

*A*dvanced *S*afety *P*roducts

Technology Corp

CE

T.C.F.

Quality • Reliability • Professionalism



ADVANCED SAFETY PRODUCT
ASP TECHNOLOGY CORP

8F,-1, No.1, Zhongzheng Rd., Tucheng Dist., New Taipei City 23670, Taiwan (R.O.C.)
TEL:886-2-22613919, FAX:886-2-22613918, E-mail: asp.twn@gmail.com

Document of Contents

Letter to Client

A. D.O.C. or V.O.C.

Declaration of Conformity or/and Verification(If any)

B. Test Report

PN664A Ref. Report :ASP T.C.F. PN5824

C. Construction Photos

D. Technical Documentation

Original Design Drawings & Specifications Including Schematics, Block Diagrams, and User or Service Manual(If any)

E. Modifications.

All Modifications That May Affect Compliance with the Standard Requirements & Necessary Test Data(If any)

Note: * In response to Energy Saving and Carbon Reduction requirements, the technical file report T.C.F. (Technical Constructional File) to electronically file-based, written report will focus on important section and informational purposes only.



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致產品行銷歐洲之客戶 (CE Marking)

- A. 自 1996 年 1 月 1 日起，銷歐產品必需符合歐盟 EMC 指令之後才能上市。
- B. 自 1997 年 1 月 1 日起，銷歐產品必須同時符合 EMC 指令和低電壓指令 (LVD-Safety) 之後才能上市。
- C. 自 2006 年 7 月 1 日起，銷歐產品必需符合歐盟 RoHS 指令之後才能上市。

技術檔案在行銷前必須準備齊全，以備歐聯國家機構隨時抽查，其內容至少包含：

- 1. Declaration of Conformity (D.O.C.) Form — 必須由歐洲分公司或進口商簽名負責 (見附件樣本)。
- 2. EMC 測試報告和 LVD-Safety 測試報告 — 可由實驗室核發或透過認證機構。
- 3. 原始之設計圖稿及規格書(如：線路圖、方塊圖、PCB Layout 圖、User's Manual 和 Service Manual 等)
- 4. 敘述製造時之生產檢查程序，以確保 EMC 和 LVD-Safety 特性之維持。
- 5. 任何會影響到 EMC 和 LVD-Safety 的變更敘述和必要之測試記錄。

附註：* 產品上要貼上歐聯指令要求之 Label 標示。

* D.O.C.簽名負責之廠商，有責任確保銷售之產品在 EMC 和 LVD-Safety 方面仍符合規定。

* 以上文件必需一份置於 D.O.C.簽名負責人手中備查。

附註：* 為響應節能減碳之環保要求，技術檔案報告 T.C.F. (Technical Constructional File) 以電子檔為主，書面報告將酌量擇重點提供並僅供參考。



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A. D.O.C. OR V.O.C.
DECLARATION OF CONFORMITY OR/AND VERIFICATION(IF ANY)

EC DECLARATION OF CONFORMITY

ANTARI LIGHTING AND EFFECTS LTD.
No. 8, Ln. 231, NANKAN RD., SEC. 1, LUCHU DIST,
TAOYUAN CITY 33859, TAIWAN (R.O.C.)
(Name / Address)

We herewith declare that the following designated product type

FOG MACHINE

Model Name : **Z-380,Z390**

Conform with the essential requirement of the relevant European Directive:
- EMC Directive: 2014/30/EU

They are based on the following standards :

- **EN 55014-1:2006+A2:2011** - Electromagnetic compatibility-Requirements for household appliances, electric tools and similar apparatus Part 1: Emission
- **EN 55014-2:2015** - Electromagnetic compatibility-Requirements for household appliances, electric tools and similar apparatus-Part 2: Immunity-Product family standard
- **EN 61000-3-2:2014** - Electromagnetic Compatibility Part 3-2 Limits for harmonics current emission for Input current up to 16A.
- **EN 61000-3-3:2013** - Electromagnetic Compatibility Part 3-3 Limits-Section 3 Limitation of voltage Fluctuations and flicker in low voltage supply Systems for equipment with rated current up to 16A.

The following authorized person who compiled the relevant documentation and established in the Europe Community.

(Name)

(Address)

MANUFACTURER / IMPORTER



(Surname, forename)
(Company Stamp)

2016.07.11

(Date and place)



EC DECLARATION OF CONFORMITY

ANTARI LIGHTING AND EFFECTS LTD.
No. 8, Ln. 231, NANKAN RD., SEC. 1, LUCHU DIST,
TAOYUAN CITY 33859, TAIWAN (R.O.C.)
(Name / Address)

We herewith declare that the following designated product type

FOG MACHINE

Model Name : **Z-380,Z-390**

Conform with the essential requirement of the relevant European Directive:

- EMC Directive: 2014/30/EU
- LVD Directive: 2014/35/EU

They are based on the following standards :

- **EN 55014-1:2006+A2:2011** - Electromagnetic compatibility-Requirements for household appliances, electric tools and similar apparatus Part 1: Emission
- **EN 55014-2:2015** - Electromagnetic compatibility-Requirements for household appliances, electric tools and similar apparatus-Part 2: Immunity-Product family standard
- **EN 61000-3-2:2014** - Electromagnetic Compatibility Part 3-2 Limits for harmonics current emission for Input current up to 16A.
- **EN 61000-3-3:2013** - Electromagnetic Compatibility Part 3-3 Limits-Section 3 Limitation of voltage Fluctuations and flicker in low voltage supply Systems for equipment with rated current up to 16A.
- **EN 60335-1:2012+A11:2014** – Household and similar electrical appliances – Safety – Part 1: General requirements.
- **EN 62233:2008/AC:2008** –Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure

The following authorized person who compiled the relevant documentation and established in the Europe Community.

(Name)

(Address)

MANUFACTURER / IMPORTER



(Surname, forename)

(Company Stamp)

2016.07.11

(Date and place)





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ASP TECHNOLOGY CORP

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VERIFICATION OF CONFORMITY

We Hereby Certify that

The following mentioned product has been tested in typical configuration by ASP.

Applicant:

ANTARI LIGHTING AND EFFECTS LTD.
No. 8, LN. 231, NANKAN RD., SEC. 1, LUCHU DIST,
TAOYUAN CITY 33859, TAIWAN (R.O.C.)

Product Type:

FOG MACHINE

Z-380,Z-390

Model Name:

Is in compliance with the European Council Directive 2014/30/EU.

The submitted samples comply with the requirements of the following standard(s):

**EN 55014-1:2006+A2:2011, EN 55014-2:2015,
EN 61000-3-2:2014, EN 61000-3-3:2013**



This verification refers only to the units submitted for test. The CE mark as shown above can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives.

Signed for and on behalf of ASP Technology Corp.

Kevin Ku/ Manager.
ASP Technology Corp.



Jul. 11, 2016
Date.

The technical report issued by ASP will support you affix the CE marking.



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B.
TEST REPORT

EMC

TEST REPORT

Equipment Under Test : Fog Machine
Model No. : Z-380,Z390
Applicant : Antari Lighting And Effects Ltd.
Address of Applicant : No.8, Ln. 231 Nankan Rd., Sec 1, Luchu Dist,
Taoyuan City 33859, Taiwan (R.O.C)
Manufacturer : As above
Address of Manufacturer : As above

Standards :**EMI Reference Standard(s):**

EN 55014-1:2006+A2:2011

EN 61000-3-2:2014

EN 61000-3-3:2013

EMS Reference Standard(s):

EN 55014-2:2015

EN 61000-4-2:2009

EN 61000-4-3:2006+A1:2008+A2:2010

EN 61000-4-4:2012

EN 61000-4-5:2014

EN 61000-4-6:2014

EN 61000-4-8:2010

EN 61000-4-11:2004

In the configuration tested, the EUT complied with the standards specified above.

Remarks :

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.



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1.1 GENERAL INFORMATION

Applicant Name : Antari Lighiting And Effects Ltd.
Kind of Test : Electromagnetic Interference (EMI) Test
Electromagnetic Susceptibility (EMS) Test

Equipment under Test (EUT):

Product Type : Fog Machine
Model Name(s) : Z-380 ,**Z-390**
Type reference :
Variant Description : --
Power rating : 220-240Vac, 50/60Hz, 1230-1450W
Serial Number : Eng. Sample
Modes/Function : Working Mode

General Product information:

The E.U.T.(Equipment Under Test) is a fog machine, emits a dense vapour that appears similar to fog.

Testing:

(1) Testing laboratory : ASP Technology Corp.
Address : 8F,-1, No.1, Zhongzheng Rd., Tucheng Dist.,
New Taipei City 23670, Taiwan (R.O.C.)
Testing location : As Above
Date of receipt of test E.U.T. : Sep. 03, 2015
Date(s) of performance of tests E.U.T. : Sep. 08, 2015 – Sep. 16, 2015

Tested by
(name + signature)



Stark Wu

Approved by
(name+ signature)



Kevin Ku

The test result refers exclusively to the test presented test Model/ Sample. Without the written authorization of the test lab, the test report may not be copied.



1.2 TEST STANDARDS

Applicant Name : Antari Lighting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380

The EUT has been tested according to the following specifications:

Emission Test Standards

Emission (EN 55014-1)		
Reference Standards	Test Type	Result
EN 55014-1:2006 +A2:2011	Electromagnetic compatibility-Requirements for household appliances, electric tools and similar apparatus Part 1: Emission	Pass
	Conducted Emission Test	Pass
	Radiated Emission Test	Pass
EN 61000-3-2:2014	Electromagnetic Compatibility Part 3-2 Limits for harmonics current emission for Input current up to 16A	Pass
EN 61000-3-3:2013	Electromagnetic Compatibility Part 3-3 Limits-Section 3 Limitation of voltage Fluctuations and flicker in low voltage supply Systems for equipment with rated current up to 16A	Pass

Susceptibility Test Standards

Immunity (EN 55014-2)		
Reference Standards	Test Type	Result
EN 55014-2:2015	Electromagnetic compatibility-Requirements for household appliances, electric tools and similar apparatus Part 2. Immunity-Product family standard	Pass
EN 61000-4-2:2009	Electrostatic discharge immunity test	Pass
EN 61000-4-3:2006+A1:2008+A2:2010	Electromagnetic compatibility (EMC) Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	Pass
EN 61000-4-4:2012	Electrical fast transient/burst immunity test	Pass
EN 61000-4-5:2014	Surge immunity test	Pass
EN 61000-4-6:2014	Immunity to conducted disturbances, induced by radio-frequency fields	Pass
EN 61000-4-8:2010	Power frequency magnetic field immunity test	Pass
EN 61000-4-11:2004	Voltage dips, short interruptions and voltage variations immunity tests	Pass



1.2 TEST STANDARDS

Applicant Name : Antari Lighting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380 ,Z-390

EMI Performance Criteria Description

Class A or Class B

EMS Performance Criteria Description

- A. Normal performance within the specification limits.
- B. Temporary degradation or loss of function or performance that is self-recoverable.
- C. Temporary degradation or loss of function or performance that requires operator intervention or system reset.
- D. Degradation or loss of function that is not recoverable due to damage equipment (components) or software, or loss of data.



