ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INDUSTRIAL, SCIENTIFIC AND MEDICAL(ISM) EQUIPMENT CERTIFICATION TO FCC PART 18 REQUIREMENT

| PRODUCT | WHITE LIGHTNING | | |
|---------------------|--|------------|-----|
| FCC ID | AAO4203071 | | |
| MODEL NO. | WL-101 | SERIAL NO. | N/A |
| APPLICANT & ADDRESS | RADIO SHACK, A DIVISION OF TANDY CORPORATION 100 Throckmorton St., Ste. 1300 Fort worth Texas 76102-2802 | | |

| REPORT NO. | E98NR-023 | ISSUE DATE | November 30, 1998 |
|----------------------------------|--|------------|-------------------|
| PREPARED BY: ONETECH CORPORATION | | | |
| | 2 F. KUNHAN B/D, 1557-11, SEOCHO-DONG, SEOCHO-KU, | | |
| | SEOUL 137-070 KOREA (TEL)02-587-9037(FAX)02-587-9039 | | |

LIST OF EXHIBITS

FCC ID : AAO4203071

MODEL: WL-101

"WHITE LIGHTNING"

- **EXHIBIT 1. IDENTIFICATION LABEL**
 - 2. AGENT AUTHORIZATION
 - 3. TECHNICAL INFORMATION: ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
 - 4. PHOTO REPORT
 - 5. USER'S MANUAL & SCHEMATIC(BLOCK DIAGRAM)

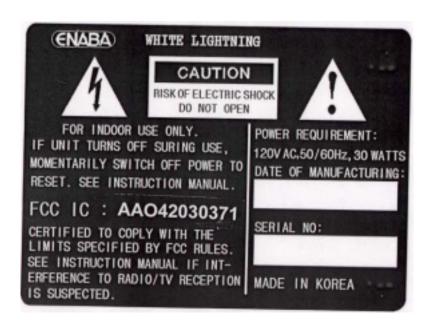
PREPARED BY: ONETECH CORPORATION

2 F. KUNHAN B/D, 1557-11, SEOCHO-DONG, SEOCHO-KU, SEOUL 137-070 KOREA (TEL)02-587-9037(FAX)02-587-9039

EXHIBIT 1. IDENTIFICATION LABEL:

PROPOSED FCC ID LABEL

The following ID Label will be attached on the bottom side of the product.



"Please find an ID Label for EUT at ID Label/Location Info in Exhibit Type"

EXHIBIT 2. AGENT AUTHORIZATION:

"Please find an Agent Authorization Letter at Attestation Statements in Exhibit Type"

EXHIBIT 3. TECHNICAL INFORMATION:

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INDUSTRIAL, SCIENTIFIC AND MEDICAL(ISM) EQUIPMENT CERTIFICATION TO FCC PART 18 REQUIREMENT

| PRODUCT | WHITE LIGHTNING | | |
|---------------------|--|------------|-----|
| FCC ID | AAO4203071 | | |
| MODEL NO. | WL-101 | SERIAL NO. | N/A |
| APPLICANT & ADDRESS | RADIO SHACK, A DIVISION OF TANDY CORPORATION 100 Throckmorton St., Ste. 1300 Fort worth Texas 76102-2802 | | |

| REPORT NO. | E98NR-023 | ISSUE DATE | November 30, 1998 |
|----------------------------------|--|------------|-------------------|
| PREPARED BY: ONETECH CORPORATION | | | |
| | 2 F. KUNHAN B/D, 1557-11, SEOCHO-DONG, SEOCHO-KU, | | |
| | SEOUL 137-070 KOREA (TEL)02-587-9037(FAX)02-587-9039 | | |

