



**MPE TEST REPORT**

**FCC Per 47 CFR 2.1091(b)**

**FCC ID** .....: **Q5EPT820001**

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Date of issue.....: June 27, 2008

**Testing Laboratory Name** .....: **Shenzhen Huatongwei International Inspection Co., Ltd**

Address.....: Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China

**Applicant's name**.....: **KIRISUN ELECTRONICS(SHENZHEN) CO., LTD.**

Address.....: 6/F., BLDG. H-2, EAST INDUSTRIAL ZONE OF OVERSEAS CHINESE TOWN NANSHAN DIST. SHENZHEN P.R. CHINA

**Test specification:**

Standard .....: **FCC Per 47 CFR 2.1091(b)**

TRF Originator.....: Shenzhen Huatongwei International Inspection CO., Ltd

Master TRF.....: Dated 2006-06

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**Test item description** ..... : Mobile Radio

Trade Mark .....: Kirisun

Manufacturer .....: KIRISUN ELECTRONICS(SHENZHEN) CO., LTD.

Model/Type reference.....: PT8200-01

Listed Models .....: /

Ratings.....: DC 13.6V

Frequency Range .....: 136 MHz -174 MHz

Result.....: **Positive**

**M P E T E S T R E P O R T**

<b>FCC ID :</b>	<b>Q5EPT820001</b>	June 27, 2008
		Date of issue

Equipment under Test : Mobile Radio

Model /Type : PT8200-01

Listed Models : /

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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

# Contents

- 1. MEASUREMENT UNCERTAINTY ..... 4**
  
- 2. METHOD OF MEASUREMENT ..... 4**
  - 2.1. EME measurements made on trunk mounted antennas 4**
    - 2.1.1. External vehicle EME measurement .....4
    - 2.1.2. Internal vehicle EME measurement .....4
  - 2.2. EME measurements made on center roof mounted antennas 4**
    - 2.2.1. External vehicle EME measurement .....4
    - 2.2.2. Internal vehicle EME measurement .....4
  
- 3. TEST RESULT ..... 5**
  
- 4. CONCLUSION ..... 7**
  
- 5. ANTENNA LOCATION DRAWING ..... 8**

## **1. Measurement Uncertainty**

The information below presents an estimate of the possible errors that are associated with the measurement system.

<b><u>Description</u></b>	<b><u>Error</u></b>
NARDA Survey Meter	± 3%
Repeatability Accuracy	± 7%

## **2. Method of measurement**

### **2.1. EME measurements made on trunk mounted antennas**

#### **2.1.1. External vehicle EME measurement**

(Antenna mounted in trunk center)

With the survey meter and probe, take ten (10) measurements, at the standard test distance of 60 cm to the antenna, from the back of the vehicle in a vertical line and then average the results. These measurements are taken and recorded at every twenty (20) centimeters over a range starting at twenty (20) centimeters above ground and ending at 2.0 meters.

#### **2.1.2. Internal vehicle EME measurement**

(Antenna mounted in trunk center)

While rotating survey meter probe through 180 degrees to ensure that the highest level is found, scan the inside of the vehicle, both front and back seating areas, for the highest level in each location. After the highest level is found, scan vertically making two (2) additional measurements within an area approximately 40 cm wide (representing the width of a person) so as to have a total of three (3) measured points as indicated below that will be averaged

- a) Head area
- b) Chest area
- c) Lower Trunk area

### **2.2. EME measurements made on center roof mounted antennas**

#### **2.2.1. External vehicle EME measurement**

With the survey meter and probe, take ten (10) measurements, at the standard test distance of 110 cm from the vehicle-mounted antenna, in a vertical line and then average the results. These measurements are taken and recorded at every twenty (20) centimeters over a range starting at twenty (20) centimeters above ground and ending at 2.0 meters; this would be representative of a person standing next to a vehicle during a mobile radio transmission.

#### **2.2.2. Internal vehicle EME measurement**

While rotating survey meter probe through 180 degrees to ensure that the highest level is found, scan the inside of the vehicle, both front and back seating areas, for the highest level in each location. After the highest level is found, scan vertically making two (2) additional measurements within an area approximately 40 cm wide (representing the width of a person) so as to have a total of three (3) measured points as indicated below that will be averaged.