1.3 TESTING SETUPS

Applicant Name : Antari Lighiting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380,Z-390

Test Procedure

1. Set down the EUT with support units and turn on the power of all equipment.
2. Pre-test the EUT in all modes by each model, then figure the worst case out.
3. Execute the appropriate program to exercise the EUT.
4. Monitor the EUT to determine if it works properly to meet the required performance criteria during immunity tests.

The Worst case of the EUT

The EUT was carried out in the worst case as followings :

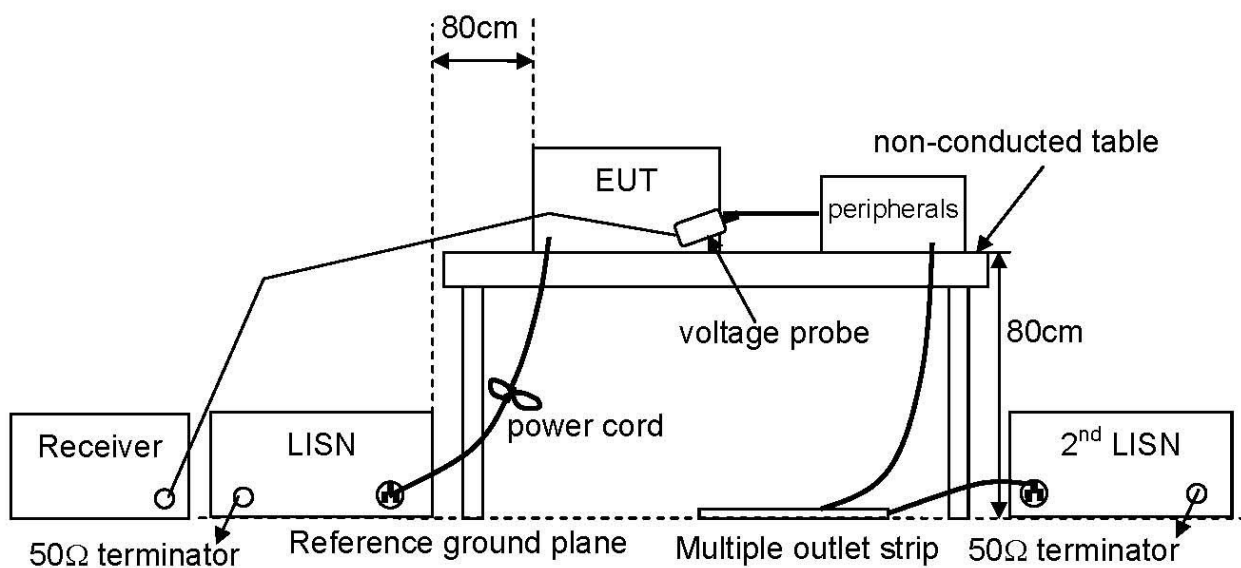
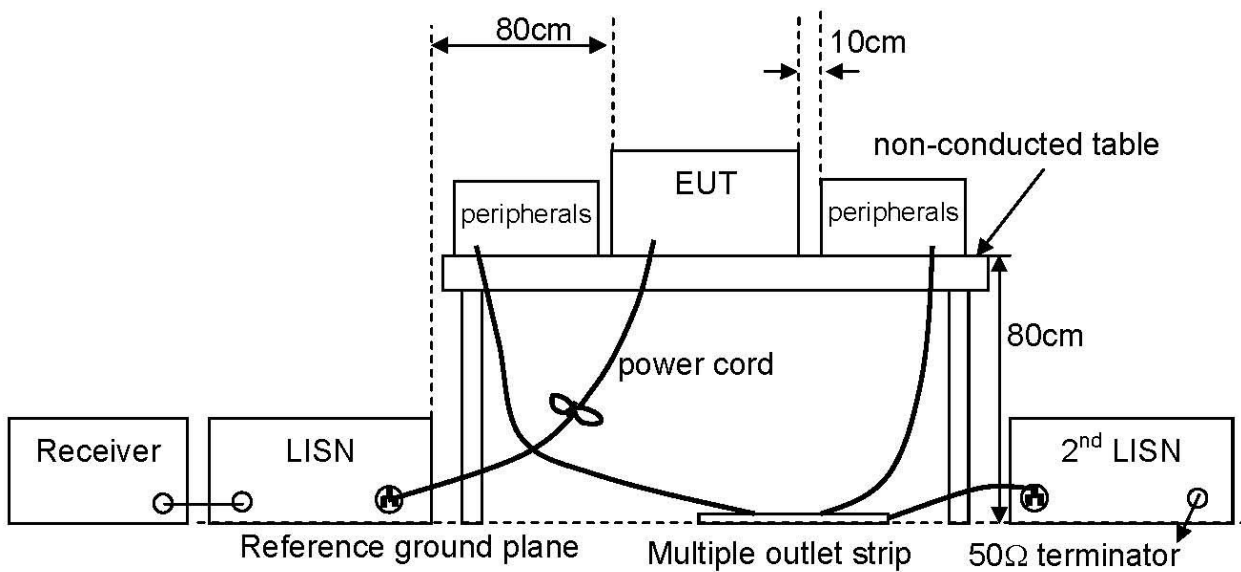
Model No : Z-380

Mode : Working Mode

2.1 CONDUCTED EMISSION TEST

Applicant Name : Antari Lighting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390

Test Standard	Result
EN 55014-1:2006+A2:2011	Pass



Test Procedures

- a. The EUT was set up per the test configuration figured in the next section of this chapter to simulate the typical usage per the user's manual.
- b. If the EUT is tabletop equipment, it was placed on a wooden table with a height of 0.8 meters above the reference ground plane and 0.4 meters from the conducting wall of the shielded room. Also of the EUT is floor-standing equipment, it was placed on a non-conducted support with a height of 0.1 meters above the reference ground plane.
- c. Connect the EUT's power source to the appropriate power mains through the LISN.
- d. All the other peripherals are connected to the 2nd LISN, if any.
- e. The LISN was placed 0.8 meters from the EUT and at least 0.8 meters from other units and other metal planes.
- f. Measure the conducted emissions on each power line (Neutral Line and Line 1 – Hot side) of the EUT's power source by using the test receiver connected to the coupling RF output port of LISN.
- g. Rapidly scan the signal from 150kHz to 30MHz by using the receiver through the Maximum-Peak detector to determine those frequencies associated with higher emission levels (at least including the following frequencies: 160kHz, 240kHz, 550kHz, 1MHz, 1.4MHz, 2MHz, 3.5MHz, 6MHz, 10MHz, 22MHz, 30MHz, $\pm 10\%$ tolerance) for each measured line.
- h. Then measure the maximum level of conducted disturbance for each frequency found from step g. by using the receiver through the Quasi-Peak and Average detectors per CISPR 16-1.
- i. Record the level for each frequency and compare with the required limit.
- j. If required, measure the conducted emissions at load / additional terminals of EUT by using the test receiver connected to the coupling RF output port of voltage probe and repeat step g. to i.
- k. If the peak emission level is lower than the specified Average limit, then the emission values presented will be the peak value only. Otherwise, accurate Q.P. or Average values will be measured and presented.

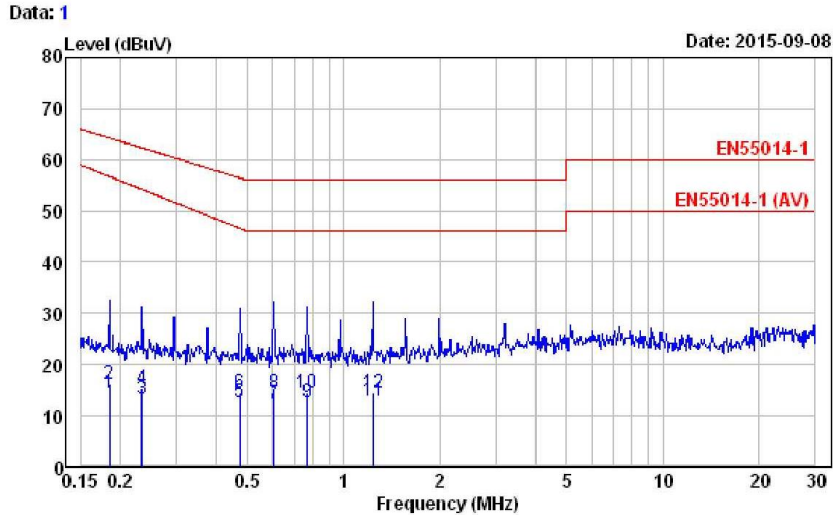
Test result

As the equipment has a PTC heating element without any switch control devices, there are no disturbances generated. It is expected that the subject equipment as described fulfils this requirements without any any further testing.



