



सत्यमेव जयते



NABL ACCREDITED  
LABORATORY No. T0001

Test Report No.

ERTL(N)/90(4)-2K5/29639

Dated : 7 / 12 / 2005

## TEST REPORT



Government of India

Ministry of Communications & Information Technology

Department of Information Technology

STQC Directorate

### ELECTRONICS REGIONAL TEST LABORATORY (NORTH)

[NSI Laboratory under IECQ, IECEE-CB & NABL Accredited Laboratory]

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#### NOTE

1. This Test Report refers only to the particular item submitted for Testing.
2. This Test Report shall not be reproduced, except in full, unless written permission for the publication of an approved abstract has been obtained from the Director, Electronics Regional Test Laboratory (North), New Delhi.
3. The results reported in this Test Report are valid at the time of and under the stated conditions of measurement.



## ELECTRONICS REGIONAL TEST LABORATORY (NORTH)

## TEST REPORT



|                                                                                                            |                                                                          |          |
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| TEST REPORT NUMBER                                                                                         | DATE                                                                     | PAGE NO. |
| ERTL(N)/90(4)-2k5/C9639                                                                                    | 07/12/2005                                                               | 1 OF 7   |
| Service Request No. 3202                                                                                   | Date : 18/10/2005                                                        |          |
| Name & Address of the Client                                                                               | M/s. Asian Electronics Ltd.,<br>No. 68, MIDC Satpur,<br>Nasik - 422 007. |          |
| Description/ Identification of the Item:-                                                                  |                                                                          |          |
| Nomenclature                                                                                               | Handheld Transmitter                                                     |          |
| Model No./Type No.                                                                                         | SRE 9E 02                                                                |          |
| Value/Tolerance                                                                                            | ---                                                                      |          |
| Serial No.(s)                                                                                              | 01                                                                       |          |
| No. of Samples                                                                                             | 01 No.                                                                   |          |
| Trade Mark/Make                                                                                            | Westing House/Asian                                                      |          |
| Year of Manufacture                                                                                        | 2005                                                                     |          |
| Applicable Standard Specification IS/IEC/JSS/other                                                         | FCC Part 15 C<br>Test Method: ANSI C63.4-1992                            |          |
| Manufacturer's Name & address                                                                              | M/s. Asian Electronics Ltd.,<br>No. 68, MIDC Satpur,<br>Nasik - 422 007. |          |
| Name & address where testing carried out (Subcontracting/Single Window/On-Site/ Using Customer Facilities) | ERTL(N)                                                                  |          |
| Test Method/Operating Procedure                                                                            | ANSI C63.4-1992                                                          |          |
| Condition of item on its receipt                                                                           | Good                                                                     |          |
| Date of receipt of item                                                                                    | 18/10/2005                                                               |          |
| Date of Completion of Testing                                                                              | 25/10/2005                                                               |          |

*D. K. Kulkarni*  
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Equipment used :

Sl.No. Nomenclature

Make

Model No

|     |                                            |              |              |
|-----|--------------------------------------------|--------------|--------------|
| 1.  | Spectrum Analyzer Based<br>EMC Test System | HP           | HP8566B      |
| 2.  | LISN                                       | R&S          | ESH3-Z5      |
| 3.  | Pulse Limiter                              | PMM          | ---          |
| 4.  | Bi-conical Antenna                         | EMCO         | 3109         |
| 5.  | Antenna log periodic                       | EMCO         | 3146         |
| 6.  | Antenna horn                               | EMCO         | 3115         |
| 7.  | Receiver                                   | PMM          | PMM9000 Plus |
| 8.  | Antenna Mast                               | EMCO         | 20752        |
| 9.  | Turntable                                  | EMCO         | 2087-2-03    |
| 10. | Anechoic Chamber                           | ETS Lindgren | Fact-3       |



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Brief Description of EUT

**Handheld Transmitter**

The Two Way Handheld Transmitter is a remote based light controlling unit . The unit consists of RF transmitter , selected the zone and the level the at has to be controlled by the transmitter to provide the user with the required light comfort user can select the zone and levels from 1 to 9 from the software to control the light intensity in that zone. This is RF Transmitter enables the user to communicate with the RF receivers to set the desired light level 1 being of and level 9 being full bright. The user selects the desired zone and the level in the transmitter to control the lights in a particular section.

