

|                                                                                                                                                                                                                                                                                                                         |                                         |                                                                                                                                                                     |                                         |                                                                                  |  |                                                                                       |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|
| <b>Prüfbericht - Nr.:</b><br><i>Test Report No.</i>                                                                                                                                                                                                                                                                     |                                         | <b>02421350 001</b>                                                                                                                                                 |                                         | Seite<br><i>Page</i>                                                             |  | 1 von<br>of 19                                                                        |  |
| <b>Auftraggeber:</b><br><i>Client:</i>                                                                                                                                                                                                                                                                                  |                                         | <b>Sling Media, Inc.</b><br>901, Mariners Island Blvd. Suite 300, San Mateo CA 94404 USA                                                                            |                                         |                                                                                  |  |                                                                                       |  |
| <b>Gegenstand der Prüfung:</b><br><i>Test item:</i>                                                                                                                                                                                                                                                                     |                                         | <b>Multimedia equipment</b>                                                                                                                                         |                                         |                                                                                  |  |                                                                                       |  |
| <b>Bezeichnung:</b><br><i>Identification:</i>                                                                                                                                                                                                                                                                           |                                         | <b>SB150-110</b>                                                                                                                                                    |                                         | <b>Serien-Nr.:</b><br><i>Serial No.</i>                                          |  | <b>proto type FCC1</b>                                                                |  |
| <b>Wareneingangs-Nr.:</b><br><i>Receipt No.:</i>                                                                                                                                                                                                                                                                        |                                         | <b>1403002766</b>                                                                                                                                                   |                                         | <b>Eingangsdatum:</b><br><i>Date of receipt:</i>                                 |  | <b>26th April 2006</b>                                                                |  |
| <b>Prüfart:</b><br><i>Testing location:</i>                                                                                                                                                                                                                                                                             |                                         | <b>Refer to section 2.1</b>                                                                                                                                         |                                         |                                                                                  |  |                                                                                       |  |
| <b>Prüfgrundlage:</b><br><i>Test specification:</i>                                                                                                                                                                                                                                                                     |                                         | <b>FCC Title 47, Part 15, Subpart B 2005(class B)</b><br><br><b>The test procedures are followed as give in the standard ANSI C63.4 2003, EIA/TIA 603 and MP-5.</b> |                                         |                                                                                  |  |                                                                                       |  |
| <b>Prüfergebnis:</b><br><i>Test Result</i>                                                                                                                                                                                                                                                                              |                                         | <b>Der vorstehend beschriebene Prüfgegenstand wurde geprüft und entspricht oben genannter Prüfgrundlage.</b><br><b>The a. m. test item passed.</b>                  |                                         |                                                                                  |  |                                                                                       |  |
| <b>Prüflaboratorium / Testing Laboratory:</b>                                                                                                                                                                                                                                                                           |                                         |                                                                                                                                                                     |                                         | <b>TÜV Rheinland (India) Pvt., Ltd</b>                                           |  |                                                                                       |  |
| <b>zusammengestellt/</b> compiled by: B.S. Ravindra Kumar                                                                                                                                                                                                                                                               |                                         |                                                                                                                                                                     |                                         | <b>kontrolliert/</b> Reviewed by: G. Kalyan Varma                                |  |                                                                                       |  |
| 8th September 2006                                                                                                                                                                                                                                                                                                      |                                         |                                                                                  |                                         | 11th September 2006                                                              |  |  |  |
| <b>Datum</b><br><i>Date</i>                                                                                                                                                                                                                                                                                             | <b>Unterschrift</b><br><i>Signature</i> | <b>Datum</b><br><i>Date</i>                                                                                                                                         | <b>Unterschrift</b><br><i>Signature</i> |                                                                                  |  |                                                                                       |  |
| <b>Sonstiges/ Other Aspects:</b><br>remarks                                                                                                                                                                                                                                                                             |                                         |                                                                                                                                                                     |                                         |                                                                                  |  |                                                                                       |  |
| Abkürzungen: ok / P = entspricht Prüfgrundlage<br>fail / F = entspricht nicht Prüfgrundlage<br>n.a. / N = nicht anwendbar                                                                                                                                                                                               |                                         |                                                                                                                                                                     |                                         | Abbreviations: ok / P = passed<br>fail / F = failed<br>n.a. / N = not applicable |  |                                                                                       |  |
| <b>Dieser Prüfbericht bezieht sich nur auf den o.g. Prüfgegenstand und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden.</b><br><br>This test report relates to the a. m. test item. Without permission of the test center this test report is not permitted to be duplicated in extracts. |                                         |                                                                                                                                                                     |                                         |                                                                                  |  |                                                                                       |  |
| TÜV Rheinland Product Safety GmbH · Am Grauen Stein · D - 51105 Köln · Tel.: +49 221 806-1371 · Fax: +49 221 806-3909<br>Mail: trps-certification@de.tuv.com · Web: www.tuv.com                                                                                                                                         |                                         |                                                                                                                                                                     |                                         |                                                                                  |  |                                                                                       |  |

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## TEST SUMMARY

### 5.1.1 MAINS TERMINAL CONTINUOUS DISTURBANCE VOLTAGE

RESULT: PASS

### 5.2.1 RADIATED EMISSION (RE)

RESULT: PASS

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## 1. General Remarks

### 1.1 Complementary Materials

All attachments are integral parts of this test report.

