

Nemko Test Report: 112163-6TRFWL

Applicant: Bellman & Symfon AB
Sodra Langebergsgatan 30
Vastra Frolunda
421 32
Sweden

Apparatus: Flash Receiver (BE1330)

FCC ID: WMSBERXTE

In Accordance With: FCC Part 15 Subpart B, 15.107 and 15.109
Unintentional Radiators

Authorized By:

A handwritten signature in blue ink, appearing to read 'Sim Jagpal'.

Sim Jagpal, Resource Manager

Date: September 2, 2008

Total Number of Pages: 14

Report Summary

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15, Subpart B. Radiated tests were conducted in accordance with ANSI C63.4-2003. OATS registration number 90493.

The assessment summary is as follows:

Apparatus Assessed:	Flash Receiver (BE1330)
Specification:	FCC Part 15 Subpart B
Compliance Status:	Complies
Exclusions:	None
Non-compliances:	None
Report Release History:	Original Release

Author: Jason Nixon, Telecom Specialist

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025.

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Section 1 : Equipment Under Test

1.1 Product Identification

The Equipment Under Test was identified as follows:

Flash Receiver (BE1330)

1.2 Samples Submitted for Assessment

The following samples of the apparatus have been submitted for type assessment:

Sample No.	Description	Serial No.
5	Bed shaker (BE1270)	BE1270065882001
13	Flash Receiver (BE1330)	None
16	Class II power Supply (U090050D)	None

The first samples were received on: August 28, 2006

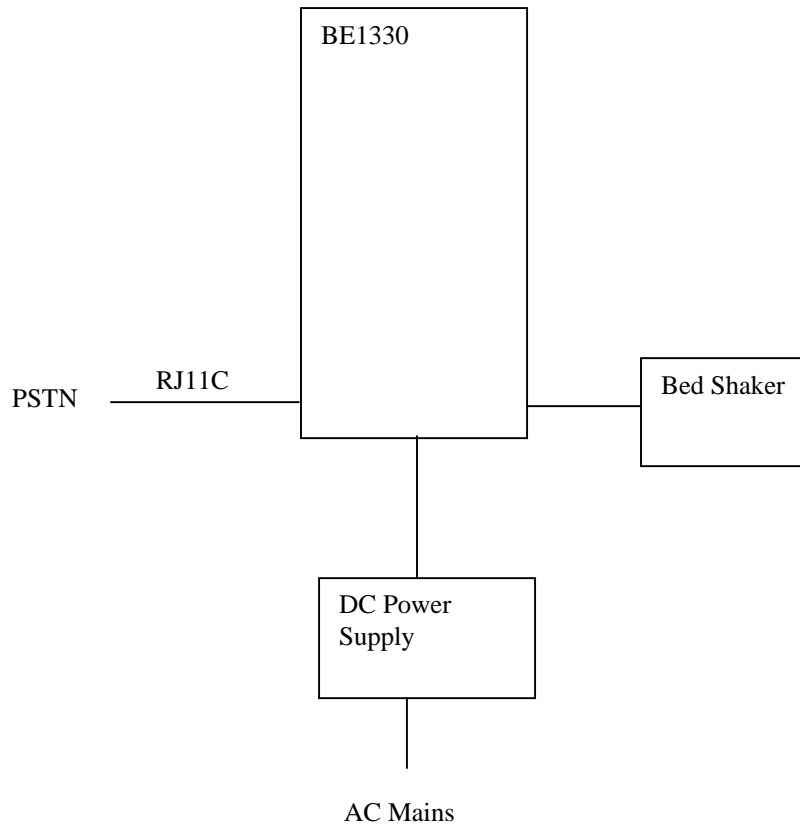
1.3 Theory of Operation

The apparatus is a signaller for the hearing impaired. It receives signals from other transmitters and either flashes or shakes the bed to alert the user.