*[Signature]*

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## TEST CONFIGURATION DETAIL:

| Sl. No. | Equipment Description                  | Model No.        | Make              | Sl. No. | Cable Description      |
|---------|----------------------------------------|------------------|-------------------|---------|------------------------|
| 1.      | Handheld Transmitter                   | SRE 9E 02        | Asian Electronics | 01      |                        |
| 2.      | Dimmable Ballast (2x24W) with receiver | (2x24W)          | Asian Electronics | 01      | Unshielded mains Cable |
| 3.      | AC adaptor                             | AD-0900500DV     | Asian Electronics |         | Unshielded power cable |
| 4.      | Receiver (RF cartridge two way)        | Module SRE 9E 02 | Asian Electronics | 01      | Antenna 160mm          |

## Test Facility:

3 meter open area test site & conducted emission measurement facility located at Electronics Regional Test Laboratory(North), Ministry of Communication & Information Technology, Deptt. of Information tech. Govt. of India, S - Block, Okhla Indl. Area, Phase - II, New Delhi - 110 020, Listed by FCC(USA) vide letter registration no. 90618 dtd. 15<sup>th</sup> Jan 2004.



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Test Result :

| Sl. No. | Cl. No. | Parameter                                                                                                                                                                                                     | Nominal Value/ Requirements                                                            | Measured Value/ Observations                    | Remarks |
|---------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------|---------|
| 1.      | 15.107  | Conducted Emission (Class B)<br>-Under Normal Working Condition (Idle State)<br>-EUT : As per configuration<br>Test Method :<br>ANCI C63.4-1992<br>Freq. in MHz<br>0.15 to 0.5<br><br>0.5 to 5<br><br>5 to 30 | Emission Limit<br>(dBuV)QP (dBuV)Avg<br>66 - 56 56 - 46<br><br>56 46<br><br>60 50      | Satisfactory<br>Refer Annexure:<br>"A1 to A2"   | ---     |
| 2.      | 15.231  | Radiation Test<br>Intended Freq. and Spurious Emission<br>-EUT : As per standard configuration<br>Measurement : 3m distance<br><br>Freq. range & field strength<br>260 - 470 MHz                              | Fundamental in uV/m<br><br>3750-12500<br><br>Harmonics & spurious uV/m<br><br>375-1250 | Satisfactory                                    | ---     |
| 3.      | 15.231  | Transmitter transmission period & freq. of radiation<br>Under normal working condition                                                                                                                        | Transmission period shall be less than 5 sec.                                          | Satisfactory<br>Freq.=433.906<br>Time 4.62 sec. |         |

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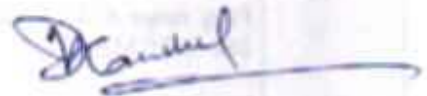
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## Test Result :

| Sl. No. | Cl. No. | Parameter                                                                                                                                                                                               | Nominal Value/ Requirements                                                         | Measured Value/ Observations           | Remarks |
|---------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------|---------|
| 4.      | 15.109  | Radiated Emission Measurement<br>Under Normal Operating<br>Condition<br>Distance : 10m<br>Test Method :<br>ANCI C63.4-1992<br>Freq. in MHz<br>30 - 88<br><br>88 - 216<br><br>216 - 960<br><br>Above 960 | FCC Limit<br>Emission Limit<br>(dBuV/m)QP<br>39<br><br>43.5<br><br>46.4<br><br>49.5 | Satisfactory<br>Refer Annexure:<br>"B" | ---     |



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- Remark :
- a) Report pertains only to the parameter(s) mentioned in the test results column.
  - b) Handheld Transmitter meets the FCC part 15C, requirements for Conducted Emission Test Class B & Radiated Emission Test Class A.
  - c) Conversion Formula & sample calculations are enclosed at Annexure - C.

*A. Sathyanarayana*

Approved By (Authorised Signatory)

