



Hong Kong

FCC – Test report

Report Number : **60/760.9.128.01** Date of Issue: 2 July 2009

Model : **PM90**

Product Type : Digital HRM Watch

Applicant : Dayton Industrial Co., Ltd.

Address : 2-12 Kwai Fat Road, 11-A Kwai Chung,
: New Territories, Hong Kong

Production Facility : Kendy Enterprise Ltd.

Address : 2-12 Kwai Fat Road, 11-A Kwai Chung,
: New Territories, Hong Kong

Test Result : **Positive** **Negative**

Total pages including Appendices : 19

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2 Details about the Test Laboratory

Details about the Test Laboratory

Company name: TÜV SÜD HONG KONG LTD.
3/F, West Wing, Lakeside 2,
10 Science Park West Avenue,
Science Park, Shatin
HK.

Telephone: 852 2776 1323
Fax: 852 2776 1372

Company name: The Hong Kong Standards and Testing Centre Ltd.
10 Dai Wang Street,
Taipo Industrial Estate,
N.T.,
Hong Kong



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3 Description of the Equipment Under Test

Description of the Equipment Under Test

Product:	Digital HRM Watch
Model no.:	PM90
Serial number:	NIL
Options and accessories:	NIL
Rated Voltage:	3 V DC
Rated Current:	NIL
Rated Power:	NIL
Frequency:	NIL
Description of the EUT:	NIL



4 Summary of Test Standards and Results

Emission Tests						
Test Condition	Test Requirement	Test Method	Pages	Test Result		
				Pass	Fail	N/A
Radiated Emission 30MHz – 1000MHz	FCC Part 15 Section 15.109	ANSI C63.4:2003	7-11	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conducted Emission on AC 150kHz to 30MHz	FCC Part 15 Section 15.107	ANSI C63.4:2003	12-16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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5 General Remarks

Remarks

NIL

SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

□ - Not Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: 5 June 2009

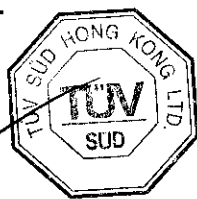
Testing Start Date: 10 June 2009

Testing End Date: 11 June 2009

- TÜV SÜD HONG KONG LTD. -

Reviewed by:

Ivan Toa
Deputy Manager



Prepared by:

Twin Ngan
EMC Test Engineer

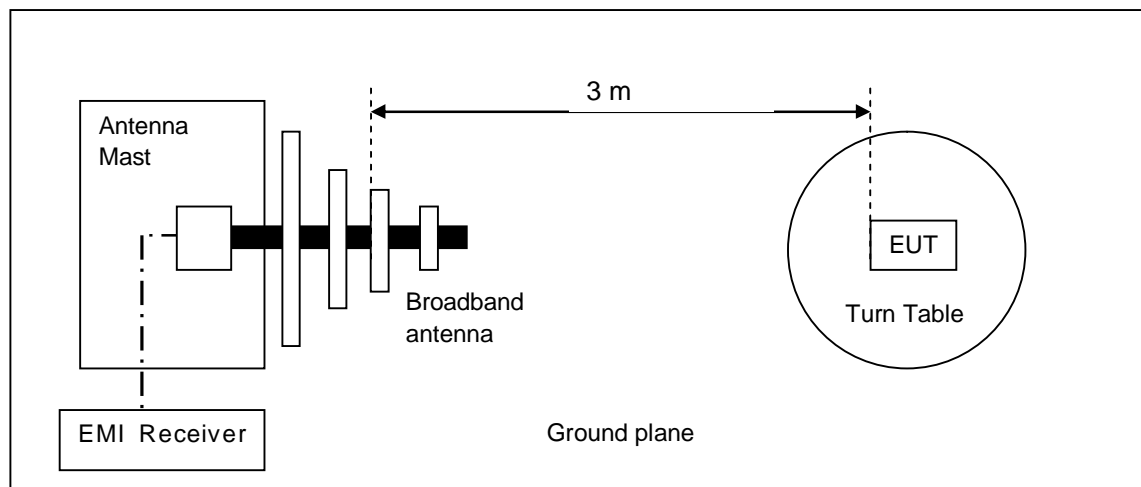
6 Emission Test Results

6.1 Radiated Emission Test (Fundamental)

Test Procedure :

The equipment under test (EUT) was placed on a test table with 0.8m high above the ground plane and the distance between the EUT and the broadband antenna is 3m. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables. The turntable was rotated to maximize the emission level and the antenna was moving along the mast from 1m up to 4m in both horizontal and vertical polarizations.