DATE: November 30, 1998

TABLE OF CONTENTS

| | page |
|---|------|
| 1. VERIFICATION OF COMPLIANCE | 1 |
| 2. SCOPE | 2 |
| 3. PRODUCT INFORMATION | 2 |
| 4. TEST FACILITY | 2 |
| 4.1 General Information | 2 |
| 4.2 Open Field Test | 2 |
| 4.3 Preliminary Test | 3 |
| 5. MEASUREMENT INSTRUMENTATION | 3 |
| 5.1 Measuring Instrument Calibration | 3 |
| 5.2 Detector Function Selection and Bandwidth | 4 |
| 5.3 Units of Measurement | 4 |
| 6. ANTENNAS | 4 |
| 7. AMBIENT CONDITION | 5 |
| 8. TEST METHODS | 5 |
| 8.1 Test Configuration | 5 |
| 8.2 Grounding | 5 |
| 8.3 Data Report format | 5 |
| 8.4 Line Conducted Test Procedure | 5 |
| 8.5 Radiated Test Procedure | 6 |
| 9. EQUIPMENT DEFINITION AND LIMITATIONS | 7 |
| 9.1 ISM Equipment Definition | 7 |
| 9.2 Equipment Limitations | 8 |
| 10. SUMMARY | 9 |
| 10.1 Equipment modifications | 9 |
| 11. CONDUCTED AND RADIATED MEASUREMENT PHOTOS | 10 |
| 12. FINAL CONDUCTED AND RADIATED EMISSION TESTS SUMMARY | 12 |
| 12.1 Conducted Emissions Tests | 12 |
| 12.2 Radiated Emission Tests | 14 |
| 13 FIELD STRENGTH CALCULATION | 15 |

1. VERIFICATION OF COMPLIANCE

APPLICANT : RADIOSHACK, A DIVISION OF TANDY CORPORATION

100 Throckmorton St., Ste. 1300 Fort Worth Texas 76102-2802 USA

CONTACT PERSON : Dwayne Cambell / Manager, Engineering and Regulatory Affairs

TELEPHONE NO : +817-414-3203

MANUFACTURER : KONG BYUNG WOO COMM IND. CO., LTD.

642-6, Sunggok-Dong, Ansan-City, Kyungki-Do, Korea

CONTACT PERSON : Yong II, Nam / ASSISTANT MANAGER

TELEPHONE NO : +82-345-491-9980

FCC ID : AAO4203071 MODEL NO/NAME : WL-101

SERIAL NUMBER : N/A

DATE: November 30, 1998

| DEVICE TYPE | RF LIGHTING DEVICE |
|---|--|
| E.U.T. DESCRIPTION | WHITE LIGHTNING |
| THIS REPORT CONCERNS | ORIGINAL GRANT |
| MEASUREMENT PROCEDURES | MP-5, ANSI C63.4 |
| TYPE OF EQUIPMENT TESTED | PRE-PRODUCTION |
| KIND OF EQUIPMENT AUTHORIZATION REQUESTED | CERTIFICATION |
| EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S) | CONSUMER EQUIPMENT (CFR 47, PART 18, SUBPART C) |
| MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE | NO |
| FINAL TESTS WERE CONDUCTED ON | 3 METER OPEN TEST SITE |

The above equipment was tested by ONETECH CORPORATION for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

EMC TESTING DEPARTMENT ONETECH Testing & Eval. Lab.

SEOUL KOREA

2. SCOPE

The Federal Communications Commission(FCC) establishes rules and regulations to regulate industrial, scientific, and medical equipment(ISM) that emits ekectromagnetic energy on frequencies within the radio frequency spectrum in order to prevent harmful interference to authorized radio communication services. An electromagnetic emissions test has been performed on the applicant/manufacturer's product to establish compliance with these rules.

The test data contained in this report was obtained utilizing test procedures, equipment, and site which in either approved by or prescribed by the FCC. The test procedures described herein are the established methods for the measurement of radio noise emitted from ISM equipment as defined in section 18.107 of the FCC rules. The technical standards for ISM equipment are set forth in subpart C of Part 18 of FCC rules(47 CFR Part 18 Sub-C). Methods for measurement of radiated and power line conducted radio noise are covered herein.

3. PRODUCT INFORMATION

Product description : WHITE LIGHTNING

Housing type : Plastic

Power supply type : Switching / 120 Vac, 50 / 60 Hz

Line filter type : Built in

Line cord type : NON-SHIELD

Normal operating frequency : 80 kHz

Power consumption : 30 Watts Max
Bulb size : 145mm(5.7")
Maximum RF energy generated : Less than 50mW

4. TEST FACILITY

4.1 General Information

The ONETECH CORPORATION test site is located at 426-1, Daessangryung-Ri, Chowol-Myun, Kwangju, Kun, Kyunggi-Do, 464-080, Korea. The site is constructed and calibrated in conformance with the requirements of FCC/OET55 and ANSI C63.4/1992. A site description is on file at the federal communications commission, 7435 Oakland mills Road, Columbia, MD 21046.