2.1 CONDUCTED EMISSION TEST

Applicant Name : Antari Lighting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380 ,Z-390



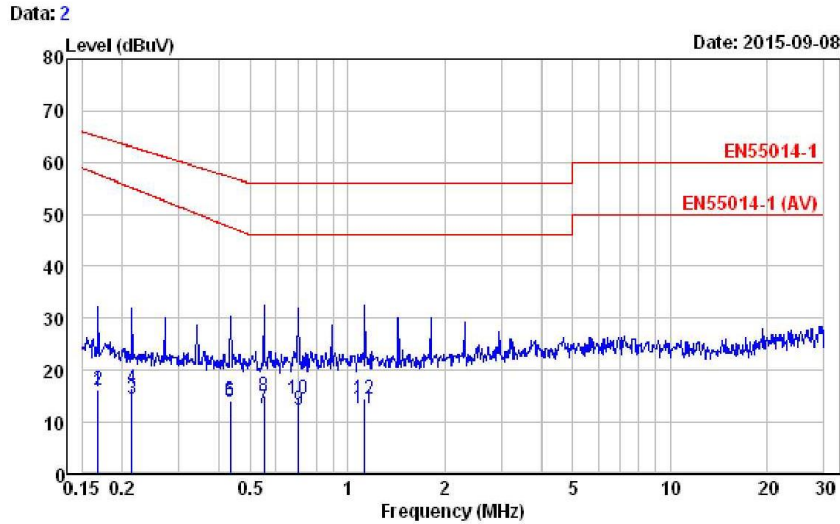
Site no. : No.3 Shielded Room Data no. : 1
Condition : KNW-244C 8-1373-5 LISN Phase : LINE
Limit : EN55014-1
Env. / Ins. : 24°C / 54% ESR3 (101772) Engineer :
EUT : Z-380
Power Rating : 230Vac / 50Hz
Test Mode :

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.184	0.10	0.02	9.87	4.34	14.33	56.77	42.44	Average
2	0.184	0.10	0.02	9.87	6.33	16.32	64.28	47.96	QP
3	0.234	0.10	0.02	9.86	3.44	13.42	54.19	40.77	Average
4	0.234	0.10	0.02	9.86	5.36	15.34	62.30	46.96	QP
5	0.474	0.09	0.02	9.85	2.70	12.66	46.59	33.93	Average
6	0.474	0.09	0.02	9.85	4.44	14.40	56.45	42.05	QP
7	0.604	0.10	0.02	9.85	2.36	12.33	46.00	33.67	Average
8	0.604	0.10	0.02	9.85	4.58	14.55	56.00	41.45	QP
9	0.771	0.10	0.02	9.86	2.62	12.60	46.00	33.40	Average
10	0.771	0.10	0.02	9.86	4.53	14.51	56.00	41.49	QP
11	1.236	0.13	0.03	9.86	3.05	13.07	46.00	32.93	Average
12	1.236	0.13	0.03	9.86	4.46	14.48	56.00	41.52	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

2.1 CONDUCTED EMISSION TEST

Applicant Name : Antari Lighting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390



Site no. : No.3 Shielded Room Data no. : 2
 Condition : KNW-244C 8-1373-5 LISN Phase : NEUTRAL
 Limit : EN55014-1
 Env. / Ins. : 24°C / 54% ESR3 (101772) Engineer :
 EUT : Z-380
 Power Rating : 230Vac / 50Hz
 Test Mode :

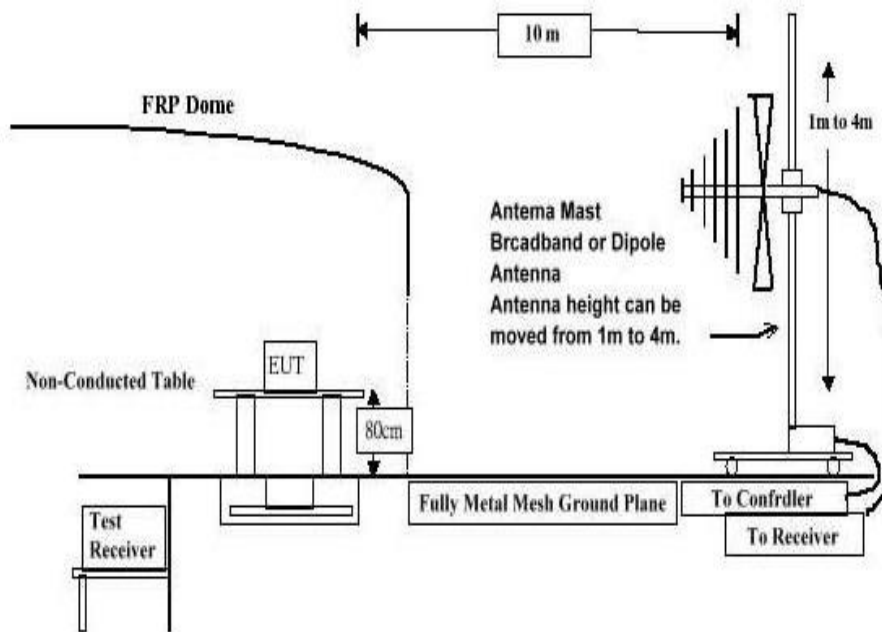
	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.169	0.12	0.03	9.87	5.79	15.81	57.74	41.93	Average
2	0.169	0.12	0.03	9.87	6.31	16.33	65.03	48.70	QP
3	0.214	0.11	0.02	9.86	4.62	14.61	55.17	40.56	Average
4	0.214	0.11	0.02	9.86	6.53	16.52	63.05	46.53	QP
5	0.433	0.11	0.02	9.86	3.78	13.77	47.56	33.79	Average
6	0.433	0.11	0.02	9.86	4.31	14.30	57.20	42.90	QP
7	0.552	0.11	0.02	9.85	2.80	12.78	46.00	33.22	Average
8	0.552	0.11	0.02	9.85	5.02	15.00	56.00	41.00	QP
9	0.705	0.12	0.02	9.86	2.46	12.46	46.00	33.54	Average
10	0.705	0.12	0.02	9.86	4.56	14.56	56.00	41.44	QP
11	1.129	0.13	0.02	9.85	2.68	12.68	46.00	33.32	Average
12	1.129	0.13	0.02	9.85	4.48	14.48	56.00	41.52	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

2.2 RADIATED EMISSION TEST

Applicant Name : Antari Lighting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390

Test Standard	Result
EN 55014-1:2006+A2:2011	Pass



- Notes:
1. Distance of Measurement: 10 Meter (30-1000MHz)
 2. Height of table on which the EUT was placed: 0.8m
 3. The above test results are obtained under the normal condition.

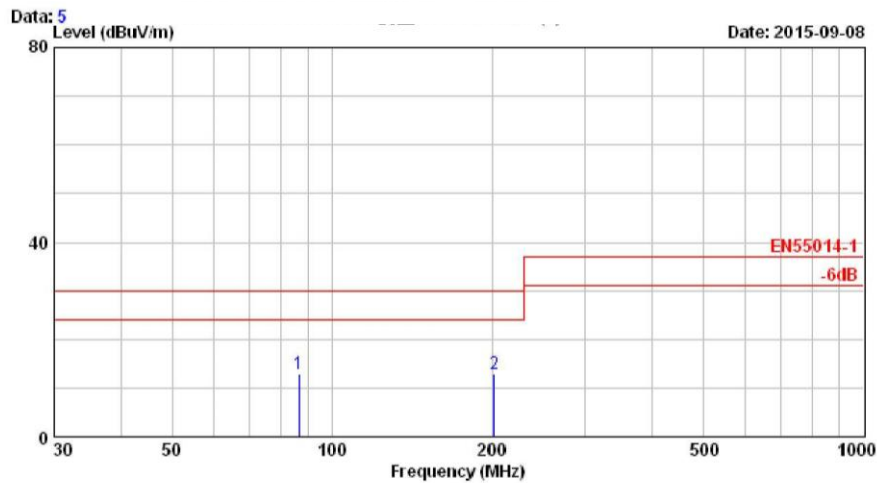
Test of Radiated Emission

Radiated emissions from 30 MHz to 1000 MHz were measured with a bandwidth of 120 KHZ according to the methods in European Standard EN 55022. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane as shown. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.



2.2 RADIATED EMISSION TEST

Applicant Name : Antari Lighting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380,Z-390



Site no. : OATS NO.8
 Dis. / Ant. : 10m CBL6112B(2735)
 Limit : EN55014-1
 Env. / Ins. : 25°C/58% ESCI (558)
 EUT M/N : Z-380
 Power Rating : 230Vac/50Hz
 Test Mode :

Data no. : 5
 Ant. pol. : HORIZONTAL
 Engineer :

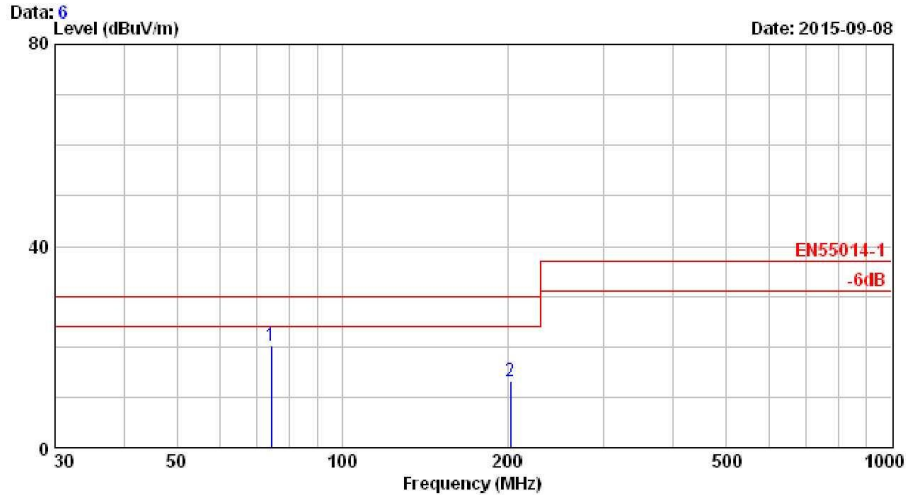
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	86.800	8.49	1.50	3.00	12.99	30.00	17.01	
2	202.100	9.25	2.52	1.00	12.77	30.00	17.23	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



2.2 RADIATED EMISSION TEST

Applicant Name : Antari Lighting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380 ,Z-390



Site no. : OATS NO.8 Data no. : 6
Dis. / Ant. : 10m CBL6112B(2735) Ant. pol. : VERTICAL
Limit : EN55014-1
Env. / Ins. : 25°C/58% E8CI (558) Engineer :
EUT M/N : Z-380
Power Rating : 230Vac/50Hz
Test Mode :