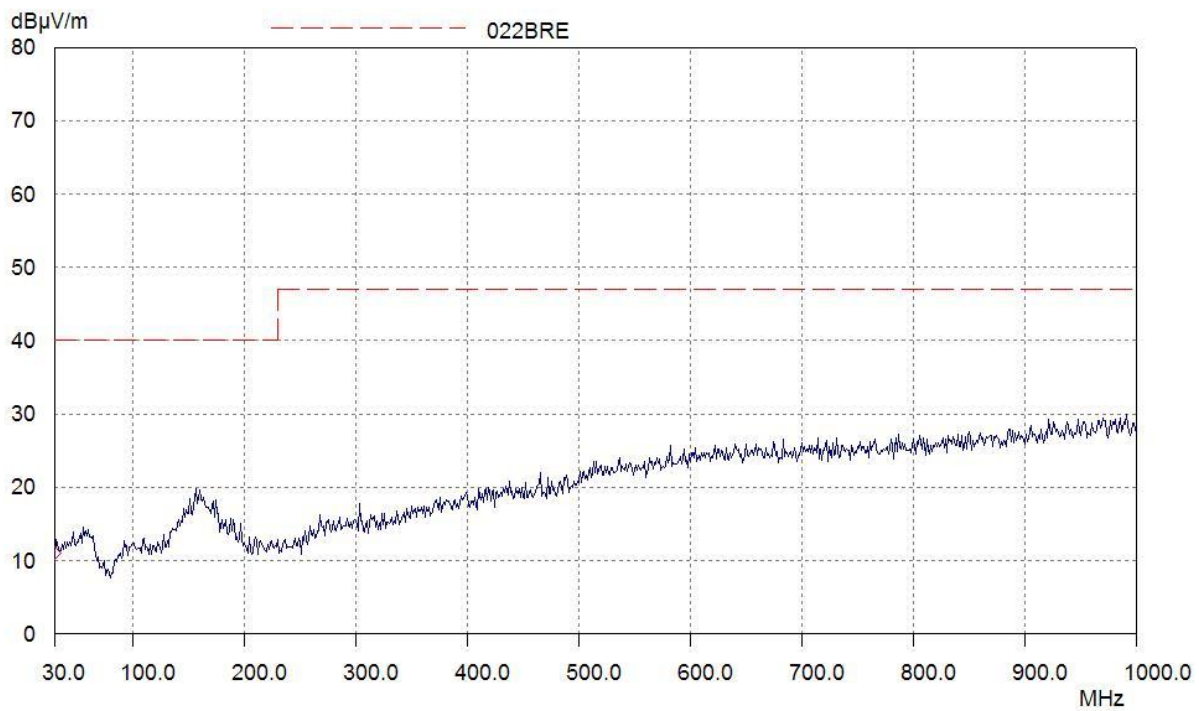
Test Setup :



6.1 Radiated Emission Test 30MHz - 1000MHz

Date of test : 10 June 2009
 Test requirement : FCC Part 15 Section 15.109
 Test method : ANSI C63.4:2003
 Operating mode : On mode
 Antenna polarity : Horizontal
 Remarks : Watch only

