OPERATING FREQUENCY MEASUREMENT

CLIENT:	The Frank Group	**TEST STANDERD:**	FCC Part 18
MODEL NUMBERS:	WBP-TP-660	**PRODUCT:**	AC/DC Tri-Powered Portable Microwave Oven
MODEL TESTED:	WBP-TP-660	**EUT DESIGNATION:**	Home or Office
TEMPERATURE:	22℃	**HUMIDITY:**	60%RH
ATM PRESSURE:	101.1kPa	**GROUNDING:**	Through AC Power Cord
TESTED BY:	Eddy Chen	**DATE OF TEST:**	2009, August 15
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	The EUT was set up according to the FCC MP-5 and FCC Part 18 for Operating Frequency Measurement. 1) The variation of frequency with time. The operating frequency was measured using a spectrum analyzer. Starting with the EUT at room temperature, a 1000ml water load in a beaker was located in the center of the oven. Set a spectrum analyzer with antenna at 3 meters distance form the oven and the oven was operated at maximum output power. The fundamental operating frequency was monitored until the water load was reduced to 20 percent of the original load. 2) The variation of frequency with Line Voltage. The operating frequency was measured using a spectrum analyzer. The EUT was operated/warmed by at least 10 minutes of use with a 1000ml water load at room temperature at the beginning of the test. Then the operating frequency was monitored as the input voltage was varied between 80 and 125 percent of the nominal rating.		
TESTED RANGE:	2450 ± 50MHz		
TEST VOLTAGE:	120VAC / 60Hz and DC 12V		
RESULTS:	Please refer to following pages for details of the variation in operating frequency with time & line voltage measurement. The test results relate only to the equipment under test provided by client.		
Changes or Modifications:	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
M. UNCERTAINTY:	Freq. ±10kHz		

Variation in Operating Frequency with Time:

AC input mode	
Minimum Frequency (MHz)	*Maximum Frequency (MHz)*
2440.9	*2465.1*
DC thru a power outlet	
Minimum Frequency (MHz)	*Maximum Frequency (MHz)*
2439.8	*2472.0*
DC direct to battery mode	
Minimum Frequency (MHz)	*Maximum Frequency (MHz)*
2438.2	*2470.4*

Variation in Operating Frequency with Line Voltage:

AC input mode	
Minimum Frequency (MHz)	*Maximum Frequency (MHz)*
2440.2	*2464.8*
DC thru a power outlet	
Minimum Frequency (MHz)	*Maximum Frequency (MHz)*
2439.5	*2472.6*
DC direct to battery mode	
Minimum Frequency (MHz)	*Maximum Frequency (MHz)*
2437.9	*2470.9*

Test equipments list :

Test Equipment	*Manufacturer*	*Model*	*Serial No.*	*Last Cal.*	*Cal. Due*
Biconilog Antenna	*ETS*	*3142C*	*00042672*	*01/25/2009*	*01/24/2010*
Double-ridged wave guide horn	*ETS*	*3115*	*6587*	*01/25/2009*	*01/24/2010*
EMI Receiver	*SCHAFFNER*	*SMR4503*	*11725*	*01/25/2009*	*01/24/2010*
Semi-Anechoic chamber	*ETS*	*9x6x6*	*N/A*	*03/27/2009*	*03/26/2010*
Spectrum Analyzer	*R&S*	*FSP30*	*100755*	*11/27/2009*	*03/26/2010*
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).					