1.4 Technical Specifications of the EUT

Manufacturer:	Bellman & Symfon AB
Receive Frequency:	433.92MHz
Receiver Type:	Amplifier-sequenced Hybrid
Antenna Data:	Integral
Power Source:	120VAC

1.5 Block Diagram of the EUT



Section 2 : Test Conditions

2.1 Specifications

The apparatus was assessed against the following specifications:

FCC Part 15 Subpart B, 15.107 and 15.109
Unintentional Radiators

2.2 Deviations From Laboratory Test Procedures

No deviations were made from laboratory test procedures.

2.3 Test Environment

All tests were performed under the following environmental conditions:

Temperature range : 15 – 30 °C
 Humidity range : 20 - 75 %
 Pressure range : 86 - 106 kPa
 Power supply range : +/- 5% of rated voltages

2.4 Test Equipment

Equipment	Manufacturer	Model No.	Asset/Serial No.	Next Cal.
LISN	EMCO	4825/2	FA001545	Jan. 30/07
Spectrum Analyzer	Hewlett-Packard	8566B	FA001309	May 16/07
Spectrum Analyzer Display	Hewlett-Packard	85662A	FA001309	May 16/07
International Power Supply	California Inst.	1001WP	FA000995	Jan. 11/07
Transient Limiter	Hewlett-Packard	1194 7A	FA000975	May 18/07
Biconical (1) Antenna	EMCO	3109	FA000805	May 03/07
Log Periodic Antenna #2	EMCO	3148	FA001355	May 16/07
Horn Antenna #1	EMCO	3115	FA000649	Jan. 12/07
1.0 – 2.0 GHz Amplifier	JCA	12-400	FA001498	Aug. 02/07

COU – Calibrate on Use

NCR – No Calibration Required

Section 3 : Observations

3.1 Modifications Performed During Assessment

No modifications were performed during assessment.

3.2 Record Of Technical Judgements

No technical judgements were made during the assessment.

3.3 EUT Parameters Affecting Compliance

The user of the apparatus could not alter parameters that would affect compliance.

3.4 Test Deleted

No Tests were deleted from this assessment.

3.5 Additional Observations

There were no additional observations made during this assessment.

Section 4 : Results Summary

This section contains the following:

FCC Part 15 Subpart B : Test Results

The column headed 'Required' indicates whether the associated clauses were invoked for the apparatus under test. The following abbreviations are used:

- N No : not applicable / not relevant.
- Y Yes : Mandatory i.e. the apparatus shall conform to these tests.
- N/T Not Tested, mandatory but not assessed. (See section 3.4 Test deleted)

The results contained in this section are representative of the operation of the apparatus as originally submitted.

4.1 FCC Part 15 Subpart B : Test Results

Part 15	Test Description	Required	Result
15.107(a)	Conducted Emissions for Class B	Y	PASS
15.109(a)	Radiated Emissions for Class B	Y	PASS

Notes:

Appendix A : Test Results

Clause 15.107(a) Conducted Emissions

Frequency of Conducted limit (dB μ V)		
Emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