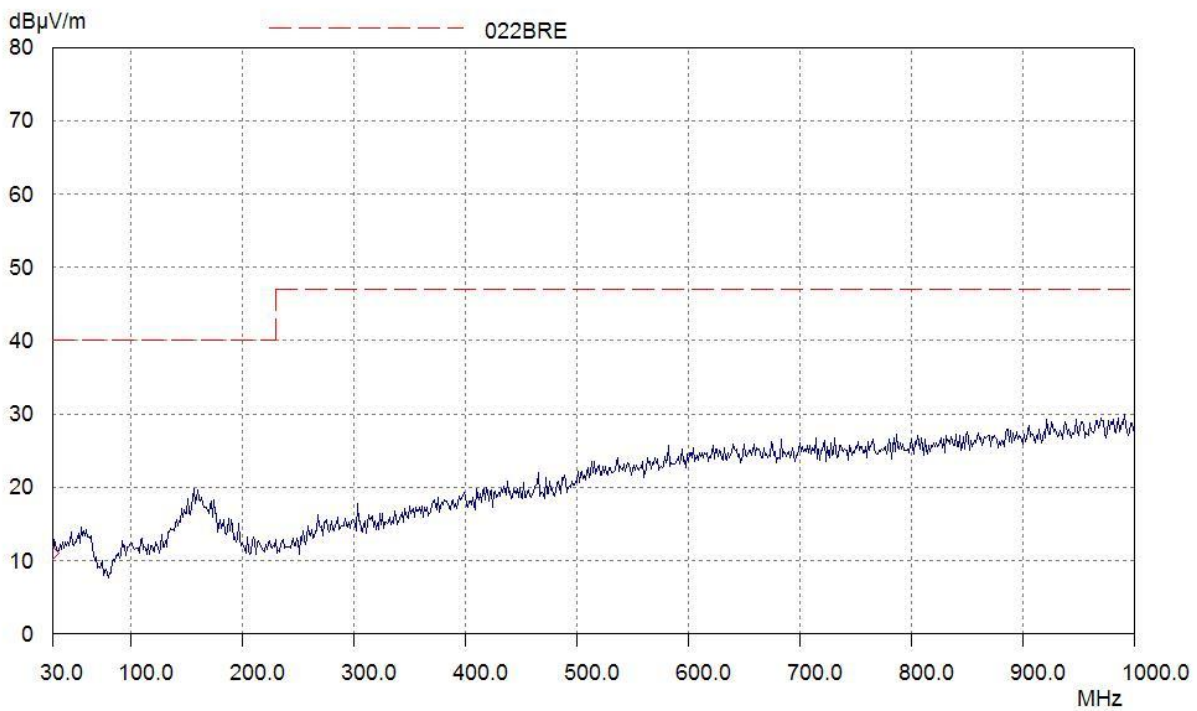
Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed



Radiated Emission Test 30MHz - 1000MHz

Date of test : 11 June 2009
Test requirement : FCC Part 15 Section 15.109
Test method : ANSI C63.4:2003
Operating mode : On mode
Antenna polarity : Vertical
Remarks : Watch only

Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed





Radiated Emission Test 30MHz - 1000MHz

Date of test : 10 June 2009
Test requirement : FCC Part 15 Section 15.109
Test method : ANSI C63.4:2003
Operating mode : On mode
Antenna polarity : Horizontal (Worse case, Horizontal > Vertical)
Remarks : Connected to the PC

Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	QP Test result dB μ V/m	QP Limit dB μ V/m	Margin dB
88.6	26.1	40.0	-13.9
140.0	26.9	43.5	-16.6
241.2	33.1	46.0	-12.9
480.0	39.2	46.0	-6.8
960.0	39.8	46.0	-6.2

