

**FCC PART 15.109**  
**MEASUREMENT AND TEST REPORT**  
For

EUT Name: Digital Meat Probe with RF monitor  
Item No.: 23100111, 20100111, 20100311  
FCC ID: YHXMPRFB-R  
Serial No.: Not supplied by client

Prepared for : Masterbuilt Manufacturing, Inc.  
Address : 1 Masterbuilt Court • Columbus, Georgia 31907, USA  
Prepared by : Shenzhen Toby Technology Co., Ltd.  
Address : 10/F., A Block, Jiada R & D Bldg., No.5 Songpingshan Road,  
Science & Technology Park, Nanshan District, Shenzhen, China  
Tel : 0086-18925263335

Report Number : **TB-F107144**  
Date of Test : May 31-June 02, 2010  
Date of Report : June 03, 2010

## TABLE OF CONTENTS

<b>TEST REPORT DECLARATION .....</b>	<b>3</b>
<b>1. GENERAL INFORMATION .....</b>	<b>4</b>
1.1. Product Description for Equipment Under Test (EUT) .....	4
1.2. Test Standards .....	4
1.3. Related Submittal(s)/Grant(s) .....	4
1.4. Test Methodology .....	5
1.5. Accessories Equipment List and Details .....	5
1.6. EUT Cable List and Details .....	5
1.7. Test Location .....	5
<b>2. SUMMARY OF TEST RESULTS.....</b>	<b>6</b>
<b>3. §15.109(A) - RADIATED EMISSION.....</b>	<b>7</b>
3.1. Measurement Uncertainty .....	7
3.2. Standard Applicable .....	7
3.3. Test Equipment List and Details .....	7
3.4. Test Procedure .....	8
3.5. Corrected Amplitude & Margin Calculation .....	8
3.6. Environmental Conditions .....	8
3.7. Summary of Test Result.....	8

## TEST REPORT DECLARATION

Applicant : Masterbuilt Manufacturing, Inc.  
Manufacturer : San Yan Electronic Co., Ltd  
EUT Description : Digital Meat Probe with RF monitor  
Model No. : 23100111, 20100111, 20100311

The device described above is tested by Bontek Compliance Testing Laboratory Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B limits for both radiation and conduction emissions.

The measurement results are contained in this test report and Shenzhen Toby Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Toby Technology Co., Ltd.

Reported by: Erin Date: June 03, 2010  
(Erin)

Reviewer: Jacky Wang Date: June 03, 2010  
(Jacky Wang)

Approved by: Justin Zhang Date: June 03, 2010  
(Justin Zhang)

## 1. GENERAL INFORMATION

### 1.1. Product Description for Equipment Under Test (EUT)

#### Client Information

Applicant : Masterbuilt Manufacturing, Inc.  
 Address : 1 Masterbuilt Court • Columbus, Georgia 31907, USA  
 Manufacturer : San Yan Electronic Co., Ltd  
 Address : No.2, 7th South of Street, Qinggong Road 3, Foshan City, Guangdong, P.R.China.

#### General Description of E.U.T

Items	Description
EUT Description:	Digital Meat Probe with RF monitor
Model No.:	23100111, 20100111, 20100311 (Note: The samples are the same except only color is different. We take 23100111 for test.)
Rated Voltage:	DC 3V Batteries
Frequency Range:	433.92MHz
Tape of Antenna:	Internal Antenna

For more information refer to the circuit diagram form and the user's manual.

The test data is gathered from a production sample, provided by the manufacturer.

### 1.2. Test Standards

The following report is prepared on behalf of the Masterbuilt Manufacturing, Inc. in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart B, and section 15.205, 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission/immunity, should be checked to ensure compliance has been maintained.

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

No Related Submittal(s).

