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1. GENERAL INFORMATION

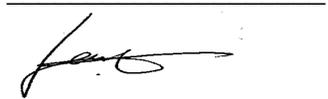
1.1 Verification of Compliance

EUT: RF CORDLESS HEADPHONE RECEIVER
 Model: RP-WF930H
 Applicant: MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.
 1-15 MATSUO-CHO, KADOMA CITY, OSAKA, JAPAN
 Test Type: FCC Part 15 CERTIFICATION
 Result: PASS
 Tested by: ADVANCED COMPLIANCE LAB
 Test Date: February 24, 2004
 Report Number: 0048-031210-01-RX-PMSV

The above equipment was tested by Advanced Compliance Laboratory for compliance with the requirement set forth in the FCC rules and regulations Part 15, subpart C. This said equipment in the configuration described in the report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

The estimated uncertainty of the test result is given as following. The method of uncertainty calculation is provided in Advanced Compliance Lab. Doc. No. 0048-01-01.

	Prob. Dist.	Uncertainty(dB)	Uncertainty(dB)	Uncertainty(dB)
		30-1000MHz	1-6.5GHz	Conducted
Combined Std. Uncertainty u_c	norm.	±2.36	±2.99	±1.83



Wei Li
 Lab Manager
 Advanced Compliance Lab

Date: February 24, 2004

1.2 Equipment Modifications

N/A

1.3 Product Information

System Configuration

ITEM	DESCRIPTION	FCC ID	CABLE
Product	RF Cordless Headphone Receiver	ACJRP-WF930H	
Housing	PLASTICS		
Power Supply	Rechargeable Ni-MH battery (2.4 V)		
Carrier Freq.	905-908MHz		
Clock/OSC Freq.	10.7MHz, 418 MHz, 906MHz		
Device Type	SUPERREGENERATIVE RECEIVER		

(1) EUT submitted for grant.

1.4 Test Methodology

Radiated tests were performed according to the procedures in ANSI C63.4-2001 at an antenna to EUT distance of 3 meters.

1.5 Test Facility

The open area test site and conducted measurement facility used to collect the radiated and conducted data are located at Somerset, New Jersey. This site has been accepted by FCC to perform measurements under Part 15 or 18 in a letter dated May 19, 1997 (Refer to: 31040/PRV 1300F2). The NVLAP Lab code for accreditation of FCC EMC Test Method is: 200101-0.

1.6 Test Equipment

Manufacture	Model	Serial No.	Description	Last Cal dd/mm/y	Cal Due dd/mm/y
Hewlett-Packard	HP8546A	3625A00341	EMI Receiver	12/01/04	12/01/05
EMCO	3115	4945	Double Ridge Guide Horn Antenna	11/08/03	11/08/04
AIL	94455	933	20-300MHz Biconical Antenna	11/03/03	11/03/04
EMCO	3146	2860	200-1000MHz Log-Periodic Antenna	09/02/04	09/02/05
Fischer Custom	LISN-2	900-4-0008	Line Impedance Stabilization Networks	11/08/03	11/08/04
Fischer Custom	LISN-2	900-4-0009	Line Impedance Stabilization Networks	25/08/03	25/08/04

All Test Equipment Used are Calibrated Traceable to NIST Standards.

1.7 Statement for the Document Use

This report shall not be reproduced except in full, without the written approval of the laboratory. And this report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

2. PRODUCT LABELING

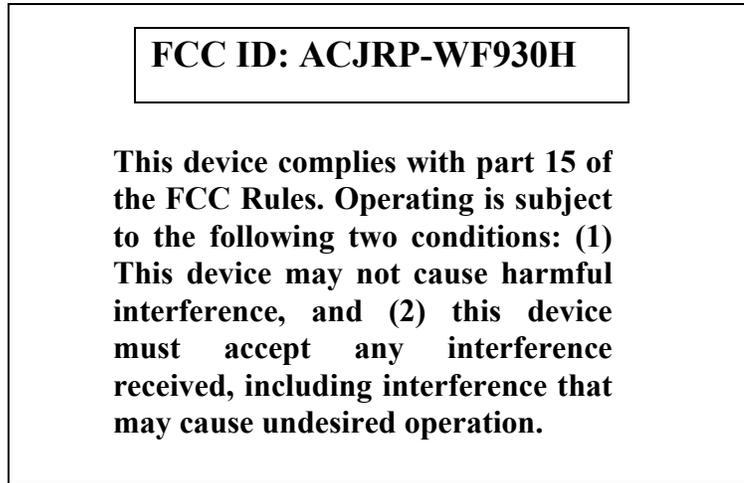


Figure 2.1 FCC ID Label



Figure 2.2 Location of the Label

3. SYSTEM TEST CONFIGURATION

3.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it). And its antenna was permanently attached to the EUT with maximum length, 6 inches.