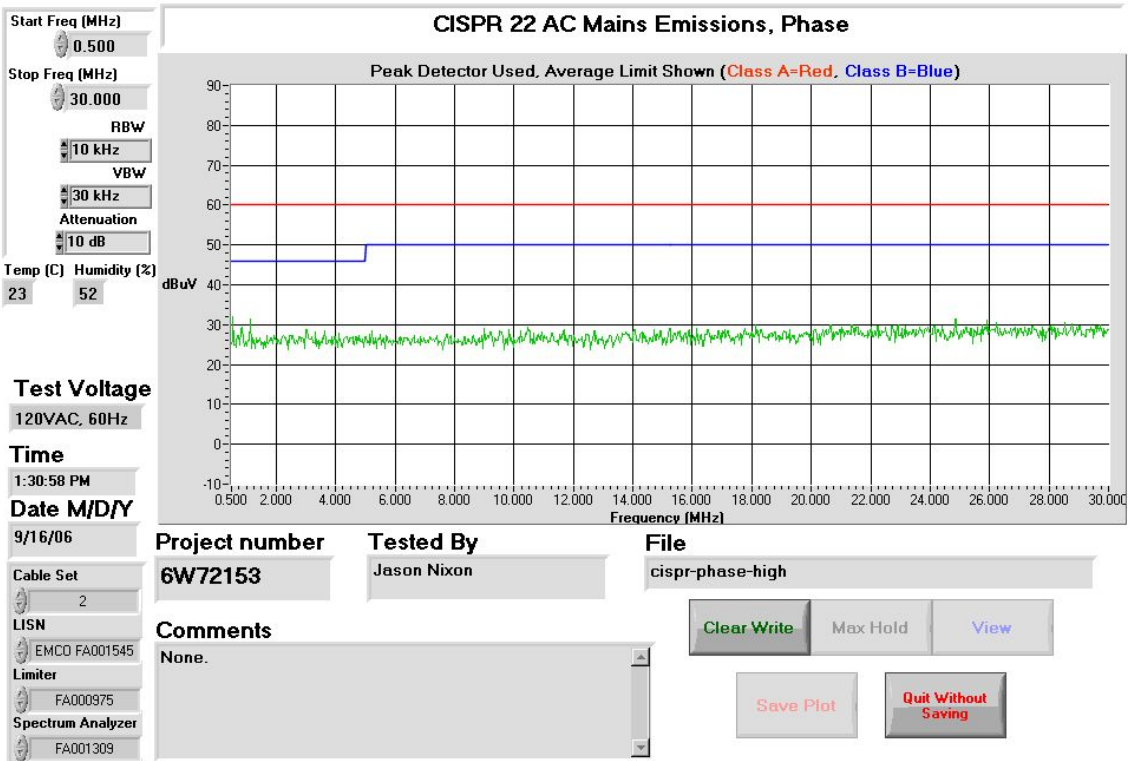
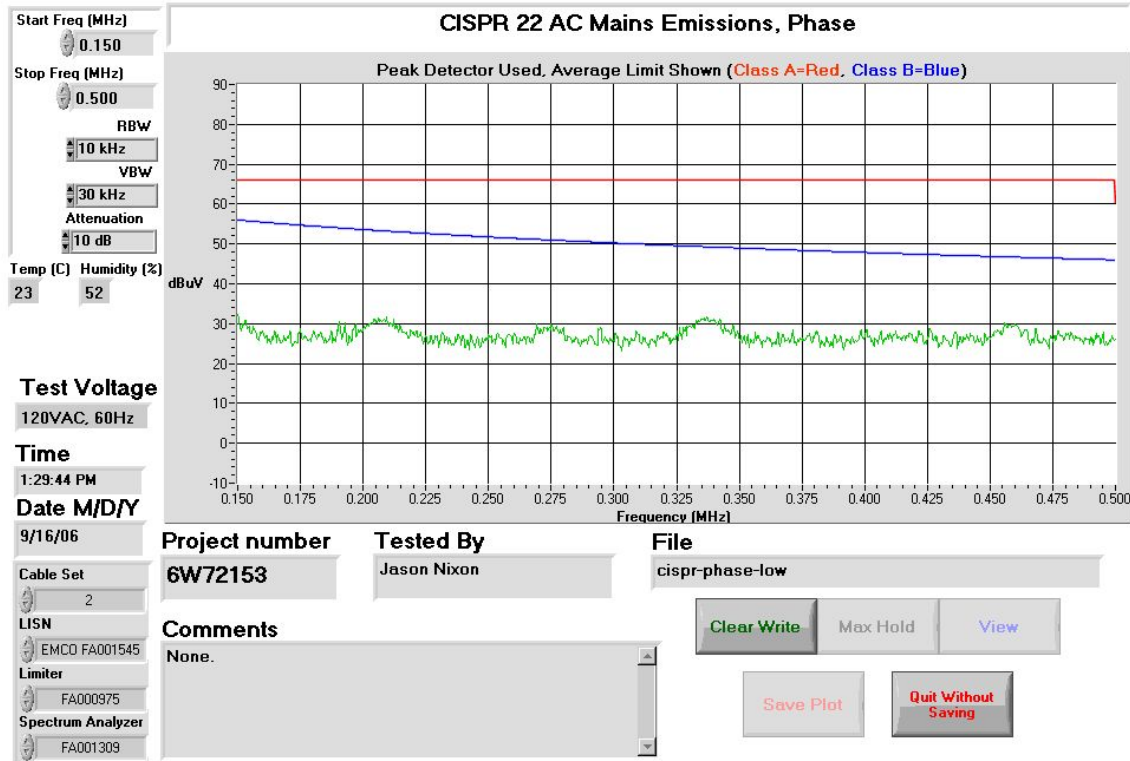
Test Conditions:

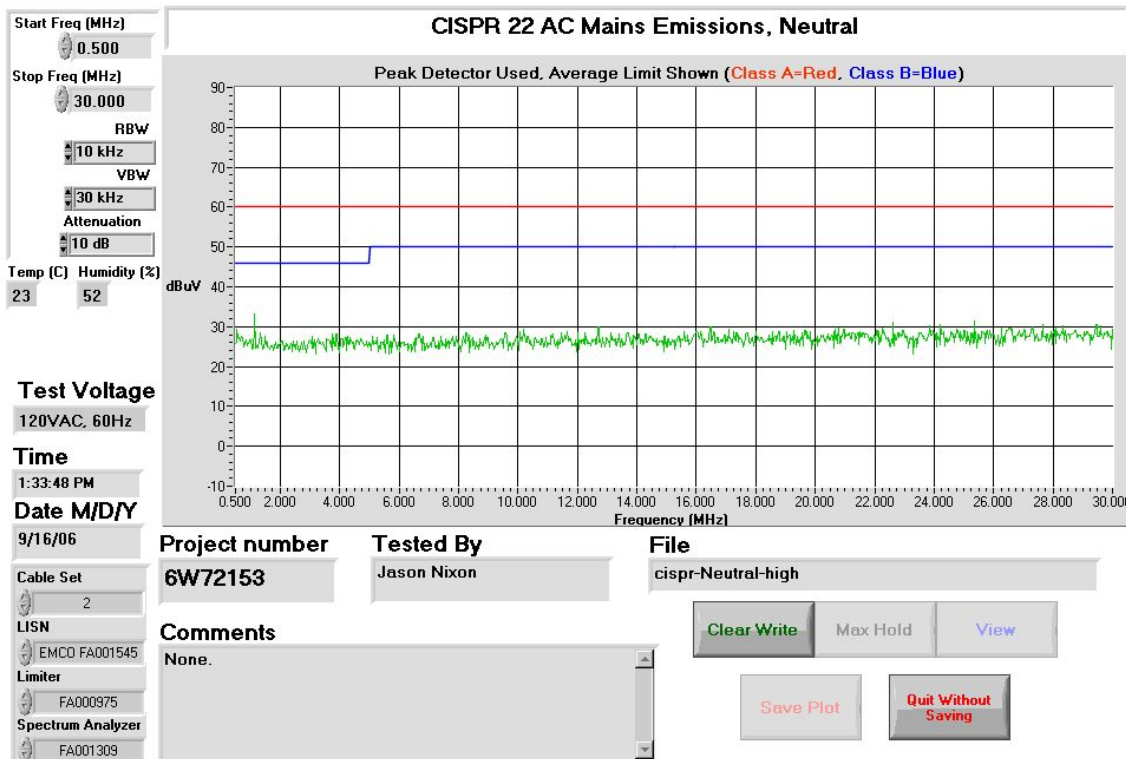
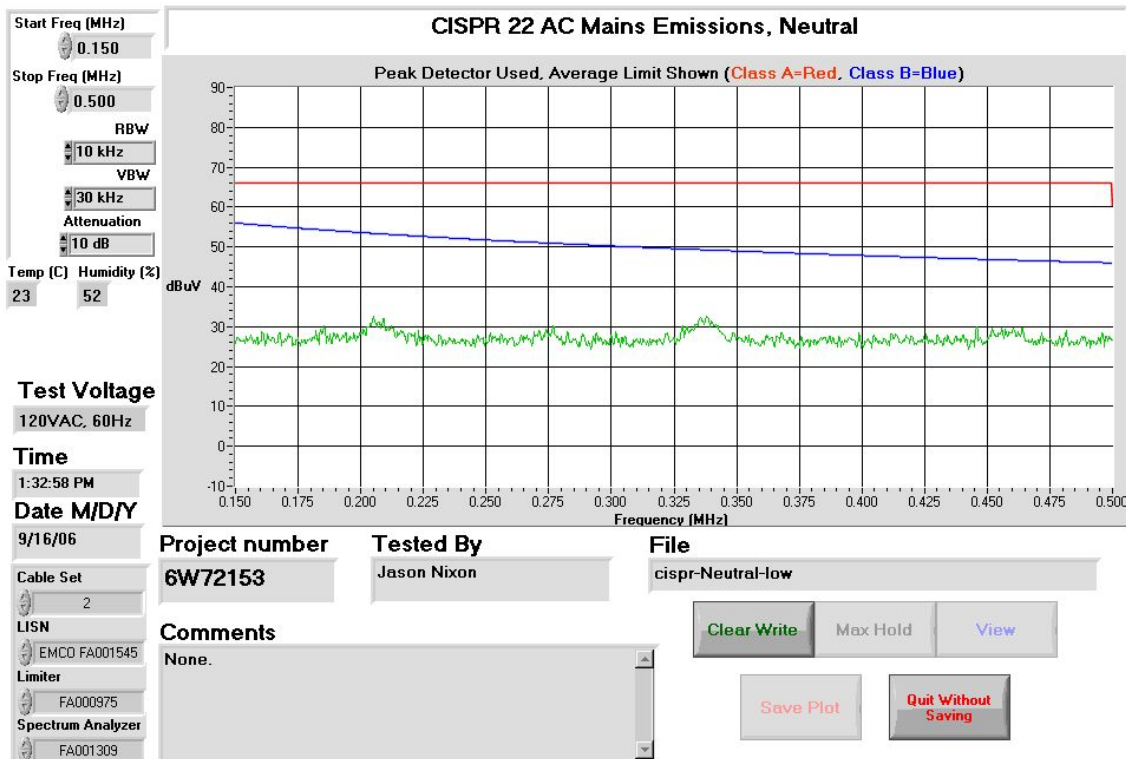
Sample Number:	13	Temperature(°C):	23
Date:	September 16, 2006	Humidity(%):	52
Modification State:	0	Tester:	Jason Nixon
		Laboratory:	Shielded Room