### 1.2 FCC Cross-reference Table

The results of emission measurements and product related information contained in this test report and the attached materials relate to the contents of the FCC standard report in the following way:

| <b>FCC § / heading</b>             |                                 |
|------------------------------------|---------------------------------|
| 1.1 Product Description            | Refer user manual attachment    |
| 1.2 Related Submittals             | ----                            |
| 1.3 Tested System Details          | Refer user manual attachment    |
| 1.4 Test Methodology               | see 5.1, 5.2                    |
| 1.5 Test Facility                  | see 2.1                         |
| 2.1 FCC ID Label                   | Refer label attachment          |
| 2.2 Location of Label on EUT       | Refer label location attachment |
| 3.1 Justification                  | See 4.1                         |
| 3.2 EUT Exercise Software          | See 4.3                         |
| 3.3 Special Accessories            | See 4.4,                        |
| 3.4 Equipment Modifications        | ---                             |
| 3.5 Configuration of Tested System | See 4.2                         |
| 4.1 Block Diagram                  | Refer block diagram attachment  |

## 2. Test Sites

### 2.1 Test Facilities

This test site is FCC listed site for measurement of radio interference.

Location 1:

SAMEER – Centre for electromagnetics  
2<sup>nd</sup> cross Road, CIT campus,  
Taramani – Chennai – 600113

### 2.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

| kind of equipment | manufacturer | type    | S/N        | calibrated until |
|-------------------|--------------|---------|------------|------------------|
| EMI Receiver      | R&S          | ESCS-30 | 100063     | 21/08/06         |
| Bilog antenna     | ETS          | 3142B   | 00026416   | 19/06/07         |
| Horn Antenna      | R&S          | HF906   | 100108     | 24/05/07         |
| EMI Receiver      | R&S          | ESI 26  | 100070     | 03/10/06         |
| LISN              | R&S          | ESH2-Z5 | 893606/023 | 10/07/07         |
|                   |              |         |            |                  |

## 3. General Product Information

### 3.1 Product Function and Intended Use

Refer to the user's manual

### 3.2 Ratings and System Details

System input voltage: 6V DC  
System Input current: 2.4A max  
System Protection class: III  
AC adaptor input voltage: AC 100-240V  
AC adaptor Frequency: 50/60Hz  
AC adaptor Input current: 1 A Max  
AC adaptor Protection class: II

EUT is supplied along with AC adaptor make: Sunny Computer Technology Europe;  
Model: SYS1298-1506-W2E

### 3.3 Independent Operation Modes

The basic operation modes are:

- A. RF cable input mode
- B. S Video input
- C. Composite video input
- D. Idle mode.

It was observed from the prescans that the maximum emissions were observed in RF cable input mode. Hence entire testing was carried out in mode A i.e, RF cable input mode. All tests were carried out at 120V AC/ 60Hz.

The requirements of section 15.111 and section 15.117 and 15.118 of FCC part 15 are considered by the manufacturer and not part of this report. Manufacturer followed the verification procedure for the requirements of TV broadcast receiver.

### 3.4 Noise Generating and Noise Suppressing Parts

Refer to the technical documentation and schematics

### 3.5 Submitted Documents

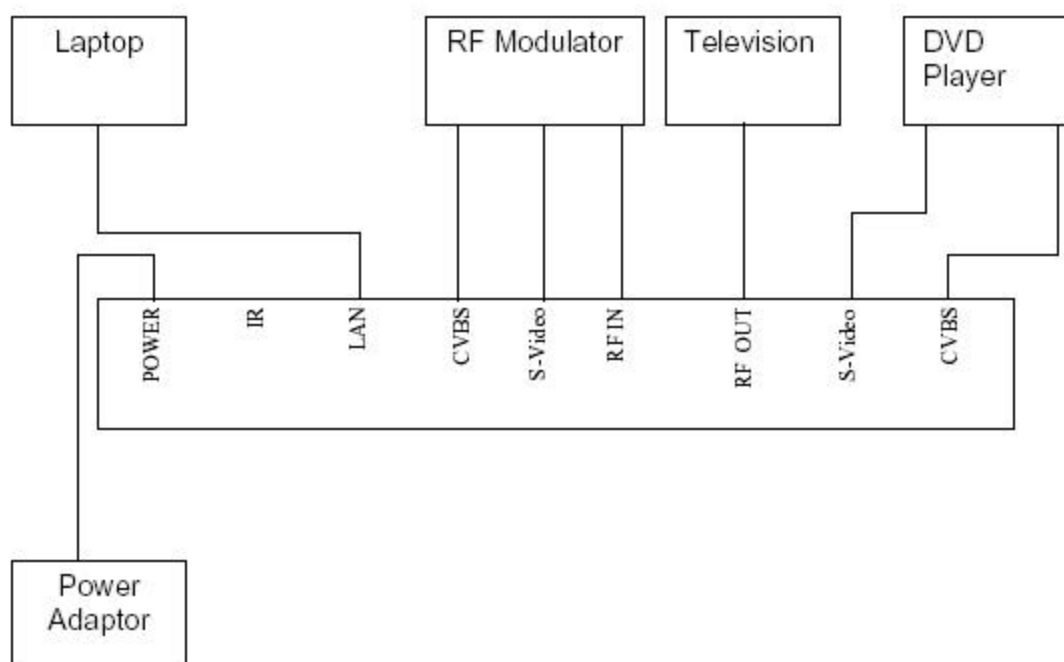
Technical Construction File

## 4. Test Set-up and Operation Modes

### 4.1 Principle of Configuration Selection

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

### 4.2 Physical Configuration for Testing



### 4.3 Test Operation and Test Software

slingplayer software Ver0.27 used during testing

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## 4.4 Special Accessories and Auxiliary Equipment