**Test Equipment List****Radiated Emission Test**

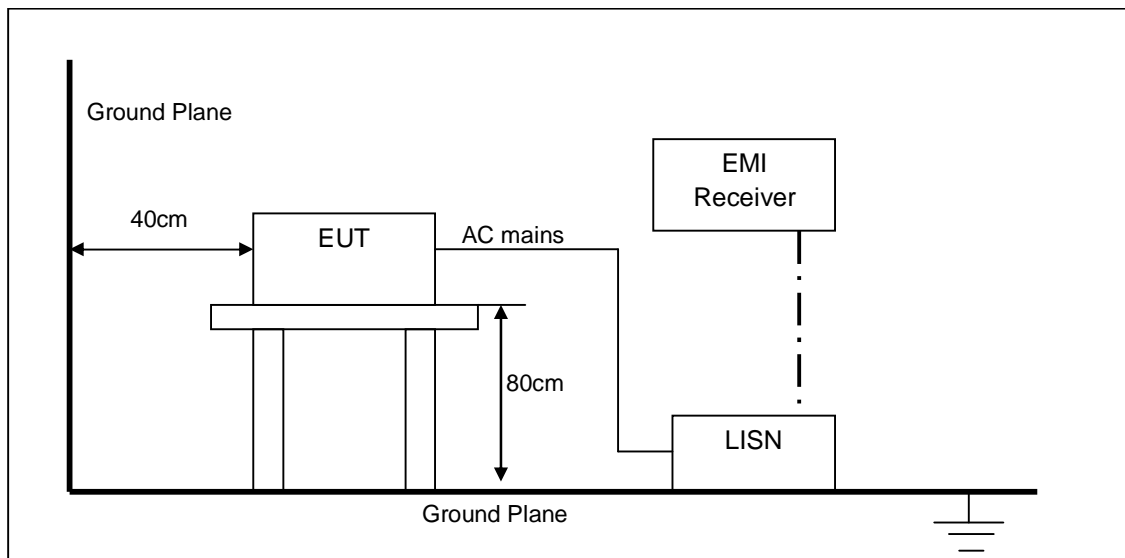
EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DATE	DUE CAL. DATE
EM215	MULTIDEVICE CONTROLER	EMCO	2090	00024676	N/A	N/A
EM216	MINI MAST SYSTEM	EMCO	2075	00026842	N/A	N/A
EM217	ELECTRIC POWERED TURNTABLE	EMCO	2088	00029144	N/A	N/A
EM218	ANECHOIC CHAMBER	ETS-Linggren	FACT-3	--	2008/12/01	2011/12/01
EM219	BICONILOG ANTENNA	EMCO	3142C	00029071	2006/08/23	2010/09/08
EM229	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB40	100248	2007/07/20	2009/08/20
EM020	HORN ANTENNA	EMCO	3115	4032	2006/07/11	2009/07/11
EM223	DOUBLE-RIDGED WAVEGUIDE HORN	EMCO	3116	00060088	2008/05/27	2010/05/27

6.2 Conducted Emission Test 150kHz – 30MHz

Test Procedure :

The equipment under test (EUT) was placed on a test table with 0.8m high above the ground plane and the distance between the EUT and the ground plane (wall) is 0.4m. The EUT was connected to the main power through a LISN. Live and Neutral of AC line are checked for maximum emission.

Test Setup :