Name A. SATHYANARAYANAN

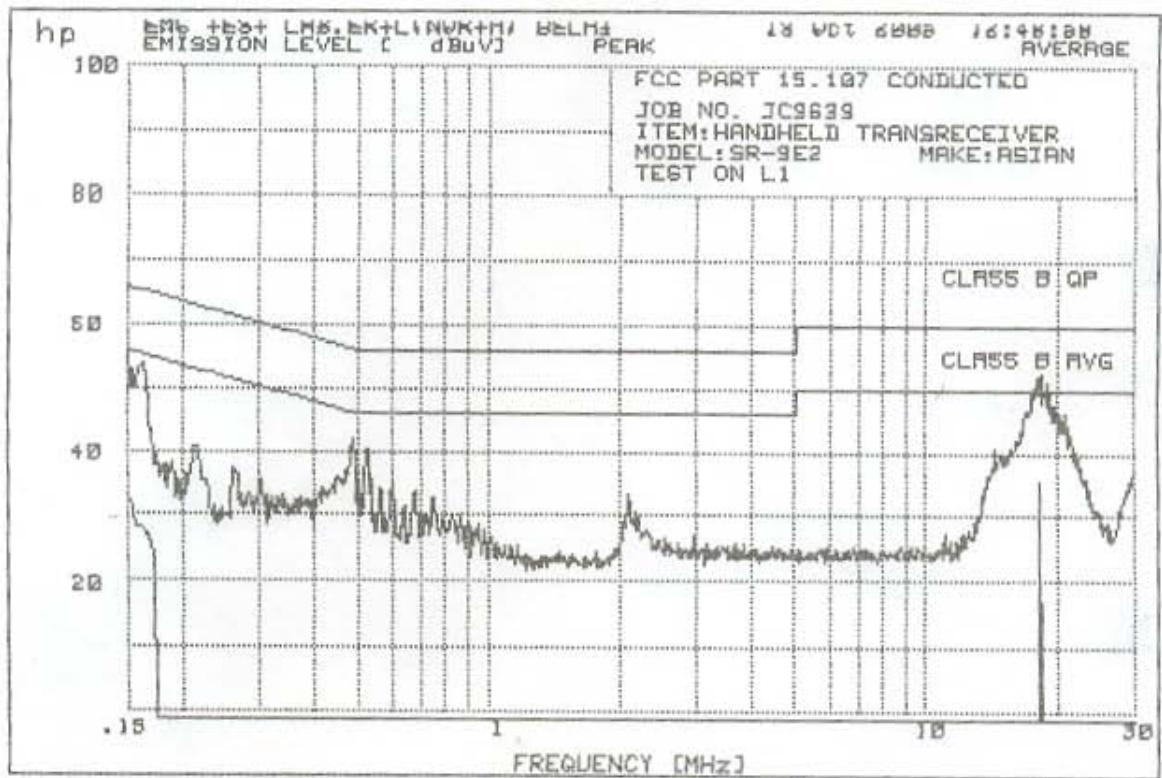
Designation SCIENTIST 'F'

*Dr. Kaushik*

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FOR DIRECTOR  
वी० डी० कौशिक (इन्चार्ज रिपोर्ट)  
V. D. KAUSHIK (Incharge Rep.)  
इलेक्ट्रॉनिकी क्षेत्रीय परीक्षण प्रयोगशाला (उत्तर)  
Electronics Regional Test Laboratory (North)  
अ० ए० एवं गु० प्र० निदेश १०५५, STQC Dte.  
सूचना प्रौद्योगिकी विभाग, भारत सरकार  
Ministry of Information Technology  
भारत सरकार, Govt. of India  
बही निदेश १०५५, Delhi-110001