Special accessory supplied along with EUT

| Item          | Make/trade mark                  | Model            | Serial number | Compliance details |
|---------------|----------------------------------|------------------|---------------|--------------------|
| AC/DC adaptor | Sunny Computer Technology Europe | SYS1298-1506-W2E | R06070414     | FCC complied       |

Auxiliary equipment used for testing

| Item       | Make/trade mark | Model           | Serial number   | Compliance details |
|------------|-----------------|-----------------|-----------------|--------------------|
| VCR        | Samsung         | SV-5000W        | 61AX501899D/XAA | FCC complied       |
| Television | Philips         | 15PT2303/69R    | BZ000420556517  | FCC complied       |
| Laptop     | HP              | Pavilion Dv1000 | CNF4463DW8      | FCC complied       |
| DVD Player | Sony            | DVPNS50P        | --              | FCC complied       |

## 4.5 Countermeasures to achieve EMC Compliance

The test sample, which has been tested contained the noise suppression parts as described in the schematics. No additional measures were employed to achieve compliance.



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## 5. Test Results EMISSION

### 5.1 Emission in the Frequency Range up to 30 MHz

#### 5.1.1 Mains Terminal Continuous Disturbance Voltage

**RESULT:**

**PASS**

|                           |                                  |
|---------------------------|----------------------------------|
| Date of testing:          | July 24, 2006                    |
| Test procedure:           | FCC Title 47, Part 15, Subpart B |
| Frequency range:          | 0.15 - 30MHz                     |
| Equipment classification: | class B                          |
| Kind of test site:        | shielded room                    |
| Bandwidth                 | 9KHz                             |
| Ambient temperature       | 25°C                             |
| Humidity                  | 50% RH                           |

Disturbances other than those mentioned are small or not detectable. The measurement was done in peak detection mode. As the Peak plot is less than Average limits thus Quaispeak measurement was not carried out. The below mentioned table for conducted emission displays the value for Peak and Average.  
The following spectral diagrams display the measurement of unweighted peak values.

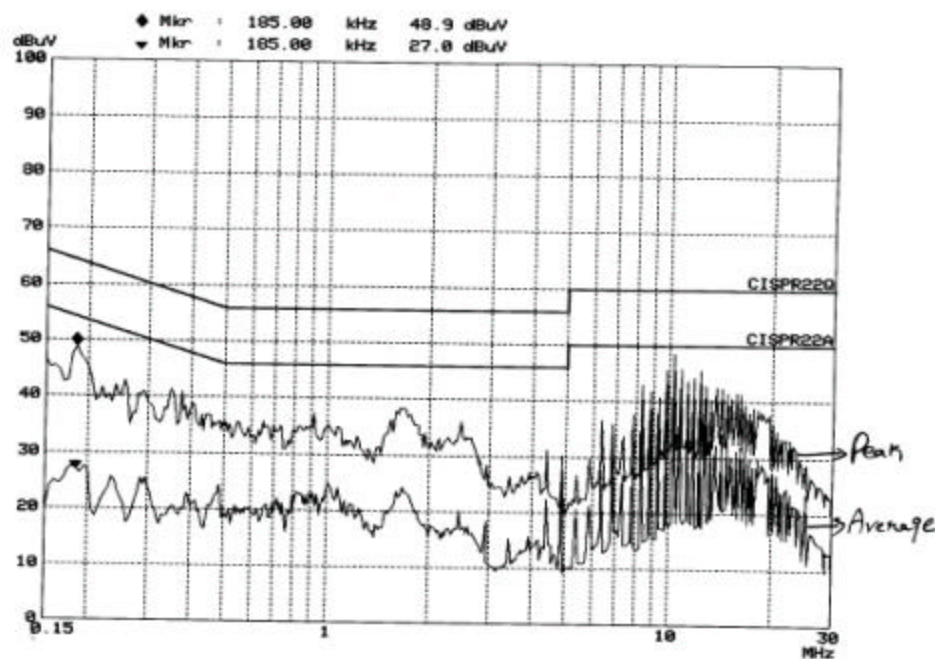
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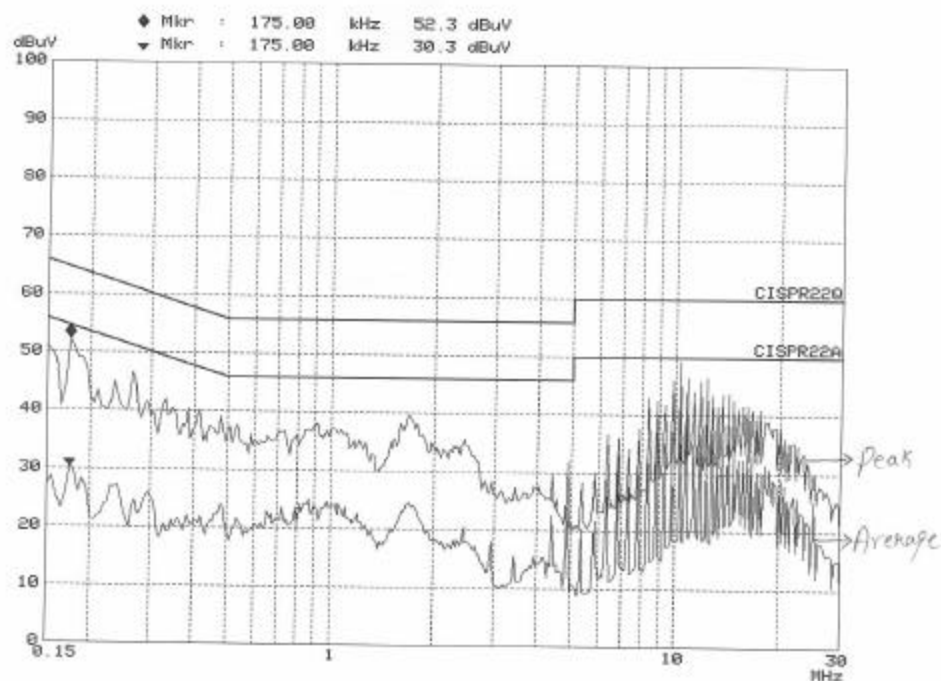
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**Figure 1: Spectral Diagrams, Conducted Emission, (0.15 - 30) MHz, Phase**