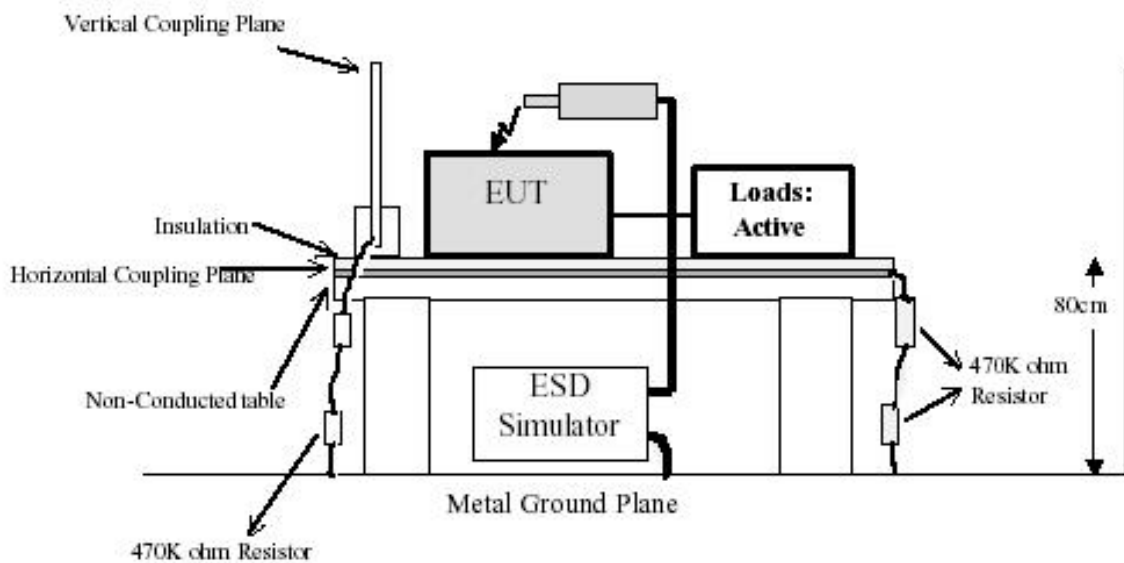
	Ant. Factor	Cable Loss	Emission Reading	Emission Level	Limits	Margin	Remark
Freq. (MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	74.400	7.08	1.37	11.80	20.25	30.00	9.75
2	202.700	9.31	2.52	1.50	13.33	30.00	16.67

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

3.1 ELECTROSTATIC DISCHARGE IMMUNITY

Applicant Name : Antari Lighting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390

Test Standard	Result
EN 61000-4-2:2009	Pass



TEST PROCEDURE

The test setup consists of the test generator, EUT and auxiliary instrumentation necessary to perform DIRECT and INDIRECT application of discharges to the EUT as applicable, in the follow manner:

- a. CONTACT DISCHARGE to the conductive surfaces and to coupling plane;
- b. AIR DISCHARGE at insulation surfaces.

The preferred test method is that of type tests performed in laboratories and the only accepted method of demonstrating conformance with this standard. The EUT was arranged as closely as possible to arrangement in final installed conditions.



3.1 ELECTROSTATIC DISCHARGE IMMUNITY

Applicant Name : Antari Lighiting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380 ,Z-390

Electrostatic discharge (ESD) immunity test

Port: Enclosure

Basic Standard: EN 61000-4-2

Requirements: Air Discharge ±2 KV, ±4 KV, ±8 KV, ±15 KV
Contact Discharge ±2 KV, ±4 KV, ±8 KV, ±15 KV

Pass Performance Criteria: A

Required Performance Criteria: B

Temperature: 25 degree C

Humidity: 61%

Selected Test Point

Air: discharges were applied to slots, aperture or insulating surfaces. 10 single air discharges were applied to each selected points.

Contact: Total 200 points minimum were to the selected contact points.

Indirect Contact Points: Total 25 discharges were applied to center of each edge of VCP and each EUT side of HCP with 10 cm away from EUT.



3.1 ELECTROSTATIC DISCHARGE IMMUNITY

Applicant Name : Antari Lighting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380 ,Z-390

Test Results

Discharge Voltage (kV)	Type of discharge	Label for Dischargeable Points	Performance		Result (Pass/Fail)
			Required	Observation	
±2	Contact	No dischargeable point	B	A(1)	Pass
±4	Contact	No dischargeable point	B	A(1)	Pass
±2	Air	No dischargeable point	B	A(1)	Pass
±4	Air	No dischargeable point	B	A(1)	Pass
±8	Air	No dischargeable point	B	A(1)	Pass
±2	HCP-Bottom	Edge of the HCP	B	A(1)	Pass
±2	VCP-Front	Center of the VCP	B	A(1)	Pass
±2	VCP-Left	Center of the VCP	B	A(1)	Pass
±2	VCP-Back	Center of the VCP	B	A(1)	Pass
±2	VCP-Right	Center of the VCP	B	A(1)	Pass
±4	HCP-Bottom	Edge of the HCP	B	A(1)	Pass
±4	VCP-Front	Center of the VCP	B	A(1)	Pass
±4	VCP-Left	Center of the VCP	B	A(1)	Pass
±4	VCP-Back	Center of the VCP	B	A(1)	Pass
±4	VCP-Right	Center of the VCP	B	A(1)	Pass

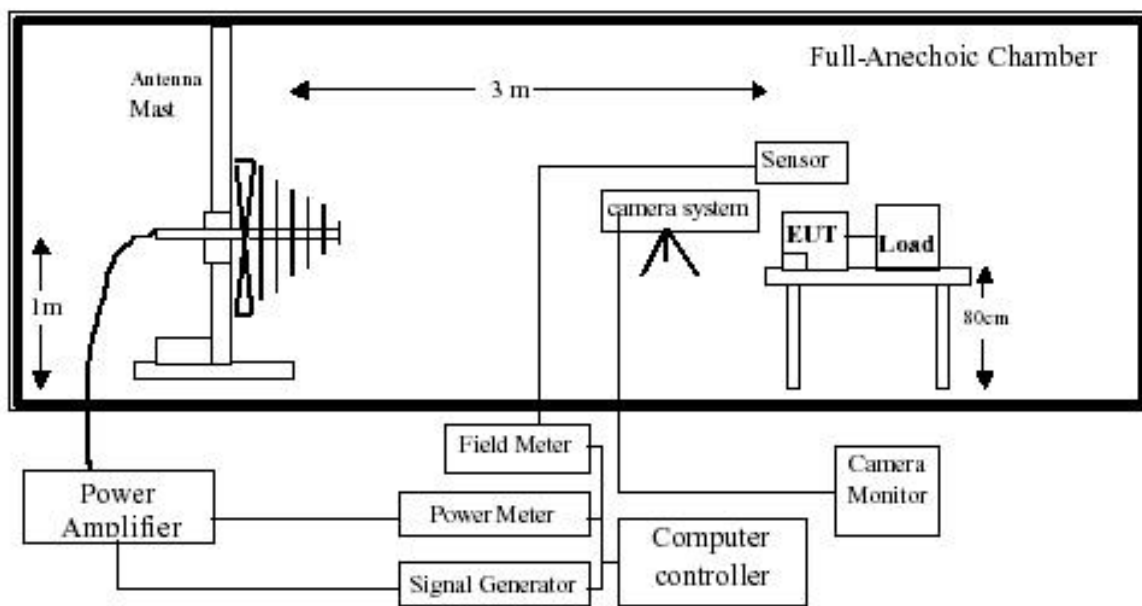
Observation of Performance during Test

(1) Normal operation condition specified by manufacturer during the test.

3.2 RADIO FREQUENCY ELECTROMAGNETIC FIELD IMMUNITY

Applicant Name : Antari Lighting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390

Test Standard	Result
EN 61000-4-3:2006+A1:2008+A2:2010	Pass



TEST PROCEDURE

The procedure defined in this part requires the generation of electromagnetic fields within which the test sample is placed and its operation observed. To generate fields that are useful for simulation of actual (field) conditions may require significant antenna drive power and the resultant high field strength levels. To comply with local Standards and to prevent biological hazards to the testing personnel, it is recommended that these tests be carried out in a shielded enclosure or semichoice chamber.

3.2 RADIO FREQUENCY ELECTROMAGNETIC FIELD IMMUNITY

Applicant Name : Antari Lighiting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380 ,Z-390

Radio-Frequency, Electromagnetic Field immunity test

Port: Enclosure

Basic Standard: EN 61000-4-3

Modulation 1 KHz, 80%AM

Requirements: ±1V/m, ±3 V/m, ±10 V/m

Frequency range: 80 MHz~1 GHz

Step: 1% of last step frequency

Step time: 3s

Pass Performance Criteria: A

Required Performance Criteria: A

Temperature: 23 degree C

Humidity: 67%

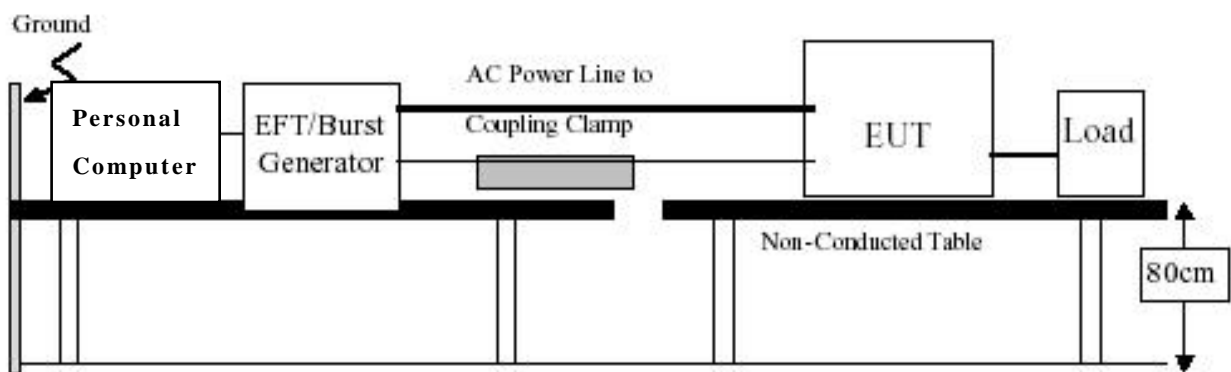
Test Setup

The field sensor is placed at one calibration grid point to check the intensity of the established fields on both polarizations. EUT is adjusted to have each side of EUT face coincident with the calibration plane. A Fog Machine is used to monitor the condition of EUT for the performance judgment.

3.3 EFT/BURST IMMUNITY

Applicant Name : Antari Lighiting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390

Test Standard	Result
EN 61000-4-4:2012	Pass



TEST PROCEDURE

The EUT was placed on a ground reference plane and was insulated from it by an insulating support about 0.1m thick. If the EUT is table-top equipment, it was located approximately 0.8m above the GRP. The GRP was a metallic sheet (copper or aluminum) of 0.25mm, minimum thickness; other metallic may be used but they shall have at least 0.65mm thickness. It shall project beyond the EUT by at least 0.1m on all sides and connected to the protective earth. In the EMC LAB, we provided 1mm thickness aluminum ground reference plane or 1mm thickness stainless steel ground reference plane. The minimum size of the ground reference plane is 1m×1m, the exact size depending on the dimensions of the EUT. It was connected to the protective grounding system. The EUT was arranged and connected according to its functional requirements. The minimum distance between the EUT and other conductive structures, except the GRP beneath the EUT, was more than 0.5m. Using the coupling clamp, the minimum distance between the coupling plates and all other conductive structures, except the GRP, beneath the EUT, was more than 0.5m. The length of the signal and power lines between the coupling device and the EUT was 1m less.