A ROHDE&SCHWARZ SMH signal generator was used during the test to radiate an unmodulated CW signal to cohered the receiver at 907.3 MHz. The level was adjusted to let this occur.

Testing was performed as EUT was tuned for frequency 905~908MHz transmission.

3.2 Special Accessories

N/A

3.3 Configuration of Tested System

Figure 3.1 and Figure 3.2 illustrate this system, which is tested standing along.



Figure 3.1 Radiated Front



Figure 3.2 Radiated Rear



Figure 3.3 Conducted Front



Figure 3.4 Conducted Rear

4. SYSTEM BLOCK DIAGRAM

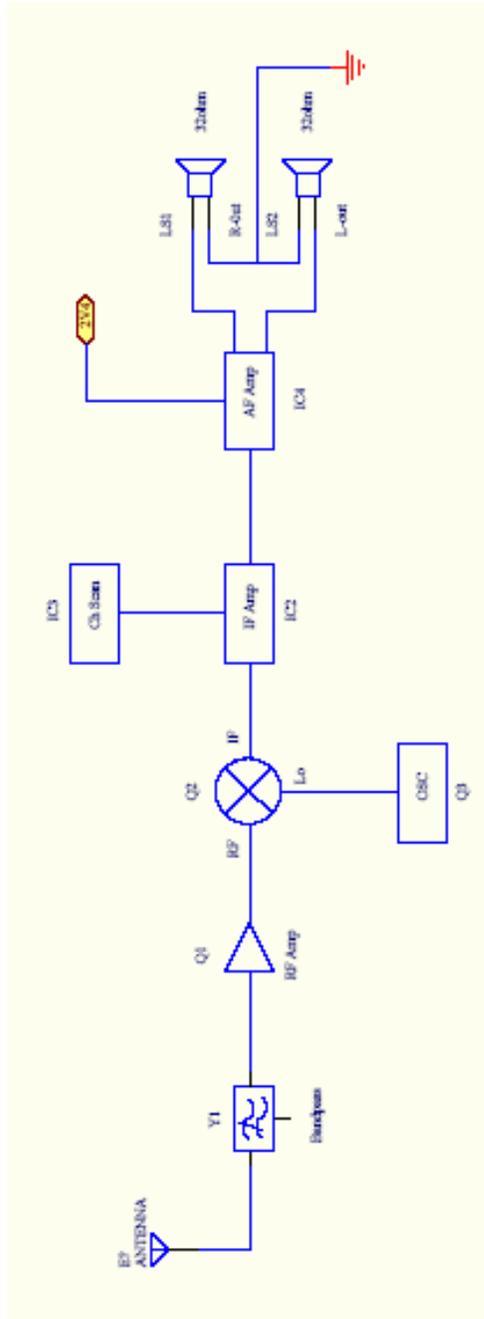


Fig. 4.1 System Block Diagram

5. CONDUCTED EMISSION DATA

5.1 Test Methods and Conditions

The EUT was under normal operational mode during the conducted emission test. EMI Receiver was scanned from 150KHz to 30MHz with maximum hold mode for maximum emission. Recorded data was sent to the plotter to generate output in linear format. At the input of the spectrum analyzer, a HP transient limiter is inserted for protective purpose. This limiter has a 10 dB attenuation in the range of 150KHz to 30MHz. That factor was automatically compensated by the receiver, so the readings are the corrected readings. The reference of the plot is the CISPR 22 Class B limit in Figure 5.1 through Figure 5.2.

Conducted Emission Technical Requirements				
Frequency Range	Class A		Class B	
	Quasi-Peak dBuV	Average dBuV	Quasi-Peak DBuV	Average dBuV
150kHz -0.5MHz	79 (8912uV)	66 (1995uV)	66-56	56-46
0.5MHz-30MHz	73 (4467uV)	60 (1000uV)	---	---
0.5MHz- 5MHz	---	---	56	46
5MHz-30MHz	---	---	60	50

Emissions that have peak values close to the specification limit (if any) are also measured in the quasi-peak mode to determine compliance.

5.2 Test Data

Figure 5.1 through Figure 5.2 show the neutral and line conducted emissions for the standard operation mode.