**Figure 2: Spectral Diagrams, Conducted Emission, (0.15 - 30) MHz, Neutral**



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**Table 2: Conducted Emission (0.15 - 30) MHz, Peak and Average Data**

| Frequency<br>[MHz] | Measured Peak<br>[dB(μV)] | Measured Average<br>[dB(μV)] | QuasiPeak Limit<br>[dB(μV)] | Average Limit<br>[dB(μV)] |
|--------------------|---------------------------|------------------------------|-----------------------------|---------------------------|
| 0.185              | 48.90                     | 27.00                        | 65.00                       | 55.00                     |
| 0.355              | 41.40                     | 21.80                        | 58.00                       | 48.00                     |
| 1.70               | 38.20                     | 25.00                        | 56.00                       | 46.00                     |
| 9.90               | 46.30                     | 33.70                        | 60.00                       | 50.00                     |
| 10.20              | 48.00                     | 35.10                        | 60.00                       | 50.00                     |
| 11.50              | 46.50                     | 34.30                        | 60.00                       | 50.00                     |
|                    |                           |                              |                             |                           |

## 5.2 Emission in the Frequency Range above 30 MHz

### 5.2.1 Radiated Emission (RE)

**RESULT:**

**PASS**

|                              |                                  |
|------------------------------|----------------------------------|
| Date of testing:             | August 28, 2006                  |
| Test procedure:              | FCC Title 47, Part 15, Subpart B |
| Frequency range:             | 30MHz - 3GHz                     |
| Equipment classification:    | class B                          |
| Measurement distance:        | 3m                               |
| Kind of test site:           | semi anechoic chamber            |
| Bandwidth                    | 120KHz                           |
| Ambient temperature/Humidity | 28°C / 55% (anechoic chamber)    |

Disturbances other than those mentioned are small or not detectable.

Note: The EMI test receiver (make R&S model ESI 26) was used for measuring radiated emission from the EUT in the semi anechoic chamber. Transducer table settings are available to enter the cable loss & antenna factor in the receiver to get the field strength (dBμV/m) values from the display. So manual calculation is not necessary.

For example:

$$E \text{ (dB}\mu\text{V/m)} = V \text{ (dB}\mu\text{V)} + AF \dots \dots \dots \text{Eq.1}$$

Where

E (dBμV/m) = Field strength

V (dBμV) = receiver two terminal voltage

AF = Antenna factor + cable loss

Radiated emission from the EUT was measured in anechoic chamber at 3 meter distance for both horizontal and vertical polarization and antenna height was varied to maximize the emission. The manipulation of interconnecting cables was done to identify maximum emissions in the frequency range of 30MHz – 3000MHz from the EUT. Antenna height was varied upto 4 meters to maximize the emission. The manipulation of interconnecting cables was done to identify maximum emissions. The photograph shows the maximum emission condition. Measurements were carried out in Peak detection mode for the frequency range 30 – 1000MHz and for selected frequencies, Quasi peak detection mode used. Above 1000MHz, Average Detector was used. Maximum operating frequency was 600MHz hence tested upto 3GHz.