3.3 POWER FREQUENCY MAGNETIC FIELD IMMUNITY

Applicant Name : Antari Lighting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380,Z-390

Electrical Fast transient/burst immunity test

Port: AC mains

Basic Standard: EN 61000-4-4

Requirements: ±0.5KV, ±1 KV, ±2KV, ±4KV

Pass Performance Criteria: A

Required Performance Criteria: B

Rise Time: 5ns

Hold Time: 50ns

Repetition Frequency: 5 KHz

Temperature: 18 degree C

Humidity: 65%

Electrical Fast transient/burst immunity test for I/O cable

Port: twisted pairs AV and S port

Basic Standard: EN 61000-4-4

Requirements: 0.5 kV

Pass Performance Criteria: None (No I/O cable)

Required Performance Criteria: B

Rise Time: 5ns

Hold Time: 50ns

Repetition Frequency: 5 KHz

Temperature: 25 degree C

Humidity: 69%

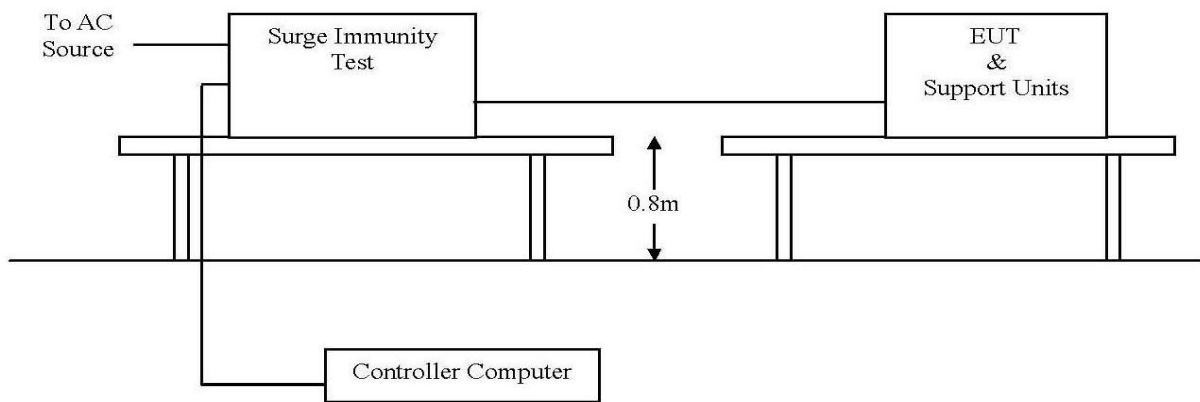
Test Setup

EUT is at least 50cm from the conductive structure.

3.4 SURGE IMMUNITY TEST

Applicant Name : Antari Lighting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390

Test Standard	Result
EN 61000-4-5:2014	Pass



TEST PROCEDURE

1. The EUT and support units were located on a wooden table 0.8m away from ground floor.
2. Injected test voltage to the EUT ports from minimum to standard request or client request.
3. Recording the test result as shown in following table.



3.4 SURGE IMMUNITY TEST

Applicant Name : Antari Lighiting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380 ,Z-390

Coupling Line	Voltage (kV)	Polarity	Coupling Method	Result (Pass/Fail)
L1-L2	1	Positive	Capacitive	Pass
L1-PE	2	Positive	Capacitive	Pass
L2-PE	2	Positive	Capacitive	Pass
L1-L2	1	Negative	Capacitive	Pass
L1-PE	2	Negative	Capacitive	Pass
L2-PE	2	Negative	Capacitive	Pass

Surge immunity test

Basic Standard: EN 61000-4-5

Pass Performance Criteria: A

Required Performance Criteria: B

Voltage Waveform : 1.2/50 us

Current Waveform : 8/20 us

Polarity : Positive/Negative

Phase angle : 0°, 90°, 270°

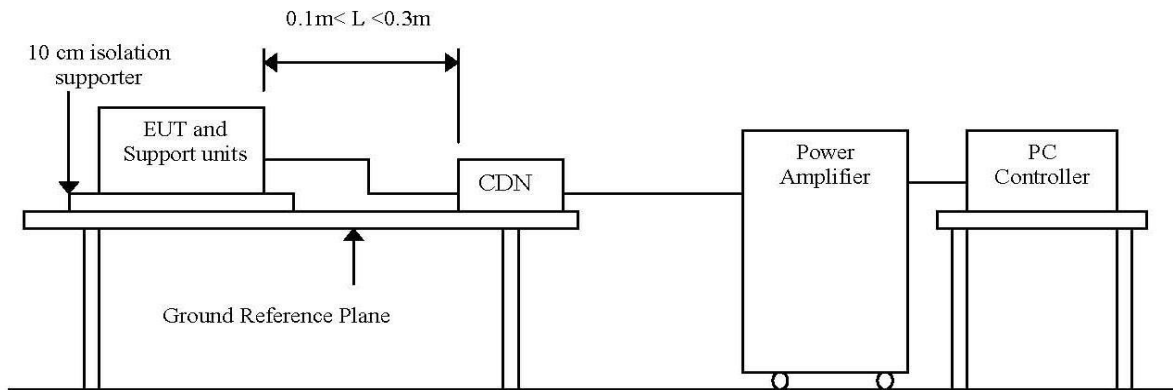
Temperature: 25 degree C

Humidity: 69%

3.5 CONDUCTED DISTURBANCE/INDUCED RF FIELD IMMUNITY TEST

Applicant Name : Antari Lighiting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390

Test Standard	Result
EN 61000-4-6:2014	Pass



TEST PROCEDURE

1. The EUT and support units were located at a ground reference plane with the interposition of a 0.1 m thickness insulating support and the CDN was located on GRP directly.
2. Setting the testing parameters of CS test software as per EN 61000-4-6.
3. Recording the test result in following table.



3.5 CONDUCTED DISTURBANCE/INDUCED RF FIELD IMMUNITY TEST

Applicant Name : Antari Lighiting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380 ,Z-390

Range (MHz)	Field	Modulation	Result (Pass/Fail)
0.15-230	3V	Yes	Pass

CONDUCTED DISTURBANCE/INDUCED RF FIELD IMMUNITY TEST

Basic Standard: EN 61000-4-6

Pass Performance Criteria: A

Required Performance Criteria: A

Frequency Range : 0.15MHz-230MHz

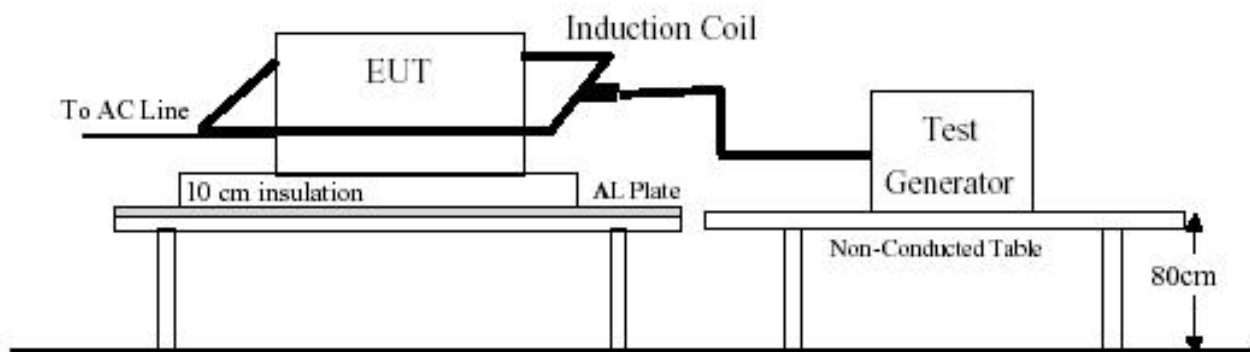
Frequency Step : 1% of fundamental

Dwell Time : 3 sec

3.6 POWER FREQUENCY MAGNETIC FIELD IMMUNITY

Applicant Name : Antari Lighting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390

Test Standard	Result
EN 61000-4-8:2010	Pass



TEST PROCEDURE

The EUT and its load are placed on a table which is 0.8 meter above a metal ground plane measured at least 1m*1m min. The test magnetic field shall be placed at central of the induction coil.

The test magnetic Field shall be applied 10minutes by the immersion method to the EUT. And the induction coil shall be rotated by 90° in order to expose the EUT to the test field with different orientation (X, Y, Z Orientations).



3.6 POWER FREQUENCY MAGNETIC FIELD IMMUNITY

Applicant Name : Antari Lighiting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380 ,Z-390

Power Frequency Magnetic field immunity test

Port: Enclosure

Basic Standard: EN 61000-4-8:2010

Requirements: 1 A/m

Pass Performance Criteria: A

Required Performance Criteria: A

Orientation: X, Y, Z

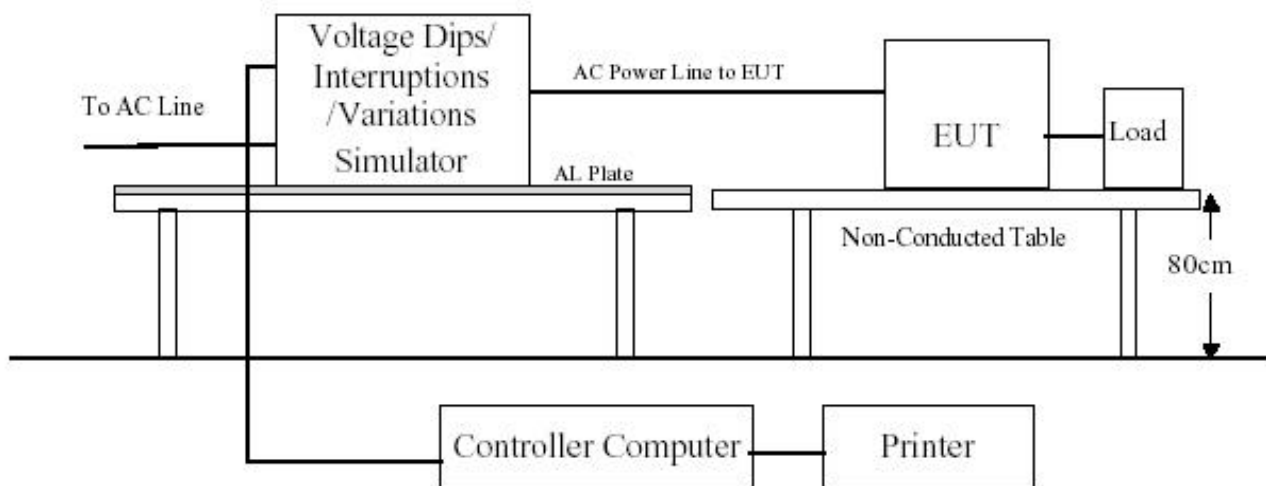
Temperature: 21 degree C

Humidity: 68%

3.7 VOLTAGE DIPS, SHORT INTERRUPTION, AND VOLTAGE VARIATION IMMUNITY

Applicant Name : Antari Lighiting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390

Test Standard	Result
EN 61000-4-11:2014	Pass



TEST PROCEDURE

The EUT and its load are placed on a table which is 0.8 meter above a metal ground plane measured 1m*1m min, and 0.65mm thick min. And projected beyond the EUT by at least 0.1m on all sides. The power cord shall be used the shortest power cord as specified by the manufacturer.