Six Highest Data for AC Line Conducted Emissions						
Frequency (MHz)	1.61	2.12	3.92	4.11	13.26	23.81
Peak Reading (dBuV)	42.5	42.7	43.0	42.8	43.4	39.7

Test Personnel:

Tester Signature: 

Date: February 24, 2004

Typed/Printed Name: Edward Lee

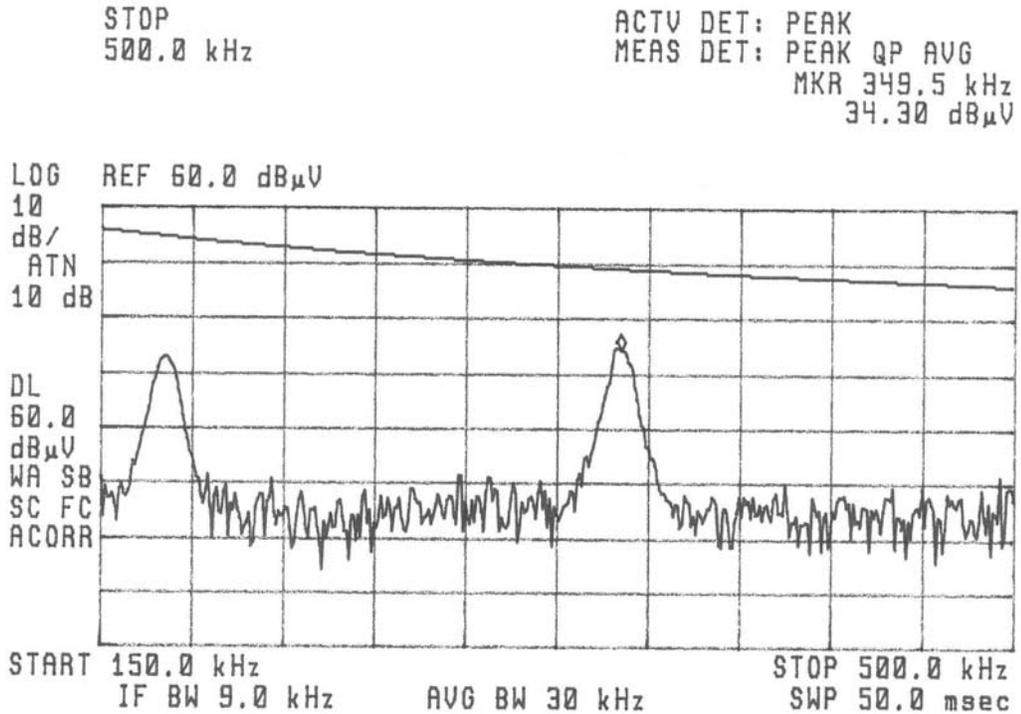
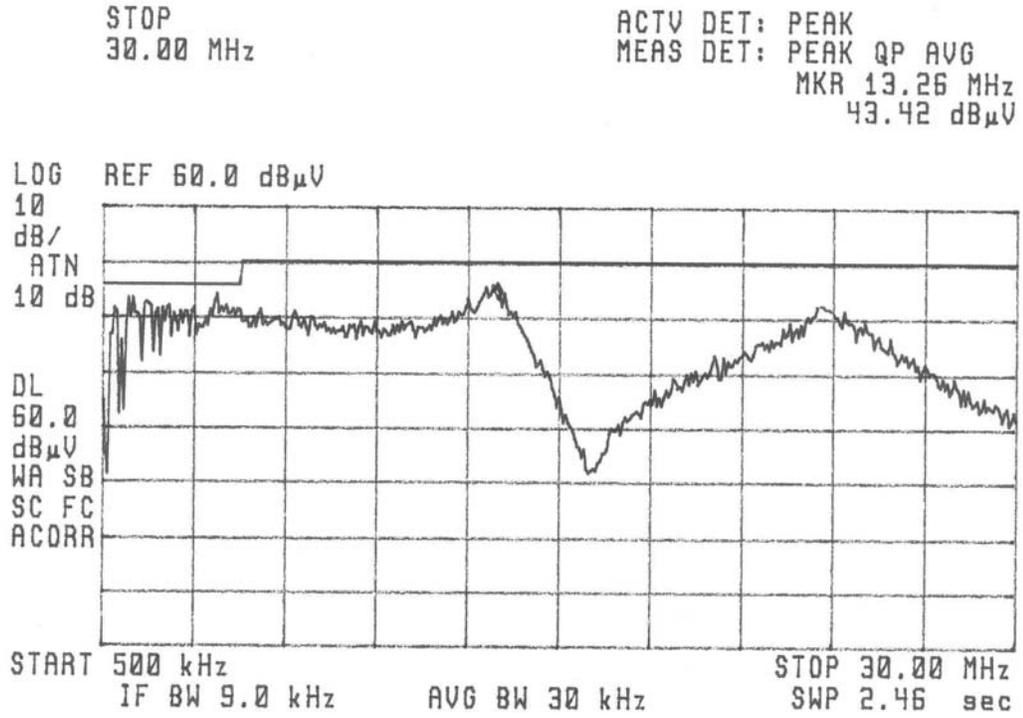