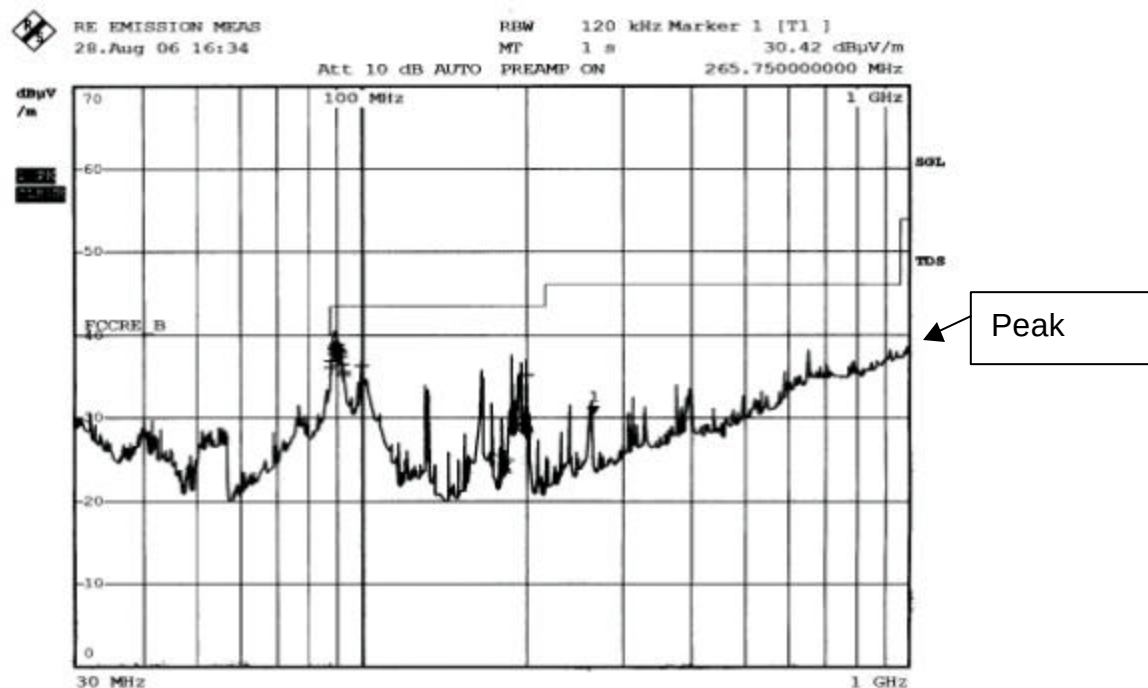
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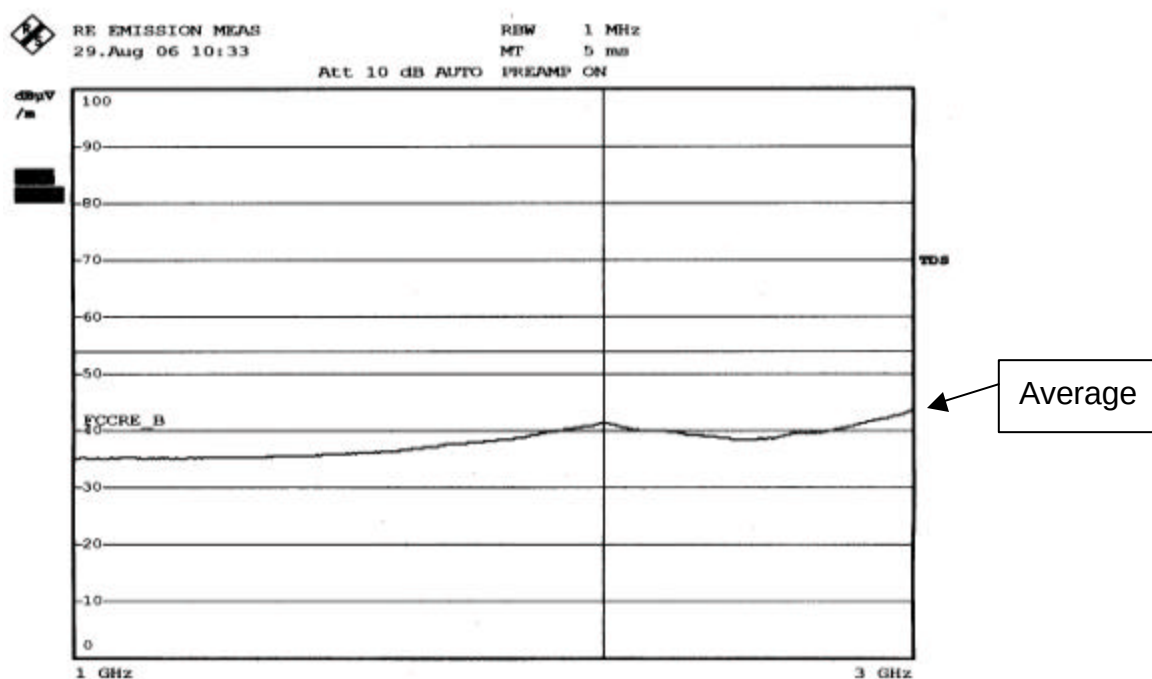
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**Figure 3: Spectral Diagram, Radiated Emission 30MHz - 1000MHz, Vertical polarization**