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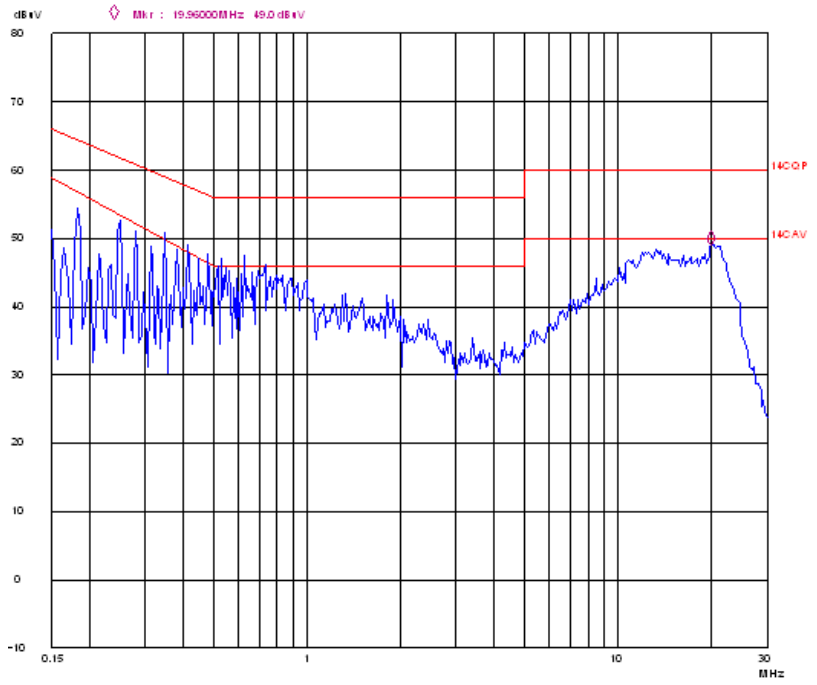
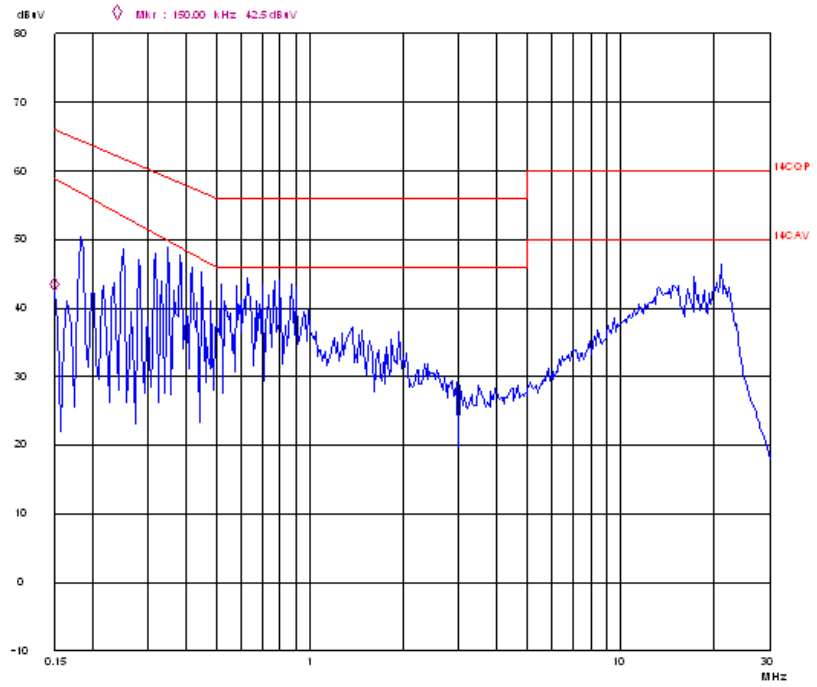
Operating Frequency Test Set-up :

ATTACHMENT 5 - CONDUCTED EMISSION TEST RESULTS

CLIENT:	The Frank Group	**TEST STANDERD:**	FCC Part 18
MODEL NUMBERS:	WBP-TP-660	**PRODUCT:**	AC/DC Tri-Powered Portable Microwave Oven
MODEL TESTED:	WBP-TP-660	**EUT DESIGNATION:**	Home or Office
TEMPERATURE:	22℃	**HUMIDITY:**	60%RH
ATM PRESSURE:	101.1kPa	**GROUNDING:**	Through AC Power Cord
TESTED BY:	Eddy Chen	**DATE OF TEST:**	2009, August 18
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	The EUT was set up according to the guideline of ANSI C63.4: 2003 & FCC MP-5 for conducted emissions. The measurement was using a AMN on each line and an EMI receiver peak scan was made at the frequency measurement range. The six highest significant peaks were then marked, and these signals were then quasi-peaked and averaged. The frequency range investigated was from 150kHz to 30MHz.		
TESTED RANGE:	150kHz to 30MHz		
TEST VOLTAGE:	120VAC / 60Hz		
RESULTS:	The EUT meets the requirements of test reference for Conducted Emissions.The test results relate only to the equipment under test provided by client.		
Changes or Modifications:	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
M. UNCERTAINTY:	±2.5 dB		



Line L Conducted Emission Graph



Line N Conducted Emission Graph

Test data:

Line L/N	*Frequency (MHz)*	*Corrected QP Level (dBuV)*	*Limits QP (dBuV)*	*Margin QP (dB)*	*Corrected AVE Level (dBuV)*	*Limits AVE (dBuV)*	*Margin AV (dB)*
L	*0.18*	*53.66*	*63.48*	*-9.82*	*48.12*	*53.48*	*-5.36*
L	*0.45*	*46.49*	*56.87*	*-10.38*	*41.48*	*46.87*	*-5.39*
L	*19.96*	*48.85*	*60.00*	*-11.15*	*43.19*	*50.00*	*-6.81*
N	*0.18*	*51.26*	*63.48*	*-12.22*	*46.98*	*53.48*	*-6.52*
N	*0.36*	*49.86*	*59.73*	*-9.87*	*43.24*	*49.73*	*-6.49*
N	*21.63*	*48.58*	*60.00*	*-11.42*	*43.86*	*50.00*	*-6.14*
Note: All readings are using a bandwidth of 9 kHz, with a 30 ms sweep time.							

Test equipments list:

Test Equipment	***Manufacturer***	***Model***	***Serial No.***	***Last Cal.***	***Cal. Due***
EMI Receiver	*R&S*	*ESCS30*	*SB2603*	*01/25/2009*	*01/24/2010*
LISN	*ETS*	*4825/2*	*1161*	*01/25/2009*	*01/24/2010*
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).					

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ENGINEER ***SENIOR ENGINEER***

Conducted Emission Test Set-up :

ATTACHMENT 6 - RADIATED EMISSION TEST RESULTS

CLIENT:	The Frank Group	**TEST STANDERD:**	FCC Part 18
MODEL NUMBERS:	WBP-TP-660	**PRODUCT:**	AC/DC Tri-Powered Portable Microwave Oven
MODEL TESTED:	WBP-TP-660	**EUT DESIGNATION:**	Home or Office
TEMPERATURE:	22℃	**HUMIDITY:**	60%RH
ATM PRESSURE:	101.1kPa	**GROUNDING:**	Through AC Power Cord
TESTED BY:	Eddy Chen	**DATE OF TEST:**	2009, August 18
TEST REFERENCE:	ANSI C63.4: 2003, FCC/OST MP-5:1986		
TEST PROCEDURE:	The EUT was set up according to the guidelines of ANSI C63.4: 2003 & FCC MP-5 for radiated emissions. Microwave oven was placed on a 1m *1.5m nonconductive table. The top of the table is 1.0 m above the ground. The table is placed on a flush mounted metal turntable. An EMI receiver peak scan was made at the frequency measurement range (pre-scan) in an Anechoic chamber. Signal discrimination was then performed and the significant peaks marked. All data was recorded in Quasi-peak detection mode from 30 MHz to 1GHz and average detector mode above 1GHz. The following data lists the significant emission frequencies, measured levels, correction factors (including cable and antenna correction factors), and the corrected readings against the limits. Explanation of the Correction Factor are given as follows: FS= RA + AF + CF - AG Where: FS = Field Strength RA = Receiver Amplitude AF = Antenna Factor CF = Cable Attenuation Factor AG = Amplifier Gain		
TESTED RANGE:	30MHz to 24.5GHz		
TEST VOLTAGE:	120VAC / 60Hz and DC 12V		
RESULTS:	The EUT meets the requirements of test reference for Radiated Emissions. The test results relate only to the equipment under test provided by client.		
Changes or Modifications:	There were no modifications installed by ECMG Worldwide Certification Solution Inc., (China) test personnel.		
M. UNCERTAINTY:	± 3.2 dB		

Field strength limits for out-of-band emissions :

For RF output power <500W, Limit at 300m = 27.96dBuV/m

*For RF output power>5 00W, Limit at 300m=20log[25*SQRT(Power/500)]dBuV/m*

Frequency band 30MHz-1000MHz:

AC input mode				
Frequency [MHz]	*Antenna Polarization [V/H]*	*Corrected Reading [dBµV/m]*	*Delta, QP [dB]*	*3 Meters Limits [dBµV/m]*
40.0100	*H*	*35.90*	*-32.06*	*67.96*
90.0650	*H*	*35.30*	*-32.66*	*67.96*
664.2220	*H*	*44.40*	*-23.56*	*67.96*
44.8970	*V*	*39.20*	*-28.76*	*67.96*
65.3210	*V*	*34.10*	*-33.86*	*67.96*
90.1000	*V*	*30.20*	*-37.76*	*67.96*
DC direct mode				
Frequency [MHz]	*Antenna Polarization [V/H]*	*Corrected Reading [dBµV/m]*	*Delta, QP [dB]*	*3 Meters Limits [dBµV/m]*
34.3050	*H*	*31.20*	*-36.76*	*67.96*
82.7490	*H*	*38.20*	*-29.76*	*67.96*
746.3850	*H*	*35.90*	*-32.06*	*67.96*
43.8520	*V*	*32.70*	*-35.26*	*67.96*
72.7710	*V*	*36.40*	*-31.56*	*67.96*
745.7600	*V*	*32.10*	*-35.86*	*67.96*

DC power outlet Mode				
Frequency [GHz]	Antenna Polarization [V/H]	Corrected Reading [dBµV/m]	Delta, QP [dB]	3 Meters Limits [dBµV/m]
80.7600	H	37.33	-30.63	67.96
82.4400	H	37.68	-30.28	67.96
736.9450	H	36.35	-31.61	67.96
80.8400	V	39.65	-28.31	67.96
81.8800	V	40.11	-27.85	67.96
82.4800	V	39.79	-28.17	67.96
Note: All readings are quasi-peak unless stated otherwise, using a bandwidth of 120kHz, with a 1.0s sweep time. A video filter was not used.				

Frequency band 1GHz-25GHz:

AC input mode				
Frequency [GHz]	Antenna Polarization [V/H]	Corrected Reading [dBµV/m]	Delta, AV [dB]	3 Meters Limits [dBµV/m]
2.1102	H	35.69	-32.27	67.96
7.4188	H	51.37	-16.59	67.96
9.3281	H	43.55	-24.41	67.96
2.7234	V	37.86	-30.10	67.96
7.4188	V	47.20	-20.76	67.96
9.3321	V	39.13	-28.83	67.96

DC Direct Mode

Frequency [GHz]	*Antenna Polarization [V/H]*	*Corrected Reading [dBµV/m]*	*Delta, AV [dB]*	*3 Meters Limits [dBµV/m]*
2.1102	*H*	*35.69*	*-32.27*	*67.96*
7.4188	*H*	*51.37*	*-16.59*	*67.96*
9.3281	*H*	*43.55*	*-24.41*	*67.96*
2.7234	*V*	*37.86*	*-30.10*	*67.96*
7.4188	*V*	*47.20*	*-20.76*	*67.96*
9.3321	*V*	*39.13*	*-28.83*	*67.96*

DC power outlet Mode

Frequency [MHz]	*Antenna Polarization [V/H]*	*Corrected Reading [dBµV/m]*	*Delta, AV [dB]*	*3 Meters Limits [dBµV/m]*
2.0713	*H*	*45.13*	*-22.83*	*67.96*
7.1200	*H*	*48.69*	*-19.27*	*67.96*
7.3945	*H*	*42.54*	*-25.42*	*67.96*
2.1192	*V*	*44.60*	*-23.36*	*67.96*
7.1285	*V*	*46.98*	*-20.98*	*67.96*
7.4053	*V*	*39.17*	*-28.79*	*67.96*

Note: All readings are average unless stated otherwise, using a bandwidth of 1MHz, with a 30 ms sweep time. A video filter was not used.

Test equipments list:

Test Equipment	*Manufacturer*	*Model*	*Serial No.*	*Last Cal.*	*Cal. Due*
Biconilog Antenna	*ETS*	*3142C*	*00042672*	*01/25/2009*	*01/24/2010*
Double-ridged wave guide horn	*ETS*	*3115*	*6587*	*01/25/2009*	*01/24/2010*
EMI Receiver	*SCHAFFNER*	*SMR4503*	*11725*	*01/25/2009*	*01/24/2010*
Semi-Anechoic chamber	*ETS*	*9x6x6*	*N/A*	*03/27/2009*	*03/26/2010*
Spectrum Analyzer	*R&S*	*FSP30*	*100755*	*11/27/2009*	*03/26/2010*
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).					

SIGNED BY: _____ ***REVIEWED BY:*** _____

ENGINEER ***SENIOR ENGINEER***

Radiated Emission Test Set-up (Below 1GHz) :

Radiated Emission Test Set-up (Above 1GHz) :