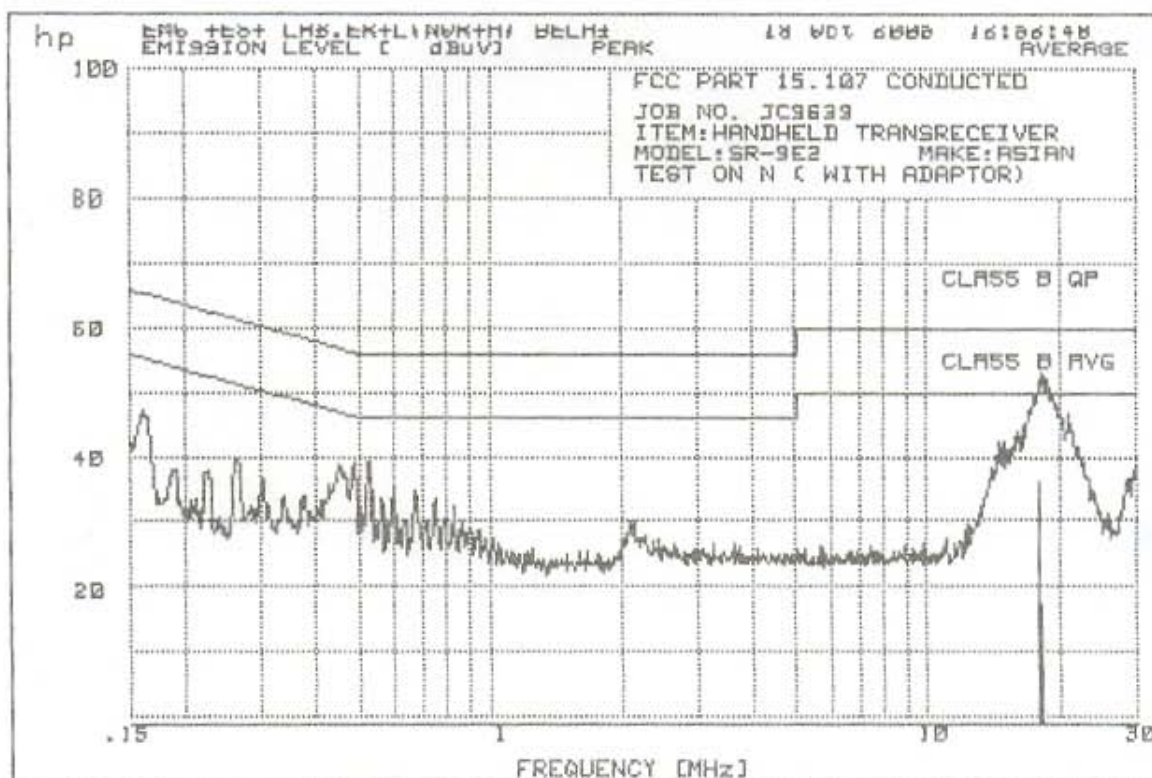
Amexure A1



*[Signature]*

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Annexure A2



*Ma*

*D. A. S. S. S.*

## ANNEXURE-B

Test Report No

ERTL(N) 90 (4) -2k5/C9639

DATED : 07/12/2005

## Radiated Emission

Measurement Distance:3m

Item: Handheld Transmitter Make: Asian

| Sl. No. | Freq. in MHz | Pol. V/H | Emission Observed (dBuV) QP | Remarks.     |
|---------|--------------|----------|-----------------------------|--------------|
| 1       | 30.2         | V        | 46.4                        | Satisfactory |
| 2       | 36.997       | V        | 48.2                        |              |
| 3       | 42.061       | H        | 45.4                        |              |
| 4       | 43.647       | V        | 48.6                        |              |
| 5       | 54.972       | H        | 43.7                        |              |
| 6       | 57.92        | V        | 38.9                        |              |
| 7       | 61.72        | V        | 43.2                        |              |
| 8       | 63.270       | H        | 48.7                        |              |
| 9       | 64.964       | V        | 47.8                        |              |
| 10      | 67.872       | H        | 48.8                        |              |
| 11      | 82.84        | H        | 48.0                        |              |
| 12      | 100.576      | H        | 44.9                        |              |
| 13      | 108.65       | H        | 46.6                        |              |
| 14      | 150.559      | H        | 45.0                        |              |
| 15      | 164.313      | H        | 40.8                        |              |
| 16      | 188.078      | H        | 45.0                        |              |
| 17      | 200.00       | H        | 33.5                        |              |
| 18      | 200.92       | H        | 46.0                        |              |
| 19      | 271.45       | H        | 45.1                        |              |
| 20      | 220.98       | H        | 45.8                        |              |
| 21      | 222.14       | H        | 45.5                        |              |
| 22      | 222.39       | H        | 46.5                        |              |
| 23      | 246.47       | H        | 40.0                        |              |
| 24      | 255.38       | H        | 42.6                        |              |
| 25      | 232.26       | V        | 37.9                        |              |
| 26      | 235.94       | V        | 40.9                        |              |
| 27      | 246.47       | H        | 41.0                        |              |
| 28      | 265.43       | V        | 40.3                        |              |
| 29      | 255.31       | H        | 42.6                        |              |



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ANNEXURE - C  
Test Report No  
ERTL(N) 90(4)-2k5/C9639  
DATED : 07/12/2005

Conversion Formulas :

- 
- A) Field strength : Emission observed in dBuV+Antenna factor  
(dBuV/m) (dB/m) + Cable loss (dB)
- B) Field strength : Antilog (Field strength in dBuV/m)  
(uV/m) : -----  
20
- C) Interference : Antilog (Interference observed in dBuV)  
(uV) -----  
20

Sample Calculation :

Field strength in dBuV/m = Emission observed (dBuV)  
+ Antenna factor (dB/m)  
+ Cable loss (dB)

Example : Emission observed = 18dBuV at 35 MHz  
Antenna factor = 10dB/m  
Cable loss = 2dB

Field strength (dBuV/m) : 18 dBuV + 10dB/m + 2 dB = 30dBuV/m

Field strength uV/m : Antilog (field strength in (dBuV/m))  
-----

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- ❖ Testing of Energy Meters, Electronics Taxi Fare Meters.
- ❖ Electromagnetic Interference/ Electromagnetic Compatibility (EMI/EMC) Testing of Telecom, Power, Consumer Electronics, IT Equipment etc.
- ❖ Safety Testing of Consumer Electrical/ Electronics Equipment/ Appliances, Information Technology Equipment, Biomedical Equipment etc.
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**FOR FURTHER DETAILS PLEASE CONTACT ON FOLLOWING TELEPHONE :-**

**Director : 26386219**

**Head (RM) : 26386206**

**Head (Testing)**

**EMC : 26387103**

**Equipment |**

**Environmental | — 26386205**

**Component . |**