4.2 Open Field Test

The description of the open field test site maintained by ONETECH CORPORATION has been submitted to the FCC pursuant to CFR 47 section 2.948. A letter of acceptance from FCC is on file at FCC.(31040/SIT, 1200F2, January 24, 1996)

4.3 Preliminary Test

REPORT NO: E98NR-023

The Preliminary test is used for administration, preliminary radiation testing and conducted radio noise measurements.

5. MEASUREMENT INSTRUMENTATION

All measurements were made using equipment which confirms to the America National Standard Specifications for Electromagnetic Interference and Field Strength Instrumentation 10 kHz to 1GHz, ANSI C63.4

5.1 Measuring Instrument Calibration

The measuring equipment which was utilized in performing the test documented herein has been calibrated in accordance with the manufacturers recommendations utilizing calibration equipment which are traceable to recognized national standards.

| No. | EQUIPMENTS | MFR. | MODEL | SER. NO. | LAST CAL | DUE CAL | USE |
|-----|------------------------------------|------|-----------------|-------------------------------------|------------|------------|-----|
| 1 | Test receiver | R/S | ESVS 10 | 825120/006 | AUG./98 | 12MONTH | |
| 2 | Spectrum analyzer | HP | 8568B | 3026A0226 | AUG./98 | 12MONTH | |
| 3 | RF preselector | HP | 85685A | 3107A01264 | AUG./98 | 12MONTH | |
| 4 | Quasi-Peak Adaptor | HP | 85650A | 3107A01542 | AUG./98 | 12MONTH | |
| 5 | Dipole Antenna | EMCO | 3121C | 9107-745 | FEB/98 | 12MONTH | |
| 6 | Biconical antenna | EMCO | 3104C | 9109-4441 9109-4443 9109-4444 | FEB./98 | 12MONTH | • |
| 7 | Log Periodic antenna | EMCO | 3146 | 9109-3213 9109-3214 9109-3217 | FEB./98 | 12MONTH | • |
| 8 | LISN | EMCO | 3825/2 | 9109-1867 9109-1869 | FEB./98 | 12MONTH | • |
| 9 | Computer System Hard disk drive | HP | 98581C 9153C | 98543A CMC762Z9153 | N/A N/A | N/A N/A | • |
| 10 | Plotter | HP | 7475A | 30052 22986 | N/A | N/A | |
| 11 | Position Controller | EMCO | 1090 | 9107-1038 | N/A | N/A | |
| 12 | Turn Table | EMCO | 1080-1.21 | 9109-1576 | N/A | N/A | |
| 13 | Antenna Master | EMCO | 1070-1 | 9109-1624 | N/A | N/A | |

The calibrations of the measuring instruments, including any accessories that may affect such calibration, are checked checked frequency to assure its accuracy. Adjustments are made correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

5.2 Detector Function Selection and Bandwidth

| Items | Line conducted test | Radiated test |
|--------------|---------------------|---------------|
| Bandwidth | 9 kHz | 120 kHz |
| Scan width | 200 kHz/Div | 200 kHz/Div |
| Sweep | 2 MHz | 2 MHz |
| Scan time | 1 ms/Div | 5 ms/Div |
| Sensitivity | -90 dBm | -90 dBm |
| Video filter | OFF | OFF |
| Reading mode | Peak | Peak |

All conducted and radiated radio noise emission testing was performed utilizing spectrum analyzer or radio noise meters incorporation CISPR quasi-peak function, if a weight circuit was employed in that instrumrnt. If measurements were made using equipment which does not employ weighting circuits, measurements were made using peak reading.

5.3 Units of Measurement

REPORT NO: E98NR-023

Measurements of radiated interference are reported in terms of microvolts perimeter, or dBuV/m at a specified distance. The indicated readings on the spectrum analyzer was converted to microvolts per meter, or dBuV/m by use of reported in terms of microvolts, or dBuV/m by use of appropriate conversion factors. Measurements of conducted interference are reported in terms of microvolts, or dBuV.

