

LOW VOLTAGE LABORATORY. ENERGY DEPARTMENT

Test Report N. B131/01-70-EE-1

Page 1 of 6 + 2 ANNEXES

Electromagnetic Compatibility Tests

EQUIPMENT UNDER TEST: MAGNETIC FORCE EMERGENCY LIGHT
MODEL: NIGHTSTAR
MANUFACTURER: APPLIED INNOVATIVE TECHNOLOGIES, INC.

APPLICANT: APPLIED INNOVATIVE TECHNOLOGIES, INC.
DATE OF RECEPTION: 9th November 2001
DATE OF EXECUTION: 17th December 2001
DATE OF ISSUE OF TEST REPORT: 21st December 2001

The equipment under test has been submitted to the test required by the applicant using the specified procedures of the applied standards.

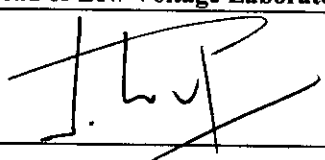

The test results are presented in the inner pages.

- * The results of the present report apply only to the samples tested and the moment and conditions under which the measurements were performed.
- * It shall not be reproduced, except in full, without written permission of L A B E I N.

THE PRESENT TEST REPORT CONTAINS:

Number of pages 6
 Pages of ANNEX I 3
 Pages of ANNEX II 3



Head of Low Voltage Laboratory	Responsible of EMC Tests
	
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ANNEX I. Radiated Radioelectric Emissions Measurements

ANNEX II. Model of Declaration of Conformity and Affixing of CE Mark

1.- **INTRODUCTION. IDENTIFICATION OF THE EQUIPMENT UNDER TEST**

This report contains the results of the electromagnetic compatibility tests performed on a sample unit of the following product:

Product name: Magnetic Force Emergency Light
Model: NightStar
Serial number: ----
Manufacturer: Applied Innovative Technologies, Inc.

The sample was selected and delivered by the local representative of the applicant. Tests were selected in order to evaluate the essential requirements of the European Council Directive 89/336/EC about Electromagnetic Compatibility.

2.- **APPLICANT**

Steve Vektorino
APPLIED INNOVATIVE TECHNOLOGIES, INC.
P.O. Box 754. Fort Lupton, CO 80621 (USA)

3.- **PLACE OF RECEPTION AND EXECUTION OF THE TESTS**

The reception of the equipment as well as the performing of the test took place in the Electromagnetic Compatibility Laboratory of LABEIN, in Zamudio, Spain.

4.- **STANDARD AND TEST PROCEDURES EMPLOYED**

- EN 50081-1 (1992): "Electromagnetic Compatibility. Generic emission standard. Part 1: Residential, Commercial and Ligth Industry Environment".
- EN 50082-1 (1997): "Electromagnetic Compatibility. Generic immunity standard. Part 1: Residential, Commercial and Ligth Industry Environment".
- EN 50081-2 (1993): "Electromagnetic Compatibility. Generic emission standard. Part 2: Industrial environment".

- EN 50082-2 (1995): "Electromagnetic Compatibility. Generic immunity standard. Part 2: Industrial environment".

LABEIN's internal test procedure used was:

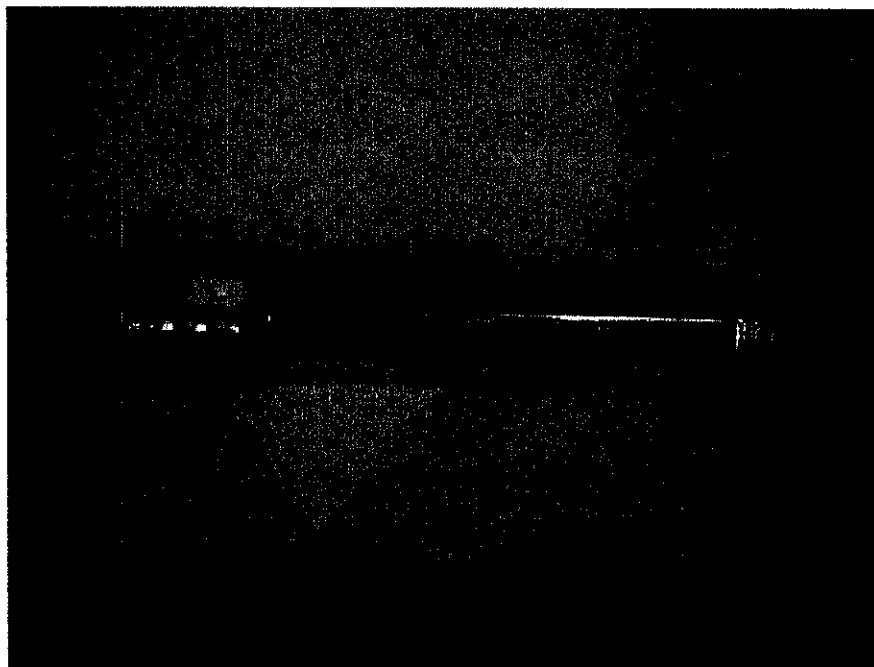
- PE.TI-03-E: "Procedure for Radioelectric emissions measurements according to EN 55022 (1994)".

5.- TEST RESULTS

The equipment under test (EUT) was tested in two different modes of operation: with light on and in an energy charging process (shaking it at an approximate rate of 90 cycles/minute). In both cases, EUT was held both horizontally and vertically in order to maximise the emission levels.

Immunity tests were not performed. This decision is supported in the provisions of the EN 50082 standards about the lack of necessity for performing immunity tests to products that do not incorporate electronic control circuits.

The photograph below shows the EUT.



5.1 Radiated radioelectric emissions measurements

Standards: EN 50081-1 (1992), EN 50081-2 (1993).

Internal procedure: PE.TI-03-E.

Average climatic conditions: T = 25° C; HR = 42 %; P = 1026 mbar.

EUT's set-up: As indicated in chapter 4 of this report.

Results: Measured levels were far below the normative limits of both applied standards in all frequencies and configurations. See graphs with results in Annex I.

Uncertainty measurement: Below ± 4 dB with a confidence level of 95% (K=2).

6.- **CONCLUSIONS**

In view of the tests results and in the conditions expressed in this report, the tested sample of:

Product name: Magnetic Force Emergency Light
Model: NightStar
Serial number: ---
Manufacturer: Applied Innovative Technologies, Inc.

- **CONFORMS** to EN 50081-1 (1992).
- **CONFORMS** to EN 50081-2 (1993).
- **CONFORMS** to EN 50082-1 (1997).
- **CONFORMS** to EN 50082-2 (1995).

Accordingly, in view of the performed tests and their results, the sample under test described above:

- **CONFORMS** to the essential requirements of the Council Directive 89/336/EC on Electromagnetic Compatibility.

L A B E I N
CENTRO TECNOLÓGICO



ANNEX I

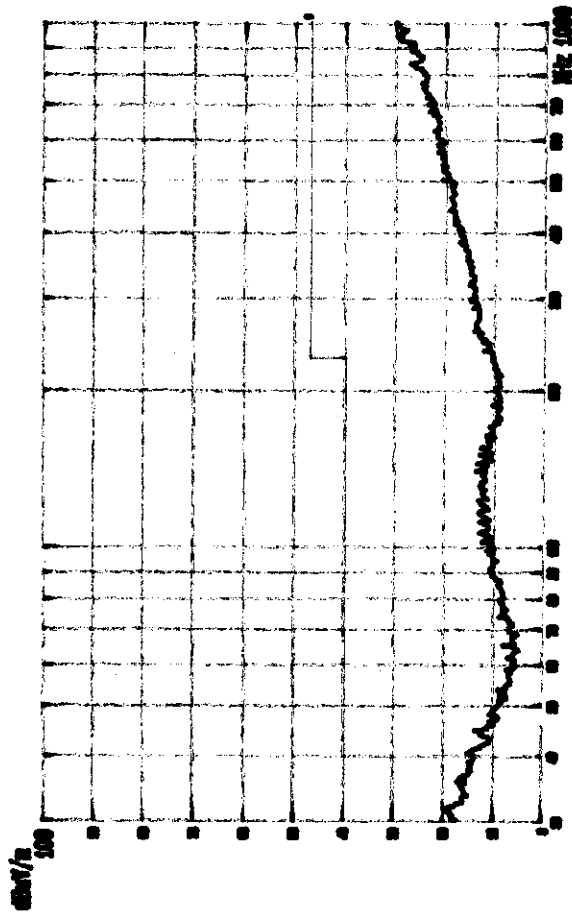
Measurements of Radiated Radioelectric Emissions