#### 1.4. Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions. The EUT was set to keep Receiving during the test.

#### 1.5. Accessories Equipment List and Details

Manufacturer	Description	Model	Serial Number
/	/	/	/

#### 1.6. EUT Cable List and Details

Cable Description	Length (M)	Shielded/ Unshielded	With Core/ Without Core
/	/	/	/

#### 1.7. Test Location

##### **FCC – Registration No.: 338263**

Bontek Compliance Testing Laboratory Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration 338263, March, 2008.

Bontek Compliance Testing Laboratory Ltd

Address: 1/F, Block East H-3, OCT Eastern Ind. Zone Qiaocheng East Road, Nanshan, Shenzhen, 518055 China

## 2. SUMMARY OF TEST RESULTS

DESCRIPTION OF TEST	RESULT
§15.109(a) Radiated Emission	Compliant

### 3. §15.109(A) - RADIATED EMISSION

#### 3.1. Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is  $\pm 3.0$  dB.

#### 3.2. Standard Applicable

According to §15.109(a), the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

Frequency of Emission (MHz)	Field Strength (microvolts/meter)
30-88	100
88-216	150
216-960	200
Above 960	500

Note: a distance of 3 meters

#### 3.3. Test Equipment List and Details

Description	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Date
Spectrum Analyzer	ROHDE& SCHWARZ	FSEA20	DE25181	2009-08-12	2010-08-11
Positioning Controller	C&C	CC-C-1F	N/A	2009-08-12	2010-08-11
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2009-07-21	2010-07-20
Horn Antenna	SCHWARZBECK	BBHX 9120	9120-426	2009-07-21	2010-07-20
RF Switch	EM	EMSW18	SW060023	2009-08-12	2010-08-11
Amplifier	Agilent	8447F	3113A06717	2009-08-12	2010-08-11
Coaxial Cable	SCHWARZBECK	AK9513	9513-10	2009-08-12	2010-08-11
EMI Test Receiver	ROHDE& SCHWARZ	ESPI	25498514	2009-08-12	2010-08-11
EMI Test Receiver	ROHDE& SCHWARZ	ESI26	838786/103	2009-08-12	2010-08-11
Receiver Horn Antenna	ROHDE& SCHWARZ	HF906	100013	2009-08-12	2010-08-11

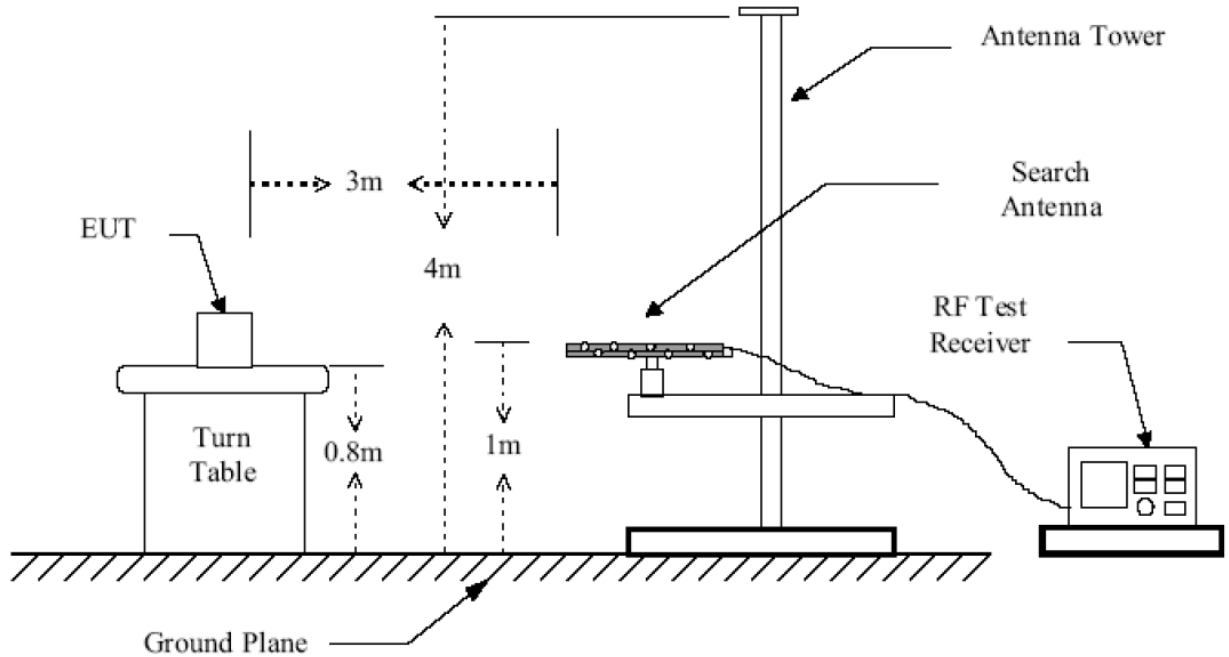
**Statement of Traceability:** All calibrations have been performed per the NVLAP requirements traceable to the NIST.