6. ANTENNAS

| Antenna type | Biconical | Dipoles | Log Periodics |
|--------------------|--|-----------------|------------------|
| Frequency range | 20 MHz to 200 MHz | 30 MHz to 1 GHz | 200 MHz to 1 GHz |
| Correction Factors | Programmed into software | | |
| Antenna Height | Varied from 1 to 4 meters above ground plane | | |
| Polarization | Vertical / Horizontal | | |
| Distance from EUT | 3 meters | | |

The calibrated antennas used to sample the radiated field strength are mounted on a non-conductive, motorized antenna mast three meters from the leading edge of the EUT.

The FCC Rules specify that the test height above ground for table mounted devices shall be 0.8 or 1.0 meters and for floor mounted equipment shall be less than 0.5 meters. During radiated measurements, the EUT is positioned on a nonconductive, motorized turntable in normal operating mode in conformance with this requirement.

7. AMBIENT CONDITION

The ambient conditions at the time of the test was conducted were as follows:

Temperature <u>15</u> Degree Centigrade

Relative Humidity <u>55</u> %

8. TEST METHODS

8.1 Test Configuration

The equipment under test was configured and operated in a manner which tend to maximize its emission characteristics a typical application. Power and signal distribution, ground, interconnecting cabling and physical placement of equipment were simulating the typical application and usage in so far as practicable.

8.2 Grounding

All conducted power line measurements were performed with LISN housing, measurement instrumentation case, ground planes, etc, electrically bonded together in such a manner that they were at the same RF potential.

8.3 Data Report format

The measurement results expressed in accordance with MP-5 and specific limits where applicableare presented in tabluar or graphical form, or alternatively as recorder charts or photographs of a spectrum analyzer display, showing the level vs. Frequency.

8.4 Line Conducted Test Procedure

Conducted emissions are measured at the plug end of the power cord suplied with the EUT, from the voltage developed across the 50 ohm port in the LISN. The length of the power cord in excess of 80cm, separating the EUT from the LISN, is coiled on prongs at top of LISN.

The EUT is placed 80cm from an grounded conducted surface and is kept at least 80cm from any other earth grounded conducted surface. Each device under test is separately tested for conducted emissions.

Emissions which have peak value close to the specification limit are also measured in the quasi-peak detection mode to determine compliance.

Analyzer setting are given on page 5. Analyzer is scanned from 0.45 MHz to 30 MHz for emissions.

During this test, EUT was operating to simulating actual use. Emission level are checked to see if equipment/cable placement are maximized.

8.5 Radiated Test Procedure

REPORT NO: E98NR-023

Measurements od radiated radio-noise were made using the measuring instrumentation and antenna specified in 7.1 and 8 respectively. Primarly, tests were made to determine the system spectrum signature, the strengths of the stronger emissions, and the directions in which these emerge from the system. During this testing, EUT was running on normal operation.

EUT and all other equipment used with EUT were placed on a wooded table 0.8 meter above a ground screen. Table is placed three meters away from antenna.

All equipment/cable are placed in a manner which tend maximize its emission characteristics in a typical application. This is accomplished by watching the analyzer while moving equipment/cables.

Table was rotated 360 degrees to further maximize emissions.

Antenna was positioned between 1 to 4 meters above ground screen to even further maximize emissions. During test many antennas are used and positioned vertical and horizontal.

Analyzer settings are given on page 5. Analyzer is scanned from 30 MHz to 1000 MHz for emissions.

When an emission is found maximized, the frequency and condition are then entered into computer.

9. EQUIPMENT DEFINITION AND LIMITATIONS

The following information has been provided to clarify the FCC requirements with regard to equipment definition and technical standards, These requirements are found in the FCC Rules for devices subject to Equipment Authorization Procedures, Parts 2, subpart J. and Parts 18. Subpart B.