Test Results: See Attached Plots.

Additional Observations:

All plots were taken using a Peak detector and have been corrected with the cable, LISN and Transient Limiter losses and compared to the average limit to show compliance.





Clause 15.109(a) Radiated Emissions

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (microvoltsmeter)
30 - 88	100
88 - 216	150
216 - 960	200
Above 960	500

Test Conditions:

Sample Number:	13	Temperature(°C):	19
Date:	September 18, 2006	Humidity(%):	85
Modification State:	0	Tester:	Jason Nixon
		Laboratory:	OATS

Test Results:

No emissions were detected within 20dB below the limit.

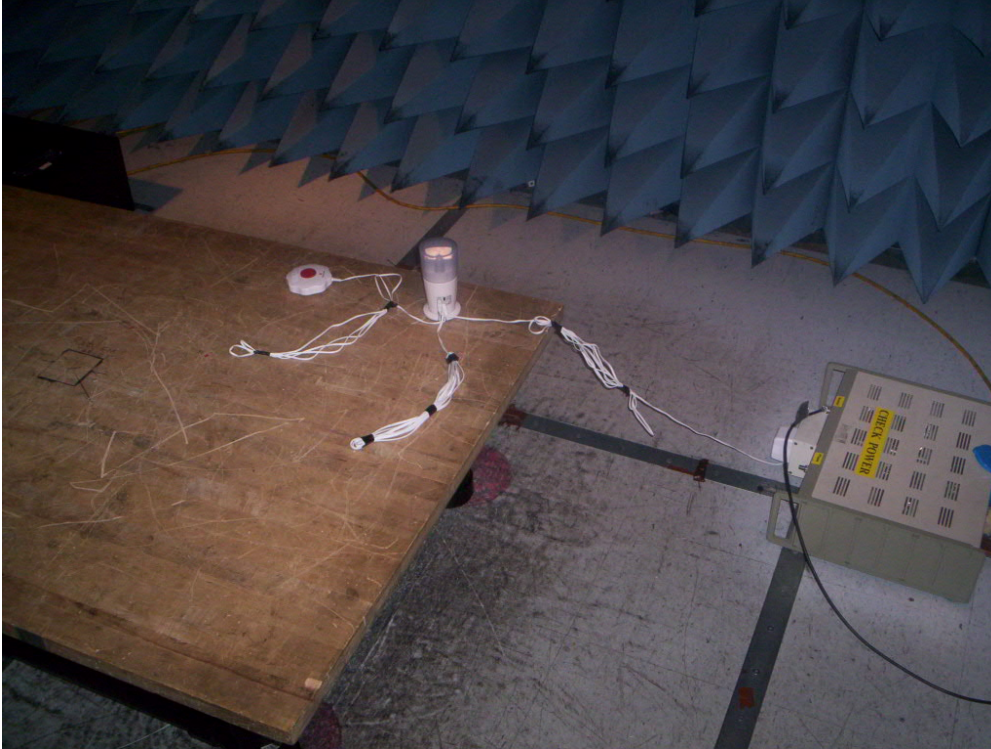
Additional Observations:

The Spectrum was searched from 30MHz to 2GHz.

All measurements were performed using a Peak Detector with 100kHz RBW below 1GHz and a 1MHz RBW above 1GHz at a distance of 3 meters.

Appendix B : Setup Photographs

Conducted Emissions Setup:

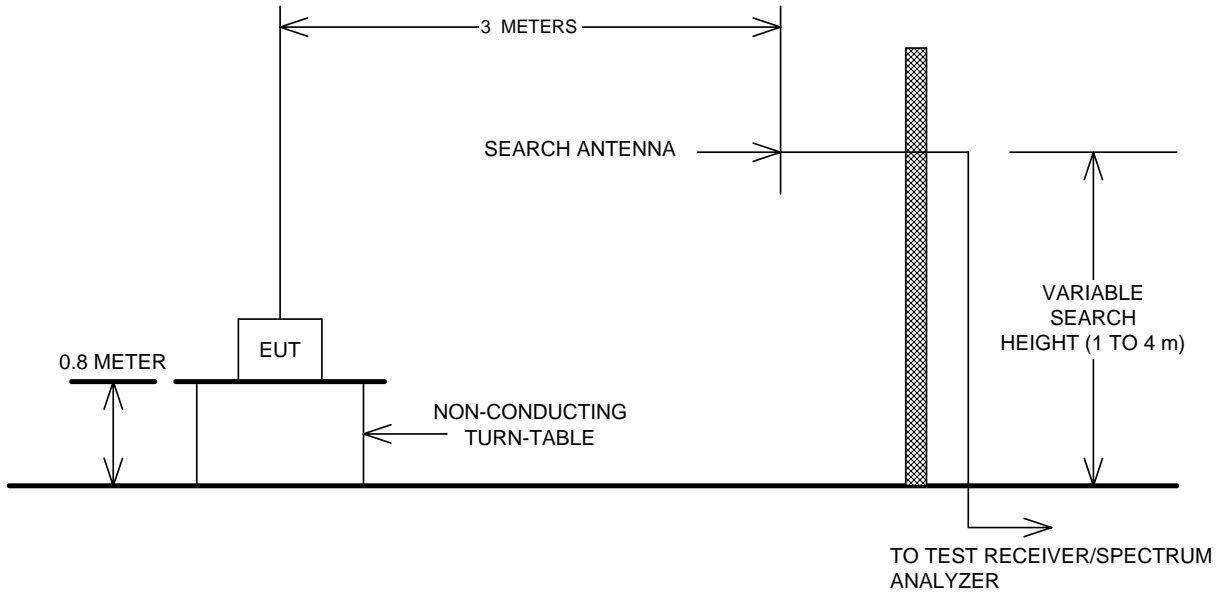


Spurious Emissions Setup:



Appendix C : Block Diagram of Test Setups

Test Site For Radiated Emissions



AC Conducted Emissions