**Figure 4: Spectral Diagram, Radiated Emission 1000MHz - 3000MHz, Vertical polarization**



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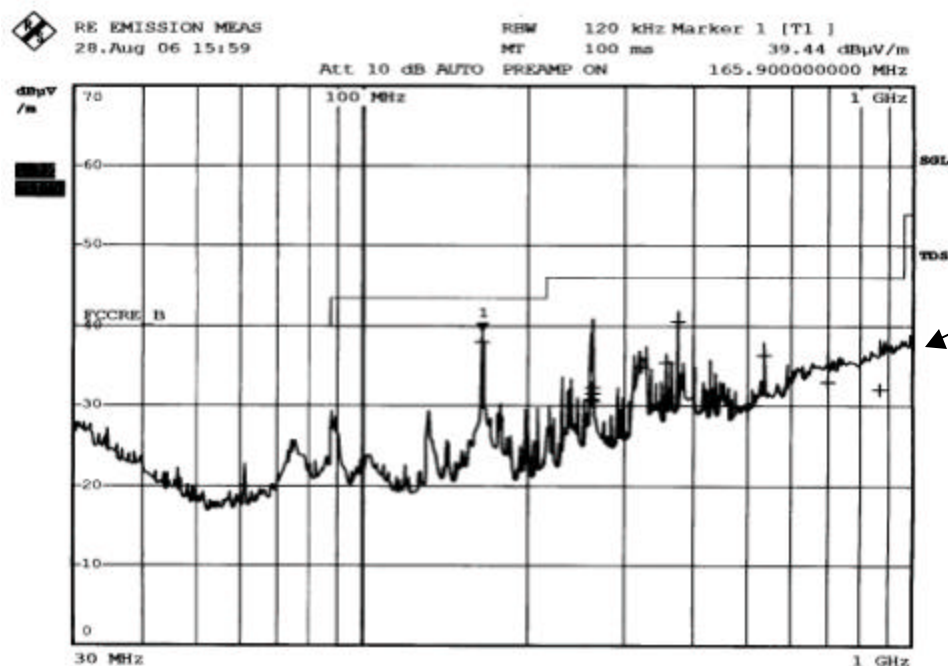
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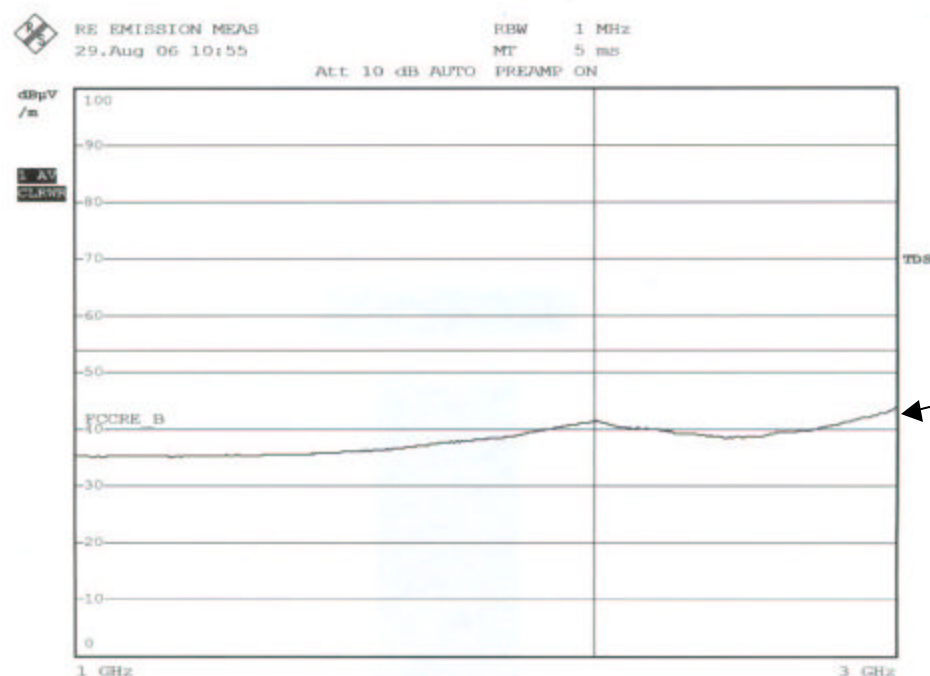
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**Figure 5: Spectral Diagram, Radiated Emission 30MHz - 1000MHz, Horizontal polarization**



**Figure 6: Spectral Diagram, Radiated Emission 1000MHz - 3000MHz, Horizontal polarization**



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**Table 3: Radiated Emission 30 – 3000MHz, Vertical and Horizontal Antenna Orientations,**