9.1 ISM Equipment Definition

REPORT NO: E98NR-023

Industrial, Scientific and Medical(ISM) equipment or appliances designed to generate and use locally RF energy for industrial, Scientific, Medical, domestic or similar purpose, excluding applications in the field of telecommunication.(Ref. CFR 47, section 18.107(c))

Industrial heating equipment: A category of ISM equipment used for or in connection with industrial heating operations utilized in a manufacturing of production process.(Ref. CFR 47, section 18.107(d))

Medical diathermy equipment: A category of ISM equipment used for therapeutic purpose, not including surgical diathermy apparatus designed for informittent operation with low power.(Ref. CFR 47, section 18.107(e))

Ultrasonic equipment: A category of ISM equipment in which the RF energy is used to excite or drive an electromechanical transducer for the production of sonic or ultrasonic mechanical energy for industrial, scientific, medical or other noncommunication purposes.(Ref. CFR 47, section 18.107(F))

Consumer ISM equipment: A category od ISM equipment used or intended to be used by the general public in a residential environment, notwithstanding use in other area.(Ref. CFR 47, section 18.107(g))

9.2 Equipment Limitations

Ultrasonic equipment Conduction limits: Maximum RF line voltage measured with a 5uH/50 ohm LISN.

| | <u> </u> | |
|--------------|-----------|-----------|
| Frequency | Emissions | Emissions |
| MHz | uV | dBuV/m |
| 0.010 - 0.49 | 1000 | 60.0 |
| 0.49 - 30.0 | 200 | 46.0 |

Induction Cooking Ranges Conduction limits: Maximum RF line voltage measured with a 5uH/50 ohm LISN.

| Frequency | Emissions |
|-------------|----------------------------|
| MHz | mV |
| 0.010 - 0.1 | 10-1(linear interpolation) |
| 0.1 - 0.5 | 1 |
| 0.5 - 30.0 | 0.25 |

RF lighting devices Conduction limits: Maximum RF line voltage measured with a 5uH/50 ohm LISN.

| Frequency | Emissions | Emissions |
|-------------------------|-----------|-----------|
| MHz | uV | dBuV/m |
| Non-consummer equipment | | |
| 0.45 - 1.6 | 1000 | 60.0 |
| 1.6 - 30 | 3000 | 69.5 |
| Consumer equipment | | |
| 0.45 - 30 | 250 | 48 |

Radiated Field Strength Limits: (Operating frequency lie outside the bands specified in setcion 18.301)

| Equipment | Operating Frequency | RF Power generated | Field Strngth | Distance |
|--------------------|-----------------------|---------------------|---------------|----------|
| | | by equipment(Watts) | limit(uV/m) | (meters) |
| Any type unless | Any ISM frequency | Below 500 | 25 | 300 |
| otherwise | | 500 or more | 25√power/500 | 1 300 |
| specified(Misc) | Any non-ISM frequency | Below 500 | 15 | 300 |
| | | 500 or more | 15√power/500 | 1 300 |
| Industrial heaters | On/below 5,752 MHz | Any | 10 | 1.600 |
| and RF stabilized | Above 5,752 MHz | Any | (2) | (2) |
| are welders | | | | |
| Medical diathermy | Any ISM freq. | Any | 25 | 300 |
| | Any non-ISM freq. | Any | 15 | 300 |
| Ultrasonic | Below 490kHz | Below 500 | 2,400/F(kHz) | 300 |
| | | 500 or more | 2,400/F(kHz) | 3 300 |
| | | | √power/500 | |
| | 4,900 to 1,600kHz | Any | 2,400/F(kHz) | 30 |
| | Above 1,600kHz | Any | 15 | 30 |
| Induction cooking | Below 90kHz | Any | 1,500 | 4 30 |
| range | On/above | Any | 300 | 4 30 |

^{1.} Field stength may nor exceed 10uV/m at 1,600 meters. Consumer Equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.

^{2.} Reduced to the greatest extend possible.

^{3.} Field strength may not exceed 10uV/m at 1,600 meters. Consumer equipment is not permitted the increase in field strength otherwise permitted here for over 500 watts.

^{4.} Induction cooking ranges manufactured prior to February 1, 1980, shall be subject to the field strength 1 limits for micsellaneous ISM equipment.