Figure 5.1 Line Conducted

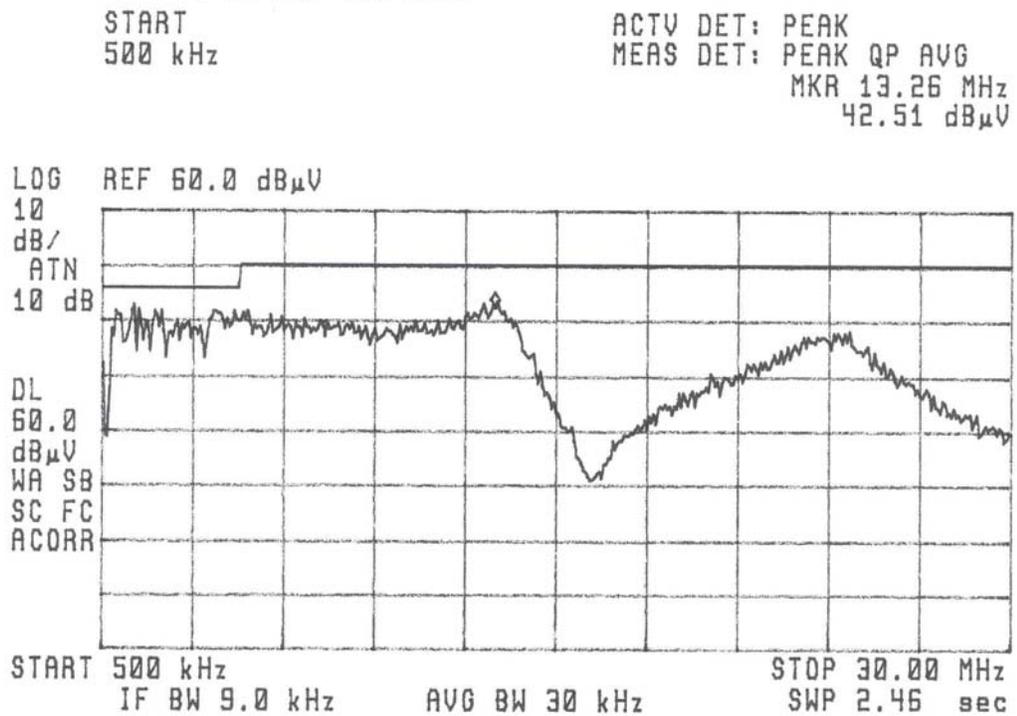
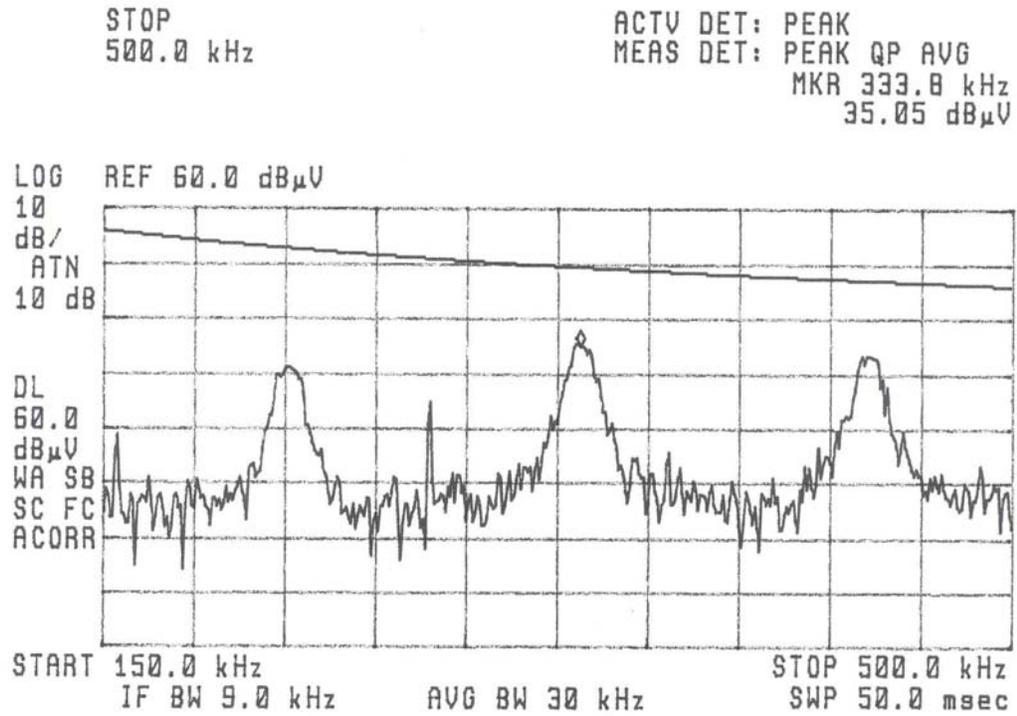