| Freq (MHz) | Polarization | Antenna Height (Meters) | Table position (degrees) | Antenna factor (dB $\mu$ V) | Cable loss (dBm) | E field value (dB $\mu$ V/m) | Spec Limit (dB $\mu$ V/m) |
|------------|--------------|-------------------------|--------------------------|-----------------------------|------------------|------------------------------|---------------------------|
| 89.70      | Vertical     | 1.1                     | 225                      | 8.70                        | 0.75             | 39.00                        | 43.00                     |
| 200.00     | Vertical     | 1.0                     | 225                      | 10.10                       | 1.00             | 38.05                        | 43.00                     |
| 166.55     | Vertical     | 1.0                     | 135                      | 9.40                        | 1.07             | 39.45                        | 43.00                     |
| 85.55      | Vertical     | 1.0                     | 90                       | 8.70                        | 0.73             | 37.01                        | 43.00                     |
| 91.15      | Vertical     | 1.1                     | 225                      | 8.70                        | 0.75             | 37.88                        | 46.00                     |
| 664.15     | Vertical     | 1.0                     | 135                      | 21.30                       | 1.98             | 33.09                        | 46.00                     |
| 378.00     | Horizontal   | 1.1                     | 180                      | 16.20                       | 1.55             | 40.56                        | 46.00                     |
| 165.95     | Horizontal   | 1.6                     | 180                      | 9.40                        | 1.07             | 36.50                        | 43.00                     |
| 540.00     | Horizontal   | 1.0                     | 180                      | 18.50                       | 1.95             | 36.36                        | 46.00                     |
| 360.00     | Horizontal   | 1.0                     | 45                       | 15.50                       | 1.45             | 35.40                        | 46.00                     |
| 324.00     | Horizontal   | 1.0                     | 45                       | 14.70                       | 1.41             | 34.87                        | 46.00                     |
| 220.00     | Horizontal   | 1.1                     | 180                      | 11.40                       | 1.14             | 31.33                        | 46.00                     |
|            |              |                         |                          |                             |                  |                              |                           |



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## Photographs of the Test Set-Up

**Photograph 1: Set-up for Conducted Emission on AC Mains**



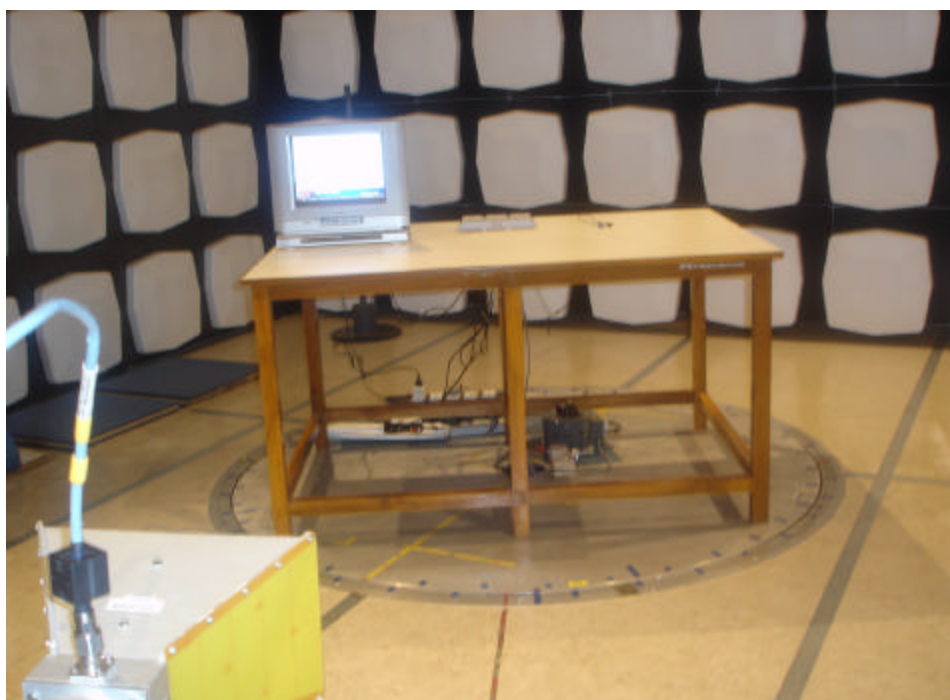
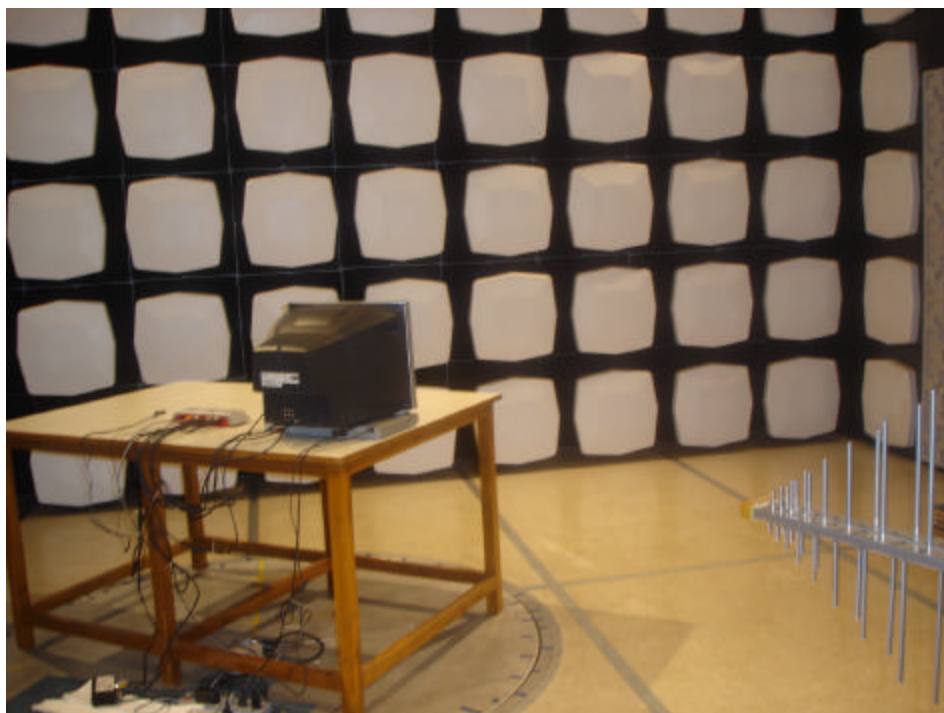