- a) Head area
- b) Chest area
- c) Lower Trunk area

### 3. Test Result

Measurement Information			
Measurement Freq.(MHz)	136.000	156.000	174.000
Raw Data Power(W)	48.5	46.0	47.5
Controlled Limit	1.	1.	1.
Uncontrolled Limit	0.	0.	0.
Cal.	1	1	1
Antenna / gain(dBi)	Whip / 0	Whip / 0	Whip / 0
External Vehicle Power Density(50%	average over body/2		
Internal Vehicle Power Density(50%	average over (head/chest/leg)/2		

External Vehicle MPE Assessment at 136.000 MHz						
Antenna Location	Antenna/ gain	Meas. Distance (cm)	E/H Field	Calibration Factor	Average Over Body	Pwr. Density (mW/cm^2)
Trunk	Whip / 0	60	E	1	0.165	0.088
Measurement grid						
Test position	Height (cm)	% of controlled limit	Test position	Height(cm)	% of controlled limit	
1	20	8	6	120	29	
2	40	12	7	140	34	
3	60	10	8	160	27	
4	80	7	9	180	15	
5	100	13	10	200	17	

External Vehicle MPE Assessment at 156.000 MHz						
Antenna Location	Antenna/ gain	Meas. Distance (cm)	E/H Field	Calibration Factor	Average Over Body	Pwr. Density (mW/cm^2)
Trunk	Whip / 0	60	E	1	0.102	0.056
Measurement grid						
Test position	Height (cm)	% of controlled limit	Test position	Height(cm)	% of controlled limit	
1	20	10	6	120	27	
2	40	11	7	140	31	
3	60	12	8	160	20	
4	80	12	9	180	12	
5	100	10	10	200	10	

External Vehicle MPE Assessment at 174.000 MHz						
Antenna Location	Antenna/gain	Meas. Distance (cm)	E/H Field	Calibration Factor	Average Over Body	Pwr. Density (mW/cm <sup>2</sup> )
Trunk	Whip / 0	60	E	1	0.143	0.071
Measurement grid						
Test position	Height (cm)	% of controlled limit	Test position	Height(cm)	% of controlled limit	
1	20	18	6	120	22	
2	40	25	7	140	32	
3	60	11	8	160	15	
4	80	17	9	180	11	
5	100	12	10	200	10	

External Vehicle MPE Assessment at 136.000 MHz						
Antenna Location	Antenna/gain	Meas. Distance (cm)	E/H Field	Calibration Factor	Average Over Body	Pwr. Density (mW/cm <sup>2</sup> )
Roof	Whip / 0	110	E	1	0.087	0.044
Measurement grid						
Test position	Height (cm)	% of controlled limit	Test position	Height(cm)	% of controlled limit	
1	20	10	6	120	12	
2	40	10	7	140	9	
3	60	11	8	160	11	
4	80	13	9	180	8	
5	100	14	10	200	10	

Internal Vehicle MPE Assessment at 136.000 MHz						
Antenna Location	Antenna/gain	Meas. Distance (cm)	E/H Field	Calibration Factor	Average over Head,Chest,Leg Back/Front Seats (mW/cm <sup>2</sup> )	Pwr. Density of Higher Level (mW/cm <sup>2</sup> )
Trunk	Whip / 0	Highest Reading	E	1	0.080/0.020	0.040/0.010
Measurement grid						
Test position	% of controlled limit Head		% of controlled limit Ches		% of controlled limit Leg	
Back Seat	11		7		1	
Front Seat	4		2		3	

Internal Vehicle MPE Assessment at 156.000 MHz						
Antenna Location	Antenna/gain	Meas. Distance (cm)	E/H Field	Calibration Factor	Average over Head,Chest,Leg Back/Front Seats	Pwr. Density of Higher Level
Trunk	Whip / 0	Highest Reading	E	1	0.060/0.048	0.030/0.024
Measurement grid						
Test position	% of controlled limit Head		% of controlled limit Ches		% of controlled limit Leg	
Back Seat	5		3		2	
Front Seat	7		5		3	