LABEIN N.Expdt.B131/01-70
RFI Field Strength Test (General)

Start of Test: 17.DEC'01 08:44
E.U.T.: NIGHTSTAR
Oper. Condition: CHARGING PROCESS
Operator: S. VALCARCEL/J. NUNEZ
Test Spec: EN 55022, EN 55024-1: 30-1000 MHz. Sm dist. Antenna BILOS.

Start Fr. Stop Fr. IF-BW Detec Att. Meas.T. Traced.
MHz MHz kHz tor dB S type

30.0000 1000.0000 180 Peak LN 0.050



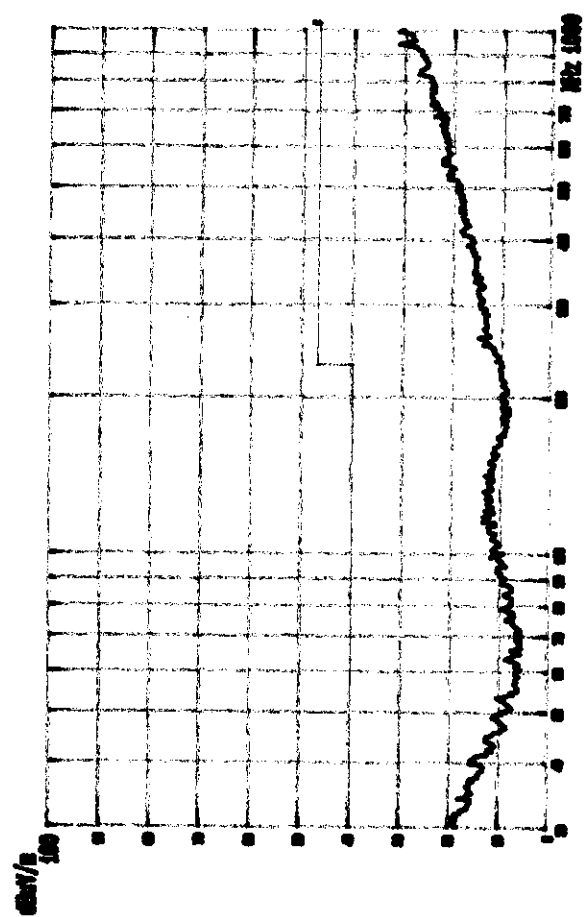
VERT. POLARIZATION. H = 1 m.



LABEIN N.Expdt.B131/01-70
RFI Field Strength Test (General)

Start of Test: 17.DEC'01 08:44
E.U.T.: NIGHTSTAR
Oper. Condition: EUT ON (LIGHT ON)
Operator: S. VALCARCEL/J. NUNEZ
Test Spec: EN 55022, EN 50081-1: 30-1000 MHz. 3m dist. Antenna BILOS.

Start Fr. Stop Fr. IF-BW Detec Att. Meas.T. Traced.
MHz MHz kHz tor dB S type
30.0000 1000.0000 180 Peak LN 0.050



HORZ. POLARIZATION. H = 1 m.