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**Photograph 2: Set-up for Radiated Emission in Vertical Orientation**



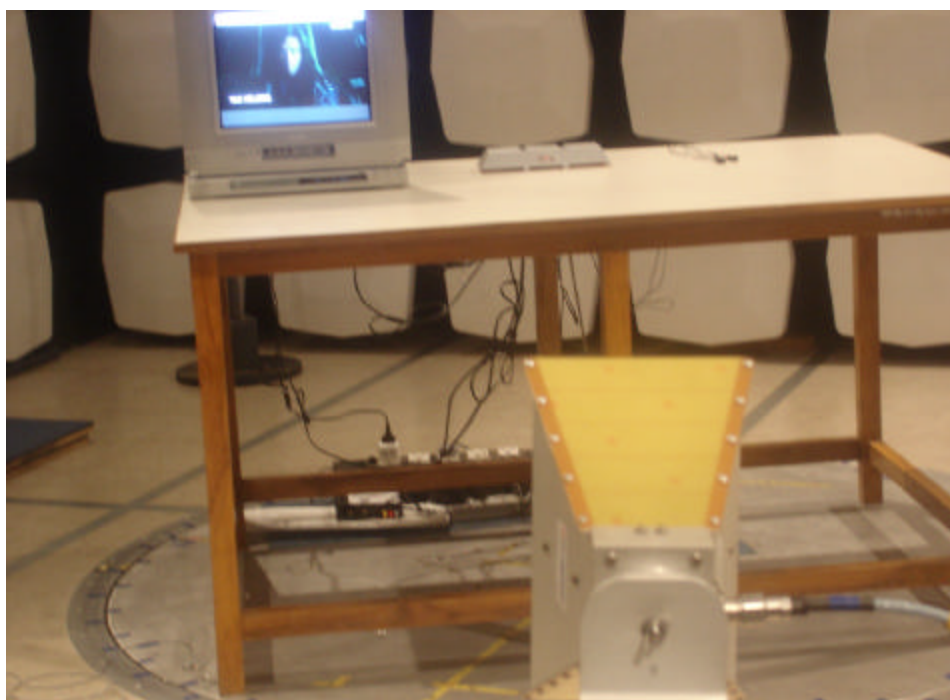
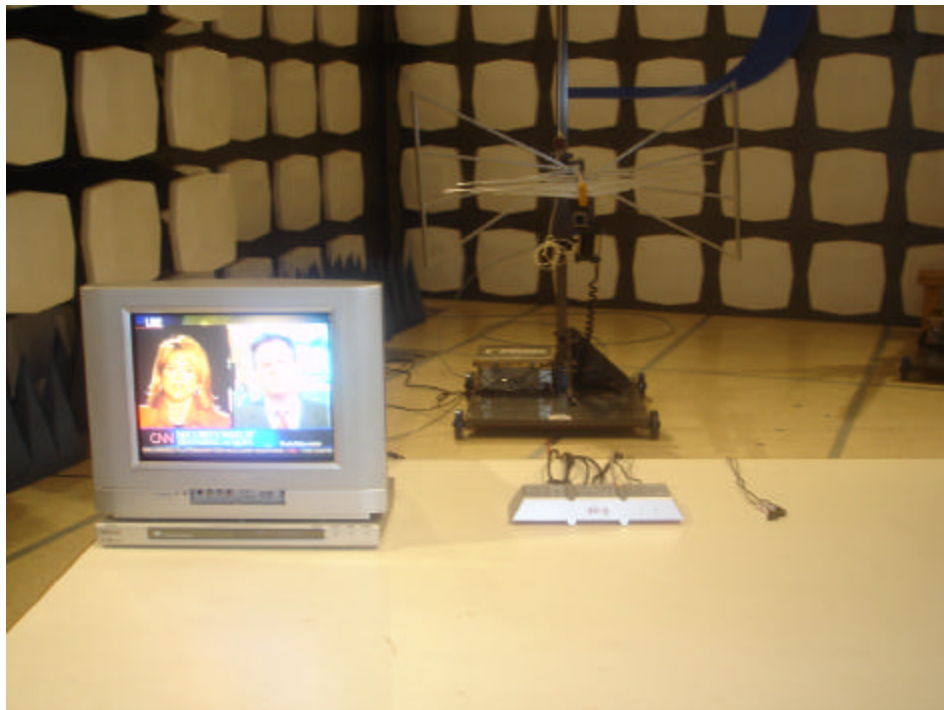
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**Photograph 3: Set-up for Radiated Emission in Horizontal Orientation**



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**End of test report**