For Voltage Dips/ Interruptions test:

The selection of test voltage is based on the rated power range. If the operation range is large than 20% of lower power range, both end of specified voltage shall be tested. Otherwise, the typical voltage specification is selected as test voltage.

The EUT is connected to the power mains through a coupling device that directly couples to the Voltage Dips and Interruption Generator.

The EUT shall be tested for 30% voltage dip of supplied voltage and duration 10ms, for 60% voltage dip of supplied voltage and duration 100ms with a sequence of three voltage dips with intervals of 10 seconds, and for 95% voltage interruption of supplied voltage and duration 5000ms with a sequence of three voltage interruptions with intervals of 10 seconds.

Voltage phase shifting are shall occur at degree 0, 45, 90, 135, 180, 225, 270, 315 of the voltage.



3.7 VOLTAGE DIPS, SHORT INTERRUPTION, AND VOLTAGE VARIATION IMMUNITY

Applicant Name : Antari Lighiting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380 ,Z-390

Voltage Dips, Short Interruption and Voltage Variation immunity test

Port: AC mains

Basic Standard: EN 61000-4-11

Pass Performance Criteria: A

Required Performance Criteria: C

Voltage Dips

1. Voltage Dips: >60% in 10 period

Criteria: Pass

2. Voltage Dips: >30% in 50 periods

Criteria: Pass

Voltage Interruption

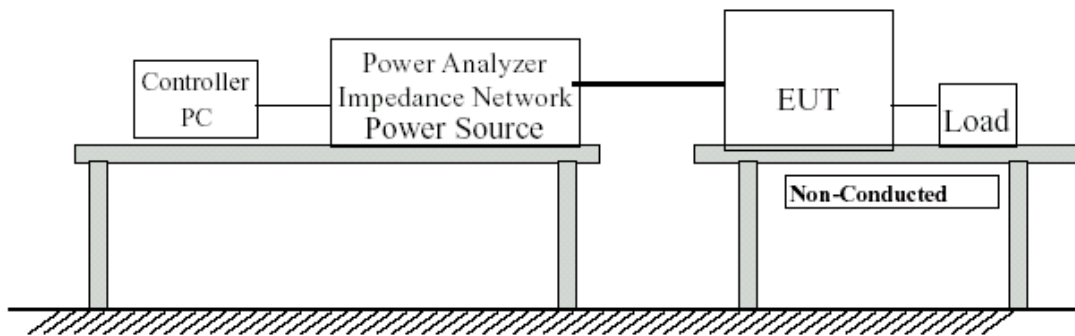
1. Voltage Interruption: >100% in 0.5 periods

Criteria: Pass

4.1 HARMONICS CURRENT MEASUREMENT

Applicant Name : Antari Lighting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380,Z-390

Test Standard	Result
EN 61000-3-2:2014	Pass



TEST PROCEDURE

a. The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating conditions for each successive harmonic component in turn.

b. The classification of EUT is according to section 5 of EN 61000-3-2

The EUT is classified as follows:

Class A: Balanced three-phase equipment and all other equipment, except that stated in one of the following classes.

Class B: Portable tools.

Class C: Lighting equipment, including dimming devices.

Class D: Equipment having an input current with “special wave shape” and an active input power, $P \leq 600 \text{ W}$

c. The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the time necessary for the EUT to be exercised.



4.1 HARMONICS CURRENT MEASUREMENT

Applicant Name : Antari Lighting And Effects Ltd.
Product Type : Fog Machine
Model Name : Z-380 ,Z-390

LIMITS OF HARMONICS CURRENT MEASUREMENT

Limits for Class A equipment	
Harmonics Order n	Max. permissible harmonics current A
Odd harmonics	
3	2.30
5	1.14
7	0.77
9	0.40
11	0.33
13	0.21
15<=n<=39	0.15x15/n
Even harmonics	
2	1.08
4	0.43
6	0.30
8<=n<=40	0.23x8/n

Limits for Class D equipment		
Harmonics Order N	Max. permissible harmonics current per watt m A/W	Max. permissible harmonics current A
Odd Harmonics only		
3	3.4	2.30
5	1.9	1.14
7	1.0	0.77
9	0.5	0.40
11	0.35	0.33
13	0.30	0.21
15<=n<=39	3.85/n	0.15x15/n

NOTE : 1.Class A and Class D are judged by test equipment automatically as per Section 5 of EN 61000-3-2: 2006

2.The above limits for Class D equipments are for all applications having an active input power > 75 W.

No limits apply for equipments with an active input power up to and including 75 W.



4.1 HARMONICS CURRENT MEASUREMENT

Applicant Name : Antari Lighting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380,Z-390

Voltage Source Verification Data (Run time)

Test category: Class-A per Ed. 3.2 (2009) (European limits) Tested by: Kent
 Start time: 17:46:06 Test Margin: 100
 End time: 17:48:57

Test duration (min): 2.5
 Comment: Customer:
 Temperature : 28 °C Humidity : 45 % Pressure : 1011 mbar

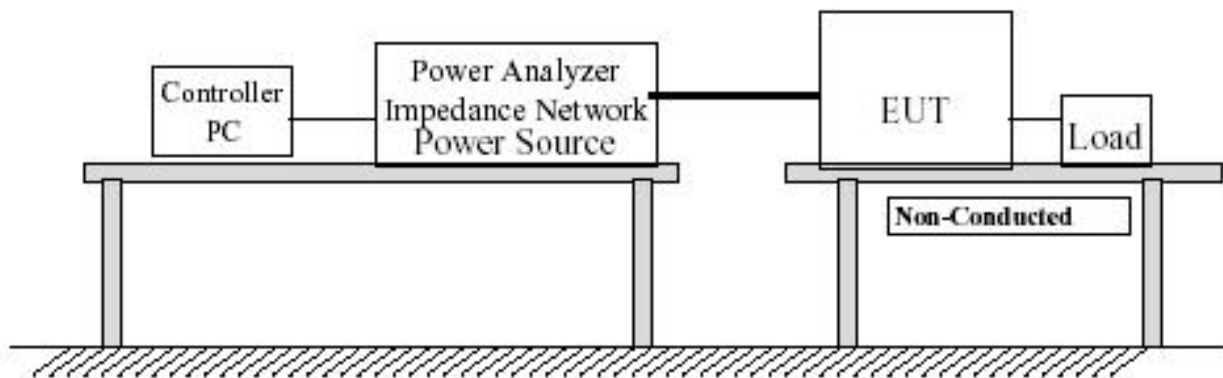
Test Result: Pass Source qualification: Normal

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.353	0.439	80.40	OK
3	0.516	1.977	26.08	OK
4	0.062	0.439	14.04	OK
5	0.031	0.879	3.55	OK
6	0.028	0.439	6.47	OK
7	0.070	0.659	10.60	OK
8	0.023	0.439	5.24	OK
9	0.060	0.439	13.62	OK
10	0.021	0.439	4.89	OK
11	0.032	0.220	14.69	OK
12	0.014	0.220	6.56	OK
13	0.020	0.220	9.06	OK
14	0.013	0.220	5.85	OK
15	0.018	0.220	8.33	OK
16	0.017	0.220	7.54	OK
17	0.014	0.220	6.34	OK
18	0.016	0.220	7.21	OK
19	0.006	0.220	2.91	OK
20	0.010	0.220	4.33	OK
21	0.010	0.220	4.38	OK
22	0.007	0.220	3.36	OK
23	0.010	0.220	4.77	OK
24	0.005	0.220	2.34	OK
25	0.011	0.220	4.83	OK
26	0.008	0.220	3.54	OK
27	0.008	0.220	3.65	OK
28	0.007	0.220	3.01	OK
29	0.009	0.220	4.28	OK
30	0.007	0.220	2.97	OK
31	0.007	0.220	3.10	OK
32	0.005	0.220	2.24	OK
33	0.008	0.220	3.48	OK
34	0.003	0.220	1.19	OK
35	0.006	0.220	2.58	OK
36	0.003	0.220	1.43	OK
37	0.005	0.220	2.45	OK
38	0.003	0.220	1.21	OK
39	0.005	0.220	2.19	OK
40	0.003	0.220	1.42	OK

5.1 VOLTAGE FLUCTUATION AND FLICKS MEASUREMENT

Applicant Name : Antari Lighting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390

Test Standard	Result
EN 61000-3-3:2013	Pass



TEST PROCEDURE

- a. The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the most unfavorable sequence of voltage changes under normal operating conditions.
- b. During the flick measurement, the measure time shall include that part of whole operation cycle in which the EUT produce the most unfavorable sequence of voltage changes. The observation period for short-term flicker indicator is 10 minutes and the observation period for long-term flicker indicator is 2 hours.