### 3.4. Test Procedure

The setup of EUT is according with per ANSI C63.4-2009 measurement procedure.

The specification used was with the FCC Part 15.109 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.



### 3.5. Corrected Amplitude & Margin Calculation

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

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB $\mu$ V means the emission is 6dB $\mu$ V below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15B Limit}$$

### 3.6. Environmental Conditions

Temperature:	21° C
Relative Humidity:	53 %
ATM Pressure:	1012 mbar

### 3.7. Summary of Test Result

According to the data in section 3.7, the EUT complied with the the FCC Part15 Paragraph 15.109(a) standards.



**Plot of Radiation Emissions Test Data**

Radiated Disturbance

EUT: Digital Meat Probe with RF monitor

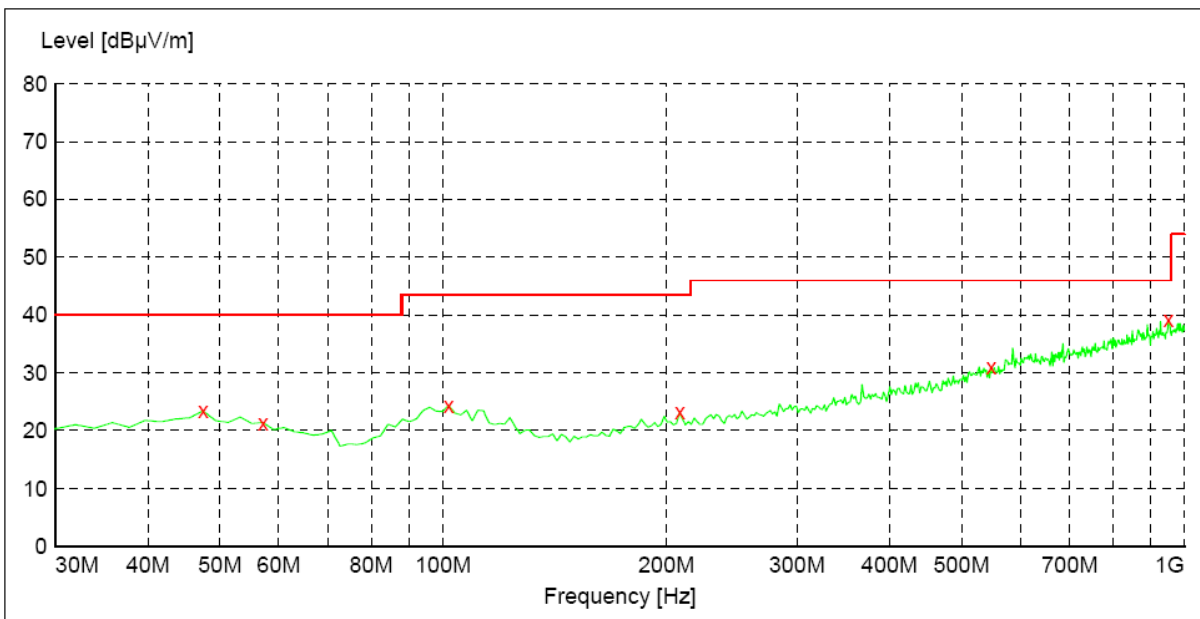
M/N: 23100111