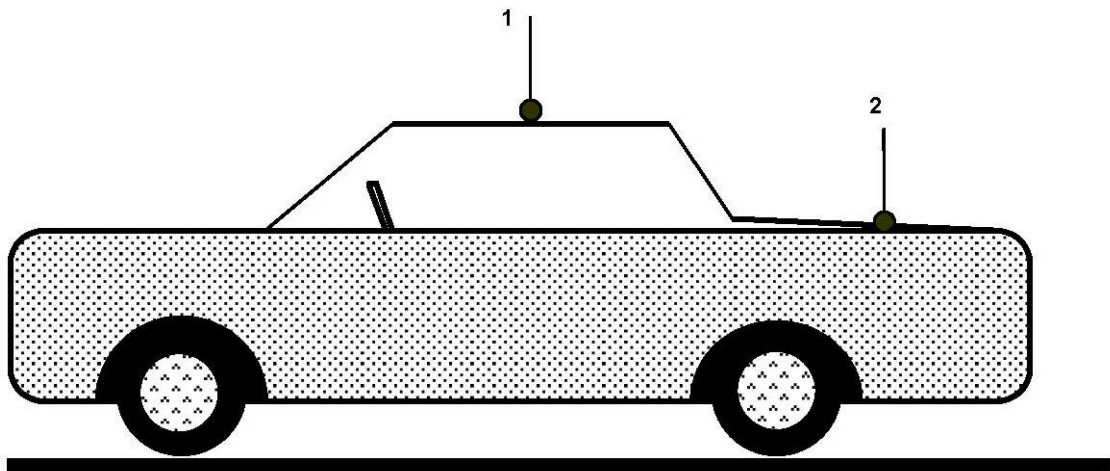
Internal Vehicle MPE Assessment at 174.000 MHz						
Antenna Location	Antenna/gain	Meas. Distance (cm)	E/H Field	Calibration Factor	Average over Head,Chest,Leg Back/Front Seats (mW/cm <sup>2</sup> )	Pwr. Density of Higher Level (mW/cm <sup>2</sup> )
Trunk	Whip / 0	Highest Reading	E	1	0.118/0.062	0.059/0.031
Measurement grid						
Test position	% of controlled limit Head		% of controlled limit Ches		% of controlled limit Leg	
Back Seat	16		18		15	
Front Seat	12		17		13	

Internal Vehicle MPE Assessment at 174.000 MHz						
Antenna Location	Antenna/gain	Meas. Distance (cm)	E/H Field	Calibration Factor	Average over Head,Chest,Leg Back/Front Seats	Pwr. Density of Higher Level
Roof	Whip / 0	Highest Reading	E	1	0.074/0.028	0.037/0.014
Measurement grid						
Test position	% of controlled limit Head		% of controlled limit Ches		% of controlled limit Leg	
Back Seat	3		5		6	
Front Seat	1		2		2	

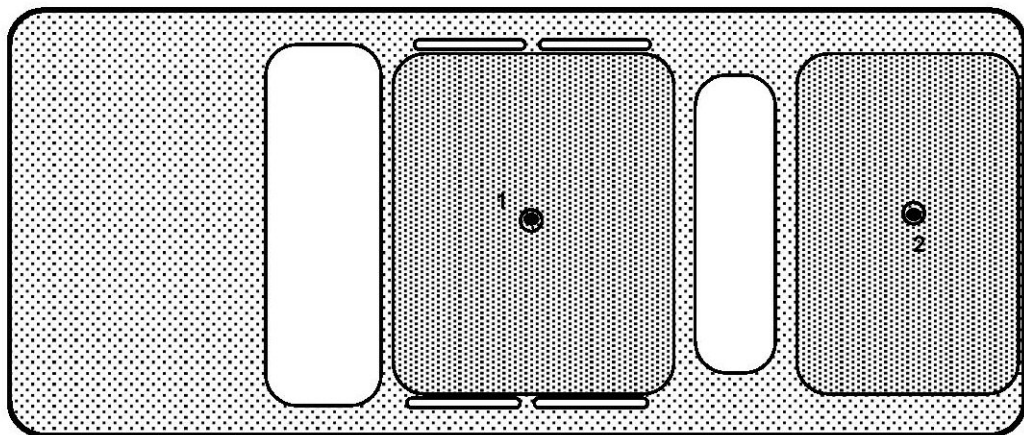
#### 4. Conclusion

The measurement results comply with the FCC Limit Per 47 CFR 2.1091 (b) for the controlled RF Exposure.

### 5. Antenna Location Drawing



- 1 - Roof (center)
- 2 - Trunk (center)



.....End of Report.....