LIMITS OF VOLTAGE FLUCTUATION AND FLICKS MEASUREMENT

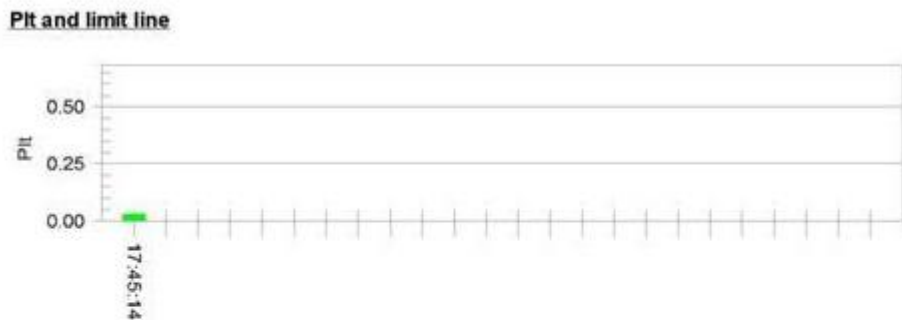
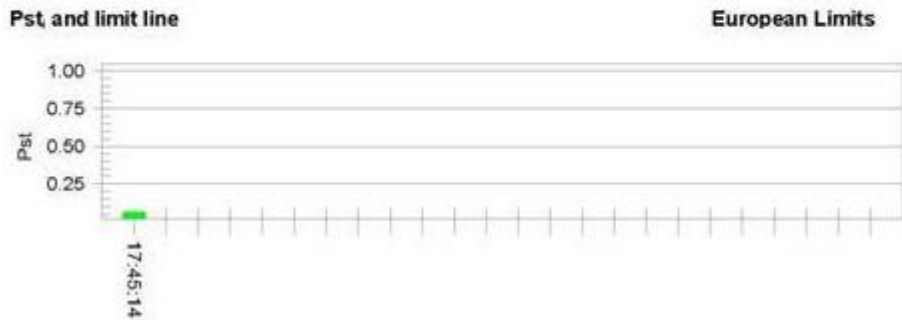
TEST ITEM	LIMIT	NOTE
P_{st}	1.0	P_{st} means short-term flicker indicator.
P_{lt}	0.65	P_{lt} means long-term flicker indicator.
$T_{dt}(ms)$	200	T_{dt} means maximum time that dt exceeds 3 %.
$D_{max}(\%)$	4%	D_{max} means maximum relative voltage change.
$Dc(\%)$	3%	Dc means relative steady-state voltage change.

5.1 VOLTAGE FLUCTUATION AND FLICKS MEASUREMENT

Applicant Name : Antari Lighting And Effects Ltd.
 Product Type : Fog Machine
 Model Name : Z-380 ,Z-390

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

Test category: All parameters (European limits)	Tested by: Kent
Test duration (min): 10	Test Margin: 100
Comment:	End time: 17:45:15
Temperature : 28 °C	Customer:
Humidity : 45 %	Pressure : 1011 mbar
Test Result: Pass	Status: Test Completed



Parameter values recorded during the test:			
Vrms at the end of test (Volt):	219.47		
Highest dt (%):	0.00	Test limit (%):	3.30 Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0 Pass
Highest dc (%):	0.00	Test limit (%):	3.30 Pass
Highest dmax (%):	0.00	Test limit (%):	4.00 Pass
Highest Pst (10 min. period):	0.064	Test limit:	1.000 Pass

- End of Report -



ADVANCED SAFETY PRODUCT
ASP TECHNOLOGY CORP

8F,-1, No.1, Zhongzheng Rd., Tucheng Dist., New Taipei City 23670, Taiwan (R.O.C.)
TEL:886-2-22613919, FAX:886-2-22613918, E-mail: asp.twn@gmail.com

C.
CONSTRUCTION PHOTOS

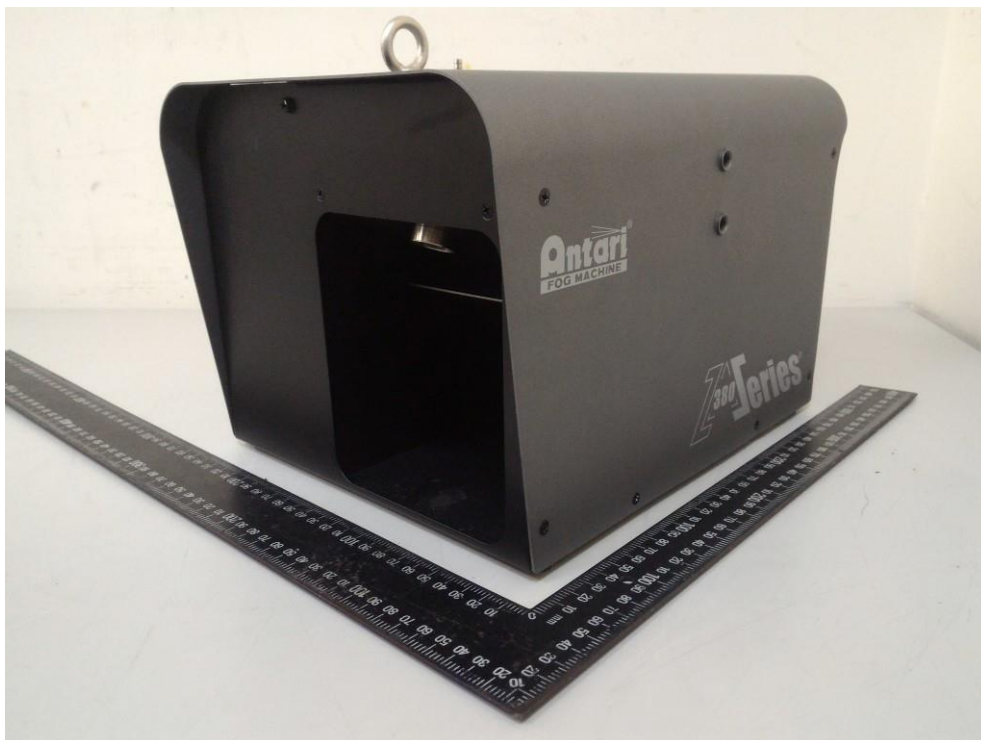
Annex. EUT Photographs

Model: Z-380



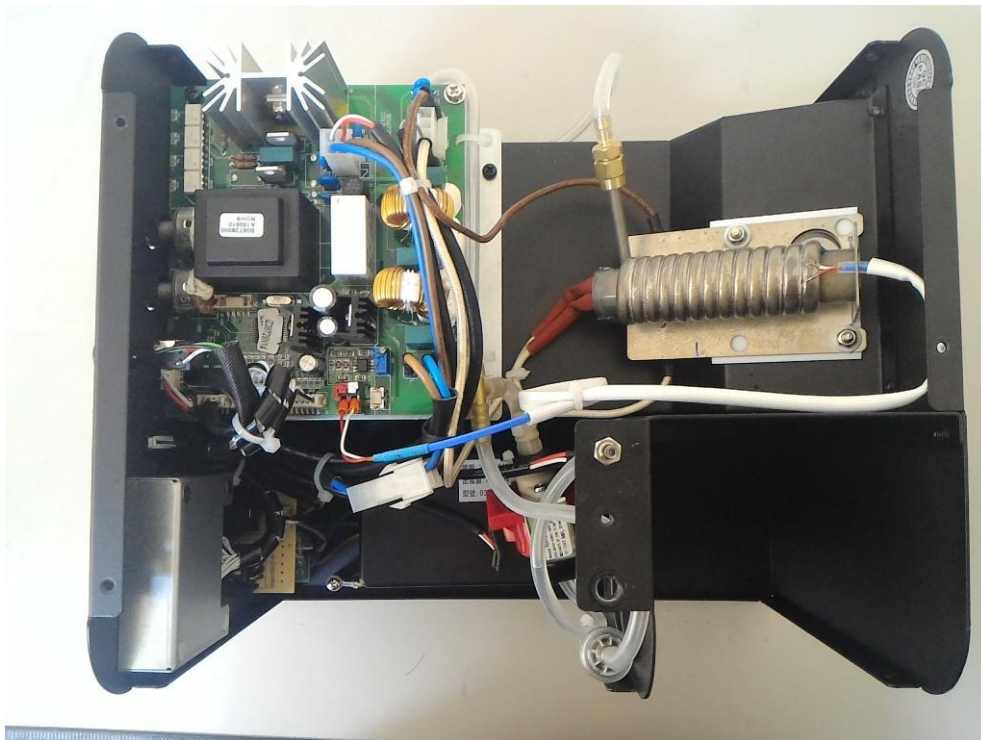
Annex. EUT Photographs

Model: Z-380



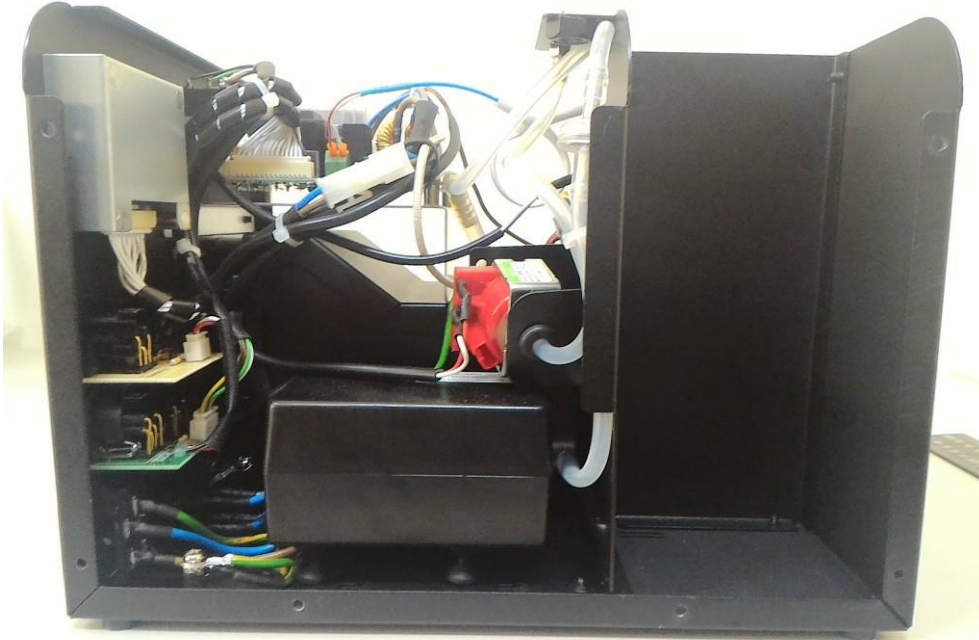
Annex. EUT Photographs

Model: Z-380



Annex. EUT Photographs

Model: Z-380





D. TECHNICAL DOCUMENTATION

(A) A general description;

(B) Conceptual design and manufacturing drawings and schemes of components, sub-assemblies, circuits, etc.;

(C) Descriptions and explanations necessary for the understanding of those drawings and schemes and the operation of the electrical equipment;

(D) A list of the harmonized standards applied in full or in part the references of which have been published in the Official Journal of the European Union or international or national standards referred to in Articles 13 and 14 and, where those harmonized standards or international or national standards have not been applied, descriptions of the solutions adopted to meet the safety objectives of the Directive, including a list of other relevant technical specifications applied. In the event of partly applied harmonized standards or international or national standards referred to in Articles 13 and 14, the technical documentation shall specify the part which have been applied;

(E) Results of design calculations made, examinations carried out, etc.



Z-380 Fazer Machine User Manual



CONFORMS TO
ANSI/UL STD.99C
CERTIFIED TO
CAN/CSA STD.
C22.2 No.104



RoHS



English



User Manual

Safety Information



Please read the following safety information carefully before operating the machine. Information includes important safety information about installation, usage, and maintenance. Pay attention to all warning labels and instructions in this manual and printed on the machine.