Radiated field strength limits for RF lighting devices.

| Frequency | Distance | Radiated |
|------------------------|----------|----------|
| (MHz) | (Meters) | (dBuV/m) |
| Non-consumer equipment | | |
| 30-88 | 3 | 48.5 |
| 88-216 | 3 | 54 |
| 216-1000 | 3 | 57 |
| Consumer equipment | | |
| 30-88 | 3 | 40 |
| 88-216 | 3 | 43.5 |
| 216-1000 | 3 | 46 |

10. SUMMARY

| Applicant | RADIOSHACK, A DIVISION OF TANDY CORPORATION |
|---------------|---|
| Manufacturer | KONG BYUNG WOO COMM IND. CO., LTD. |
| E.U.T. | WHITE LIGHTNING |
| Serial Number | N/A |
| Type of Test | CERTIFICATION(CFR 47, PART 18, SUBPART C) |
| Passed/Failed | PASSED |

| Line Conducted Test | EUT was connected to AC 120V power source. |
|---------------------|--|
|---------------------|--|

| Radiated Emission Test | EUT was setup as the same as it was in the Line Conducted Test. |
|------------------------|---|
| | EUT was tested at a 3 meter open test site. |

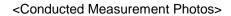
10.1 Equipment modifications

To achieve compliance to consumer equipment levels, the following change(s) were made by ONETECH Corp. during compliance testing:

"Not Applicable"

REPORT NO: E98NR-023

11. CONDUCTED AND RADIATED MEASUREMENT PHOTOS





REPORT NO: E98NR-023



12. FINAL CONDUCTED AND RADIATED EMISSION TESTS SUMMARY

Per preliminary tests, the following normal mode of operations were selected which shown the maximum emissions level.

12.1 Conducted Emissions Tests

Limits apply to : FCC CFR 47, PART 18, SUBPART C

Type of Tests : CONSUMER EQUIPMENT

Result : PASSED BY -8.00 dB

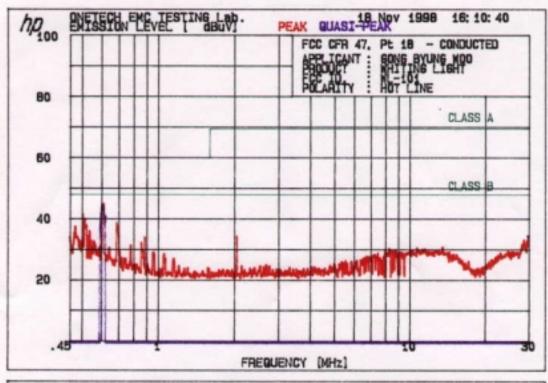
EUT : WHITE LIGHTNING Date : November 18, 1998

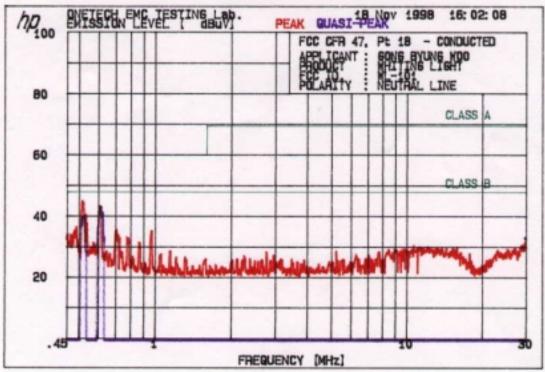
Operating Condition: NORMAL

| Frequency (MHz) | Amplitude (dBuV) | Detection Mode | Conductor | Limit (dBuV) | Margin (dB) |
|--------------------|---------------------|-------------------|-----------|-----------------|----------------|
| 0.52 | 40.00 | Quasi-Peak | Neutral | 48.0 | -8.00 |
| 0.61 | 44.7 | Quasi-Peak | Hot | 48.0 | -3.30 |
| 0.69 | 38.90 | Peak | Hot | 48.0 | -9.10 |
| 0.97 | 35.20 | Peak | Neutral | 48.0 | -12.80 |
| 11.53 | 30.20 | Peak | Hot | 48.0 | -17.80 |
| 30.00 | 33.40 | Peak | Neutral | 48.0 | -14.60 |

Line Conducted Emissions Tabulated Data

Measuring by : Tag Sun, Park / Project Engineer





12.2 Radiated Emission Tests

The following table shows the highest levels of radiated emissions on both polarization of horizontal and vertical.