Operating Condition: RX

Test Specification: Horizontal & Vertical

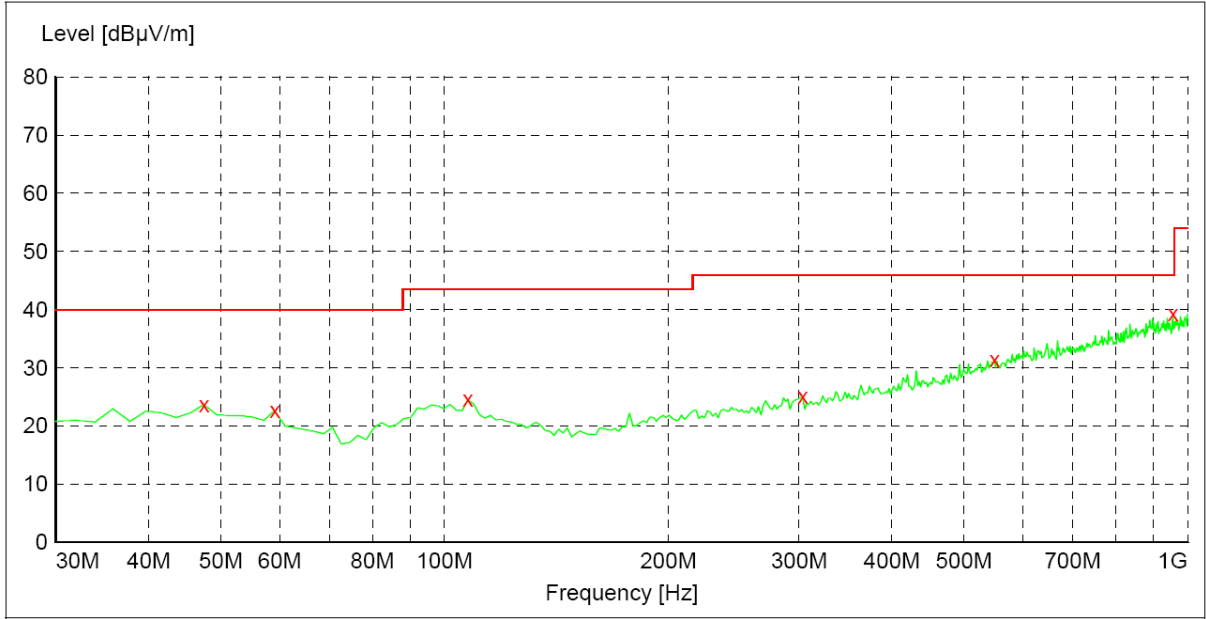
Comment: DC 3V

Horizontal



Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	23.40	15.8	40.0	16.6	---	100.0	0.00	HORIZONTAL
57.160000	21.40	15.1	40.0	18.6	---	100.0	0.00	HORIZONTAL
101.780000	24.40	17.4	43.5	19.1	---	100.0	0.00	HORIZONTAL
208.480000	23.20	16.1	43.5	20.3	---	100.0	0.00	HORIZONTAL
547.980000	31.10	25.1	46.0	14.9	---	100.0	0.00	HORIZONTAL
951.500000	39.20	31.8	46.0	6.8	---	100.0	0.00	HORIZONTAL

Vertical



Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	23.70	15.8	40.0	16.3	---	100.0	0.00	VERTICAL
59.100000	22.60	14.6	40.0	17.4	---	100.0	0.00	VERTICAL
107.600000	24.50	16.9	43.5	19.0	---	100.0	0.00	VERTICAL
303.540000	25.10	18.8	46.0	20.9	---	100.0	0.00	VERTICAL
549.920000	31.40	25.2	46.0	14.6	---	100.0	0.00	VERTICAL
955.380000	39.30	31.8	46.0	6.7	---	100.0	0.00	VERTICAL