Conducted Emission Test 150kHz – 30MHz

Date of test : 10 June 2009

Test requirement : FCC 47CFR 15.107 Class B

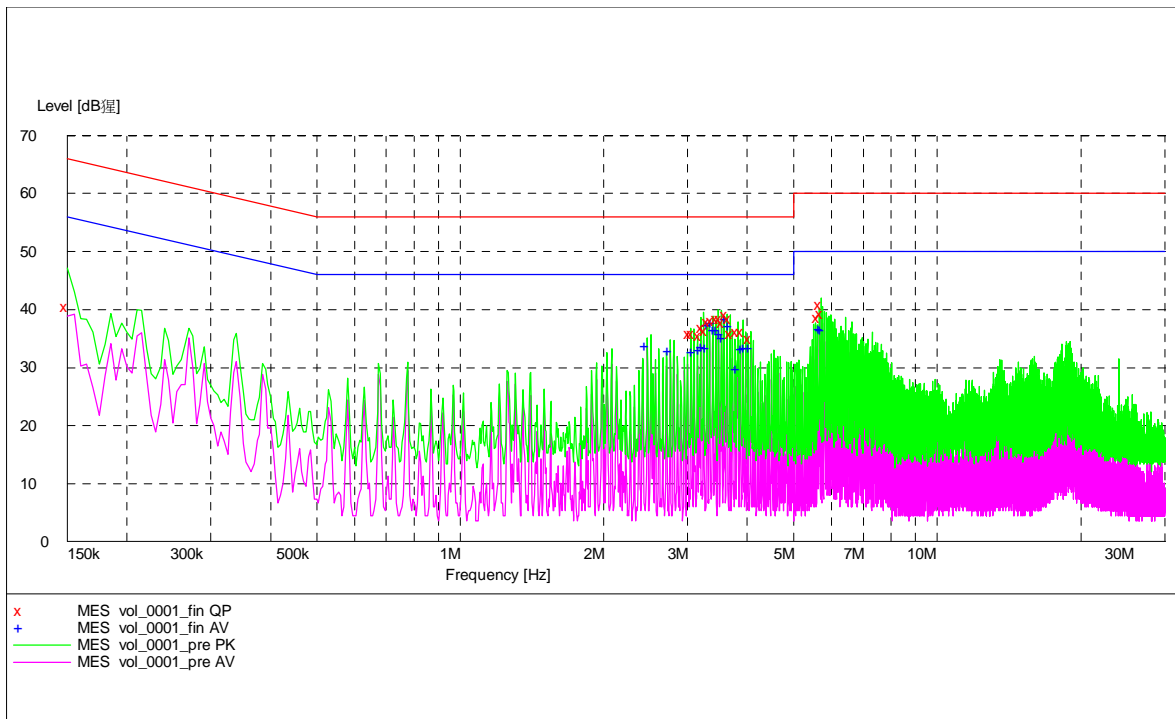
Test method : ANSI C63.4:2003

Operating mode : On mode (connected to the PC)

Tested on : Power Line, Live & Neutral

Remarks : NIL

Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed





Conducted Emission Test 150kHz – 30MHz

Date of test : 10 June 2009

Test requirement : FCC 47CFR 15.107 Class B

Test method : ANSI C63.4:2003

Operating mode : On mode (connected to the PC)

Tested on : Power Line, Live & Neutral

Remarks : NIL

Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	QP Test result dBµV	QP Limit dBµV	Margin dB	Phase	PE
0.150	40.4	66.0	-25.6	N	GND
3.045	35.8	56.0	-20.2	L1	GND
3.095	35.9	56.0	-20.1	N	GND
3.190	35.4	56.0	-20.6	N	GND
3.240	36.9	56.0	-19.1	N	GND
3.285	36.3	56.0	-19.7	N	GND
3.335	37.9	56.0	-18.1	N	GND
3.385	38.1	56.0	-17.9	N	GND
3.480	38.3	56.0	-17.7	L1	GND
3.530	38.3	56.0	-17.7	L1	GND
3.575	37.8	56.0	-18.2	N	GND
3.625	39.0	56.0	-17.0	L1	GND
3.675	38.4	56.0	-17.6	N	GND
3.720	35.8	56.0	-20.2	L1	GND
3.820	36.1	56.0	-19.9	L1	GND
3.915	36.2	56.0	-19.8	N	GND
4.060	35.0	56.0	-21.0	N	GND
5.655	38.6	60.0	-21.4	N	GND
5.705	40.7	60.0	-19.3	N	GND
5.750	39.2	60.0	-20.8	N	GND

Conducted Emission Test 150kHz – 30MHz

Frequency MHz	AV Test result dB μ V	AV Limit dB μ V	Margin dB	Phase	PE
2.465	33.6	46.0	-12.4	N	GND
2.755	32.8	46.0	-13.2	N	GND
3.095	32.6	46.0	-13.4	L1	GND
3.190	33.1	46.0	-12.9	L1	GND
3.240	33.5	46.0	-12.5	L1	GND
3.290	33.3	46.0	-12.7	L1	GND
3.335	37.4	46.0	-8.6	L1	GND
3.385	37.7	46.0	-8.3	N	GND
3.430	36.4	46.0	-9.6	N	GND
3.480	36.5	46.0	-9.5	L1	GND
3.530	35.8	46.0	-10.2	L1	GND
3.580	35.1	46.0	-10.9	L1	GND
3.625	38.3	46.0	-7.7	N	GND
3.675	37.1	46.0	-8.9	N	GND
3.820	29.8	46.0	-16.2	L1	GND
3.915	33.2	46.0	-12.8	L1	GND
3.965	33.4	46.0	-12.6	L1	GND
4.060	33.3	46.0	-12.7	N	GND
5.705	36.7	50.0	-13.3	L1	GND
5.750	36.4	50.0	-13.6	L1	GND



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Test Equipment List

Conducted Emission Test

EQP NO.	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DATE	DUE CAL. DATE
EM197	LISN	EMCO	4825/2	1193	2007/10/30	2009/10/30
EM181	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB7	100072	2008/09/08	2009/09/08
EM154	SHIELDING ROOM	SIEMENS MATSUSHITA COMPONENTS	N/A	803-740-057-99A	2009/01/23	2010/01/23

7 Appendix A



Appendix A



Appendix A



8 Appendix B

Radiated Emission Test Set Up



Conducted Emission Test Set Up