Figure 5.2 Neutral Conducted

6. RADIATED EMISSION DATA

6.1 Field Strength Calculation

The corrected field strength is automatically calculated by EMI Receiver using following:

$$FS = RA + AF + CF + AG$$

where FS: Corrected Field Strength in dB μ V/m

RA: Amplitude of EMI Receiver before correction in dB μ V

AF: Antenna Factor in dB/m

CF: Cable Attenuation Factor in dB

AG: Built-in Preamplifier Gain in dB (Stored in receiver as part of the calibration data)

6.2 Test Methods and Conditions

The initial step in collecting radiated data is a EMI Receiver scan of the measurement range below 30MHz using peak detector and 9KHz IF bandwidth / 30KHz video bandwidth. For the range 30MHz - 10GHz, 120KHz IF bandwidth / 30KHz video bandwidth are used. Both bandwidths are 1MHz for above 1GHz measurement.

6.3 Test Data

The following data lists the significant emission frequencies, polarity and position, peak reading of the EMI Receiver, the FCC limit, and the difference between the peak reading and the limit. Explanation of the correction and calculation are given in section 5.1.

The plot shows there is no significant radiated emission point for the range of 30MHz ~ 5GHz.

Test Personnel:

Tester Signature:



Typed/Printed Name: Edward Lee

Date: February 24, 2004

Radiated Test Data

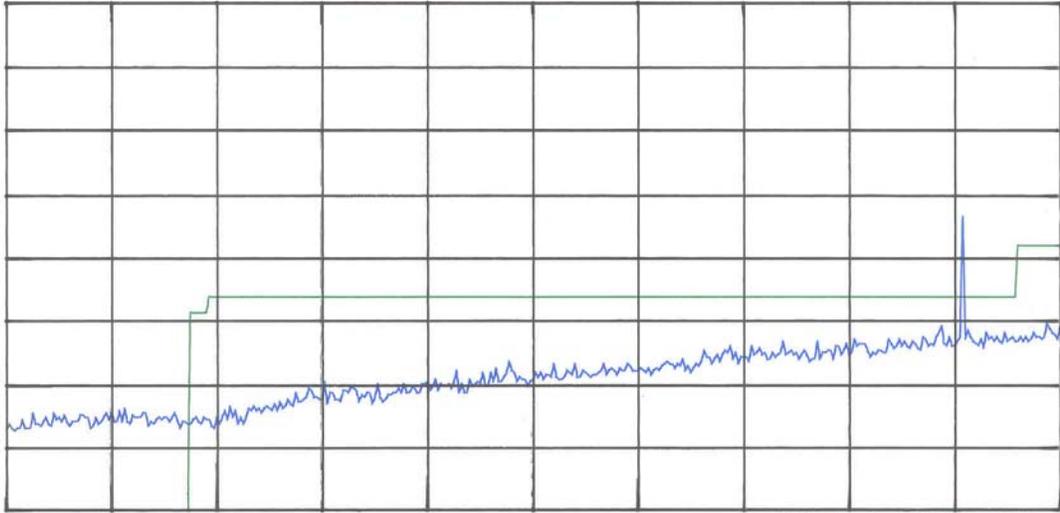
START
30.0 MHz

ACTV DET: PEAK
MEAS DET: PEAK QP AVG

LOG REF 92.0 dB μ V/m

10
dB/
ATN
10 dB

VA SB
SC FC
ACORR



START 30.0 MHz

IF BW 120 kHz

AVG BW 300 kHz

STOP 1.0000 GHz

SWP 909 msec

7. PHOTOS OF TESTED EUT

The following photos show the inside details of the EUT.