Limits apply to : FCC CFR 47, PART 18, SUBPART C

Type of Tests : CONSUMER EQUIPMENT

Result : PASSED BY -4.11dB

EUT : WHITE LIGHTNING Date : November 18, 1998

Operating Condition : NORMAL
Distance : 3 Meter

| Freq. (MHz) | Amp. (dBuV) | Detection Mode | Ant Pol. | Ant. (dB/m) | Cable (dB) | Total. (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|----------------|----------------|-------------------|-------------|----------------|---------------|--------------------|-------------------|----------------|
| 43.15 | 21.00 | Peak | V | 10.42 | 2.76 | 34.18 | 40.00 | -5.82 |
| 46.45 | 21.30 | Peak | ٧ | 10.33 | 2.80 | 34.43 | 40.00 | -5.57 |
| 60.25 | 22.30 | Peak | V | 10.10 | 3.00 | 35.40 | 40.00 | -4.60 |
| 64.70 | 21.60 | Peak | V | 9.10 | 3.00 | 33.70 | 40.00 | -6.30 |
| 92.18 | 21.70 | Peak | Н | 8.77 | 3.34 | 33.81 | 43.50 | -9.69 |
| 102.40 | 19.11 | Peak | Н | 11.91 | 3.45 | 34.47 | 43.50 | -9.03 |
| 129.35 | 22.30 | Quasi-Peak | Н | 13.32 | 3.77 | 39.39 | 43.50 | -4.11 |
| 133.13 | 21.60 | Quasi-Peak | Н | 13.12 | 3.86 | 38.58 | 43.50 | -4.92 |
| 154.82 | 13.40 | Peak | Н | 14.33 | 4.00 | 31.73 | 43.50 | -11.77 |

Radiated Emissions Tabulated Data

Measuring by : Tag Sun, Park / Project Engineer

REPORT NO : E98NR-023

13. FIELD STRENGTH CALCULATION

Meter readings are compared to the specification limit correcting for antenna and cable losses

+ Meter reading (dBuV)

+ Cable Loss (dB)

+ Antenna Factor (Loss) (dB/meter)

= Corrected Reading (dBuV/meter)

- Specification Limit (dBuV/meter)

= dB Relative to Spec (+/- dB)

EXHIBIT 4. PHOTO REPORT

INDUSTRIAL, SCIENTIFIC AND MEDICAL(ISM) EQUIPMENT CERTIFICATION TO FCC PART 18 REQUIREMENT

| PRODUCT | WHITE LIGHTNING | | | |
|---------------------|---|------------|-----|--|
| FCC ID | AAO4203071 | | | |
| MODEL NO. | WL-101 | SERIAL NO. | N/A | |
| APPLICANT & ADDRESS | RADIO SHACK, A DIVISION 100 Throckmorton St., Ste | | | |

| REPORT NO. | E98NR-023 | ISSUE DATE | November 30, 1998 | |
|--|-----------|------------|-------------------|--|
| PREPARED BY: ONETECH CORPORATION | | | | |
| 2 F. KUNHAN B/D, 1557-11, SEOCHO-DONG, SEOCHO-KU, | | | | |
| SEOUL 137-070 KOREA (TEL)02-587-9037(FAX)02-587-9039 | | | | |

EXHIBIT 5. USER'S MANUAL & SCHEMATIC(BLOCK DIAGRAM)

INDUSTRIAL, SCIENTIFIC AND MEDICAL(ISM) EQUIPMENT CERTIFICATION TO FCC PART 18 REQUIREMENT

| PRODUCT | WHITE LIGHTNING | | | |
|---------------------|---|------------|-----|--|
| FCC ID | AAO4203071 | | | |
| MODEL NO. | WL-101 | SERIAL NO. | N/A | |
| APPLICANT & ADDRESS | RADIO SHACK, A DIVISION OF TANDY CORPORATION 100 Throckmorton St., Ste. 1300 Fort worth Texas 76102-2802 | | | |

| REPORT NO. | E98NR-023 | ISSUE DATE | November 30, 1998 | |
|--|-----------|------------|-------------------|--|
| PREPARED BY: ONETECH CORPORATION | | | | |
| 2 F. KUNHAN B/D, 1557-11, SEOCHO-DONG, SEOCHO-KU, | | | | |
| SEOUL 137-070 KOREA (TEL)02-587-9037(FAX)02-587-9039 | | | | |

"Please find a manual and Schematic diagram for EUT at User Manual / Schematic diagram in Exhibit Type"