If you have questions about how to operate the machine safely, please contact your local Antari dealer for help.

- Keep this device dry.
- Always connect to a grounded circuit to avoid risk of electrocution.
- Before connecting machine to power, always check voltage indicate on machine match to your local AC voltage. Do not use the machine if AC power voltage does not match.
- Disconnect the machine from AC power before servicing and when not in use.
- This product is for indoor use only! Do not expose to rain or moisture. If fluid is spilled, disconnect AC power and clean with a damp cloth. If fluid is spilled onto electronic parts, immediately unplug the machine and contact your local Antari dealer for advice.
- No user serviceable and modifiable parts inside. Never try to repair this product, unauthorized technician may lead machine to damage or malfunction.
- For adult use only. Never leave the machine running unattended.
- Installed in well ventilated area. Provide at least 50 cm space around the machine.
- Never add flammable liquid of any kind to the machine.
- Make sure there are no flammable materials close to the machine while operating.
- Only use Antari fluid. Other fluid may lead to heater clog and malfunction.
- If the machine fails to work, unplug the machine and stop operation immediately. Contact your local Antari dealer for advise.
- Before transporting the machine, make sure the fluid tank is completely drained.
- Smoke fluid may present health risks if swallowed. Do not drink smoke fluid. Store it

securely. In case of eye contact or if fluid is swallowed immediately look for medical advice.

Unpacking and Inspection

Immediately upon receiving the machine, carefully unpack the carton, check all content to ensure that all parts are present and have been received in good condition. If any parts appear damaged or mishandled from shipping, notify the shipper immediately and retrain the packing material for inspection.

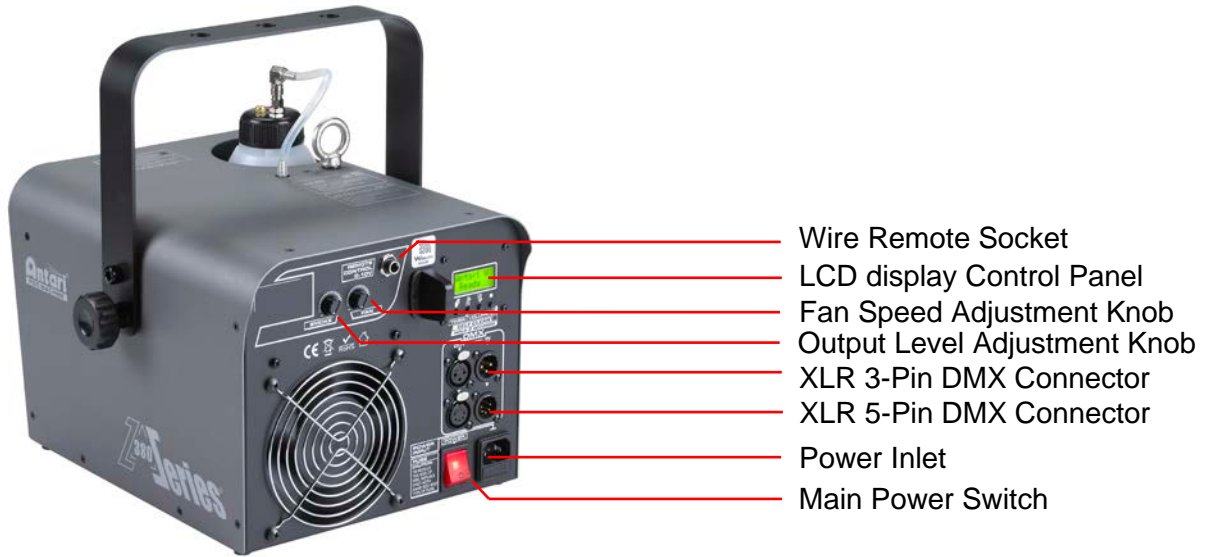
What is included:

- 1 x Z-380 Fazer
- 1 x Power Cord
- 1 x User Manual

Product Dimension



Product Overview



Setting Up

Step 1: Place the machine on a flat surface and in a suitable large area with at least 50 cm open space around the machine.

Step 2: Fill the fluid tank with Antari approved fluid.

Step 3: Connect the machine to suitable rated power supply. To determine the power requirement for the machine refer to the label on the back of the machine.



Always connect the machine to a protected circuit and ensure it is properly grounded to avoid risk of electrocution.

Step 4: Turn on the machine and allow it to heat up. Heat up takes approximately 1.5 minutes. Once the machine has reached operating temperature, the LCD display will show “Ready to Faze”. Now the machine is ready for operation.

Step 5: To start making haze, locate the **Volume** button on the control panel, and press the button to start making faze.

Step 6: To turn off the machine, press **Stop** button and put the power switch to the **OFF** position.

Operation

Control Panel Operation

The machine can be operated with onboard digital control interface or two rotary knobs located on the rear.



Rotary Knob	Function
SMOKE	Turn haze on/off, adjust output volume from 1~100%
FAN	Adjust fan speed from 20%~100%

Button	Function
[MENU]	Scroll through setting menu
▲ [UP]/[TIMER]	Up/Activate Timer function
▼ [DOWN]/[VOLUME]	Down/Activate Volume function
[STOP]	Deactivate Timer/Volume function

Control Menu

Interval Set 180s	Set interval from 1 to 180 seconds
Duration Set 120s	Set duration from 1 to 120 seconds
Timer Out 100%	Set timer output from 1 to 100%

Volume Out 100%	Set volume output from 1 to 100%
Fan Out 100%	Set fan output from 20 to 100%
DMX512 Add. 511	Set DMX address from 1 to 511
DMX Mode 1Ch	Set DMX mode Sync, 1Ch or 2Ch
Wireless OFF	Turn On or Off wireless control
Quick StartOFF	Turn On or Off run last setting function

Remote Control Operation (Optional)

To operate the machine by remote control, connect the remote to the microphone jack located on the rear of machine. Use the switch to turn haze on/off, and use the rotary knob to adjust the output volume from 1~100%.



Wireless Operation (Optional)

Wireless remote control system W-2 consists of a transmitter equipped with four buttons to turn faze output on or off, and adjust output volume; with an onboard receiver attach to the rear panel of Z-380.



W-2 Wireless Transmitter



Wireless Receiver

Wireless remote control function:

- [A] button – Turn on faze output
- [B] button – Turn off faze output
- [C] button – Increase output volume
- [D] button – decrease output volume

In a free open space the effective distance is 50 meters, actual usage depending on obstacle level the effective distance is 10-25 meters.

Registering transmitter

Transmitter can be pair or deleted from the receiver. Each receiver can pair up to 10 transmitters. Follow below steps to pair or delete transmitter from receiver.

Step 1: Power off Z-380 Fazer

Step 2: Press and hold [DOWN] button

Step 3: Turn power on and hold [DOWN] button until below menu shows on display

UP: Pair
DOWN:Del

Step 4A: Press [UP] to pair a new transmitter; press any button on the W-2 remote to finish pairing.

Step 4B: Press [DOWN] button to delete existing transmitter.

Transmitter battery replacement

If effective distance seems to be decreased, it is possible the battery level are low and require replacement. In order to replace the battery, undo the three screws on the back of transmitter to release the cover. Replace with same type and specification of battery which is 27A 12V

DMX Connector Pin Assignment

The machine provide 3 or 5 pin XLR connector for DMX connection. Diagram below indicate pin assignment information



Pin	Function
1	Ground
2	Data-
3	Data+

DMX Operation

Making the DMX Connection – Connect machine to a DMX controller or to one of the machines in the DMX chain. The machine uses an 3 or 5 pin XLR connector for DMX connection, the connector is located on the rear of the machine.



DMX Channel Function

Channel Mode	Channel	Value	Function
2	1	0-5	Faze off
	2	6-255	Faze 1-100%
1	1	0-5	Faze off Fan 100%
		6-255	Faze 1-100% Fan 100%
Sync	1	0-5	Faze Off Fan 20%
		6-255	Faze 1-100% Fan 21-100%

Fluid

Only use Antari FLG water-based liquid for the Z-380 Fazer. The machine is tested and

calibrated with this liquid to get the best output performance. Warranty will be void if any other type of liquid is used, improper use of liquid may lead to machine failure and malfunction.

Service and Maintenance

- Do not allow the machine to become contaminated.
- Remove dust from air vents with air compressor, vacuum or a soft brush.
- Only use a damp cloth to clean the casing.
- Before storing run distilled water through the system to help avoid condensing the pump or heater.
- It is recommended to run the machine on a monthly basis in order to achieve best performance and output condition.
- Excessive dust, liquid and dirt built up will degrade performance and cause overheating.

Fuse Replacement



Disconnect AC power before replacing fuse. Only replace fuse with same type and rating.

Step 1: Disconnect power cord from supply.

Step 2: Use a flat-head screwdriver to release fuse holder.

Step 3: Replace fuse with exact same type and rating as indicated below.

Step 4: Reinsert fuse holder.



Fuse

100V = T8A 250V

120V = T10A 250V

240V = T7A 250V

Error Messages

Heater Overheat	Indicate heater exceed temperature range
Heater Error	Indicate heater not working properly

If above message show on display unplug the machine and stop operation immediately.
Contact your local Antari dealer for advise

Technical Specifications

Input voltage	AC120V, 50/60Hz AC240V, 50/60Hz
Fuse	100V = T8A 250V 120V = T10A 250V 240V = T7A 250V
Heater	1500W
Warm-up time	1.5 min. (approx.)
Coverage volume	6000 cu.ft./min.
Max. operating time	3.5 hrs max. output
Fluid tank capacity	1.2 L
Fluid consumption	6 ml/min.
Compatible fluid	Antari FLG water-based fluid
Control option	DMX 512, Cable remote, Manual, Wireless remote Adjustable faze volume and fan speed

DMX channels	2 channels, Faze volume and fan speed
Power connection	IEC
DMX data connection	3 and 5 pin XLR
Remote control connection	3.5mm headphone jack
Dimension	L 328 x W 247.7 x H 264.9 mm L 328 x W 247.7 x H 323.9 mm (with hanging bracket)
Dry weight	8.48 kg
Accessories (Optional)	Z-3 remote control, W-2 wireless remote



For current product information visit Antari at: www.antari.com
For information requests please contact us at: sales@antari.com



C08Z38000

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E. MODIFICATIONS
ALL MODIFICATIONS THAT MAY AFFECT COMPLIANCE WITH THE STANDARD
REQUIREMENTS & NECESSARY TEST DATA(IF ANY)