ANNEX II

Model of Declaration of Conformity
and Affixing of CE Marking

DECLARATION OF CONFORMITY

Declaration of Conformity (DoC) must be made in order to guarantee the conformance of the product to its applicable directives. This is made exclusively by the manufacturer (or his mandatory in the European Union). So, this process is called self-certification. No administrative procedures have to be followed. This document must be kept to the disposal of the European authorities for a period of 10 years.

Here, it is included an example of DoC for the NightStar.

DECLARATION OF CONFORMITY	
Manufacturer:	APPLIED INNOVATIVE TECHNOLOGIES, INC. P.O. Box 754, Fort Lupton, CO 80621, USA
declares under sole responsibility that the product:	
Product Name:	Magnetic Force Emergency Light
Model:	NightStar
to which this declaration relates, is in conformity with the EMC European Directive 89/336/EC + amendments :	
Applied Standards:	EN 50081-1 (1992) EN 50081-2 (1993) EN 50082-1 (1997) EN 50082-2 (1995)
Remarks: Product is CE marked according to CE-Marking Directive 93/68/EC.	
December 21, 2001 Fort Lupton, CO	Signed <i>Mr Steve Vectorino</i> Vice-President

This is only an example. Format, fonts, etc. can be modified as desired. The person who signs the Declaration must be any of the company with enough responsibility (Managing Director, Quality Manager, etc.).

CE MARKING

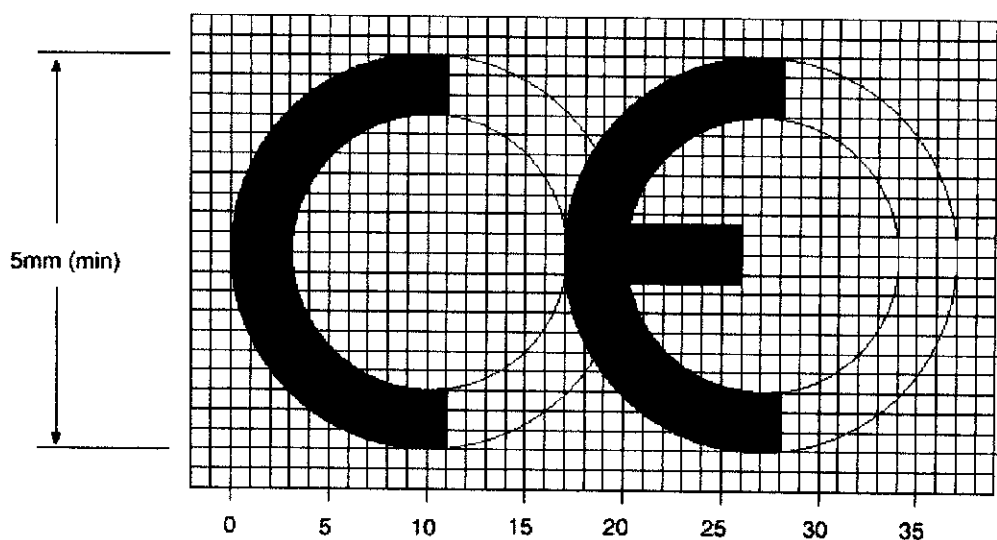
CE Marking must be affixed to the product. Optionally, it can be also affixed to the envelope of the product.

The CE conformity marking shall consist of the initials "CE" in the form shown in the picture below. Grid is only for guidance purposes in order to drawing the characters.

If the CE marking is reduced or enlarged the proportions given in the graduated drawing below must be respected.

The various components of the CE marking must have substantially the same vertical dimension, which may **not be less than 5 mm**.

The affixing of markings on the products which are likely to deceive third parties as to the meaning and form of the CE marking shall be prohibited. Any other marking may be affixed to the products or the data plate provided that the visibility and legibility of the CE marking is not thereby reduced.



More information could be obtained from the text of the 93/68/CE Directive (see http://europa.eu.int/eur-lex/en/lif/dat/1993/en_393L0068.html).