TEST REPORT

Reference No.	:	WTX23X08183429E
Applicant	:	GlobTek, Inc.
Address	:	186 Veterans Dr. Northvale, NJ 07647 USA
Manufacturer	:	1: GlobTek, Inc. 2: GlobTek (Suzhou) Co., Ltd
Address	:	1: 186 Veterans Dr. Northvale, NJ 07647 USA 2: Building 4, No. 76, Jin Ling East Rd., Suzhou Industrial Park, Suzhou, JiangSu 215021, China
Product Name	:	X-plore 8000 Standard Charger
Model No.	:	R59780
Standards	:	**47 CFR FCC Part 15, Subpart B**
Date of Receipt sample	:	2023-08-25
Date of Test	:	2023-08-25 to 2023-09-06
Date of Issue	:	2023-09-06
Test Report Form No.	:	WTX_FCC PART15B_001
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:
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Tested by: Tom Ma

Tom Ma

Approved by: Silin Chen

Silin Chen

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Report version

Version No.	Date of issue	Description
Rev.00	2023-09-06	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	X-plore 8000 Standard Charger
Trade Name:	Dräger or GlobTek, Inc.
Model No.:	R59780
Adding Model(s):	GT-93036SHG3380
Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model R59780, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	100-240V~, 50-60Hz
Rated Current:	/
Rated Power:	/
Power Adapter Model:	GTM96600-6016-R2 Input: 100-240V~, 50-60Hz, 1.5A Output: 16.0V⎓3.75A 60.0W
Lowest Internal Frequency:	/
Highest Internal Frequency:	Below 108MHz
Classification of ITE:	Class B

1.2 Test Standards

The tests were performed according to following standards:

47 CFR FCC Part 15, Subpart B: Unintentional Radiators.

ANSI C63.4-2014: American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

ANSI C63.4a-2017: American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.
Amendment 1:Test Site Validation

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

Address of the test laboratory
Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.
Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990
Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A
The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List			
Test Mode	Description	Remark	Power Supply Mode
TM1	Working mode	/	AC 120V/60Hz

EUT Cable List and Details				
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite	With / Without Chip
DC Cable	1.7	Shielded	With	Without

Special Cable List and Details				
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite	With / Without Chip
/	/	/	/	/

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Battery	/	ARSC-0107	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	9-150kHz ±3.74dB
		0.15-30MHz ±3.34dB
Radiated Emissions	Radiated	30-200MHz ±4.52dB
		0.2-1GHz ±5.56dB
		1-6GHz ±3.84dB
		6-18GHz ±3.92dB

1.7 Test Equipment List and Details

Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
☐Chamber A:Below 1GHz					
Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2023-02-25	2024-02-24
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2023-02-25	2024-02-24
Trilog Broadband Antenna	Schwarz beck	VULB9163	9163-333	2023-03-20	2026-03-19
Loop Antenna	Schwarz beck	FMZB 1516	9773	2021-03-20	2024-03-19
Amplifier	HP	8447F	2805A03475	2023-02-25	2024-02-24
☐Chamber A:Above 1GHz					
Amplifier	C&D	PAP-1G18	2002	2023-02-25	2024-02-24
Horn Antenna	ETS	3117	00086197	2021-03-19	2024-03-18
☒Chamber B:Below 1GHz					
Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2021-04-09	2024-04-08
Amplifier	Agilent	8447D	2944A10179	2023-02-25	2024-02-24
EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2023-02-25	2024-02-24
☐Chamber C:Below 1GHz					
EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2023-02-25	2024-02-24
Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2021-05-28	2024-05-27
Amplifier	HP	8447F	2944A03869	2023-02-25	2024-02-24
☐Chamber C:Above 1GHz					
Horn Antenna	POAM	RTF-11A	LP228060221	2023-03-10	2026-03-09
Amplifier	Tonscend	TAP01018050	AP22E806235	2023-02-25	2024-02-24
☒Conducted Room 1#					
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2023-02-25	2024-02-24
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2023-02-25	2024-02-24
AC LISN	Schwarz beck	NSLK8126	8126-224	2023-02-25	2024-02-24
8-WIRE LISN	Schwarz beck	8158	CAT3-8158-0059	2023-02-25	2024-02-24
8-WIRE LISN	Schwarz beck	8158	CAT5-8158-0117	2023-02-25	2024-02-24
☐Conducted Room 2#					
EMI Test Receiver	Rohde & Schwarz	ESPI	10129	2023-02-25	2024-02-24
LISN	Rohde & Schwarz	ENV 216	100097	2023-02-25	2024-02-24

Software List			
Description	**Manufacturer**	**Model**	**Version**
EMI Test Software (Radiated Emission)*	Farad	EZ-EMC	RA-03A1
EMI Test Software (Conducted Emission)*	Farad	EZ-EMC	RA-03A1

*Remark: indicates software version used in the compliance certification testing.

2. SUMMARY OF TEST RESULTS

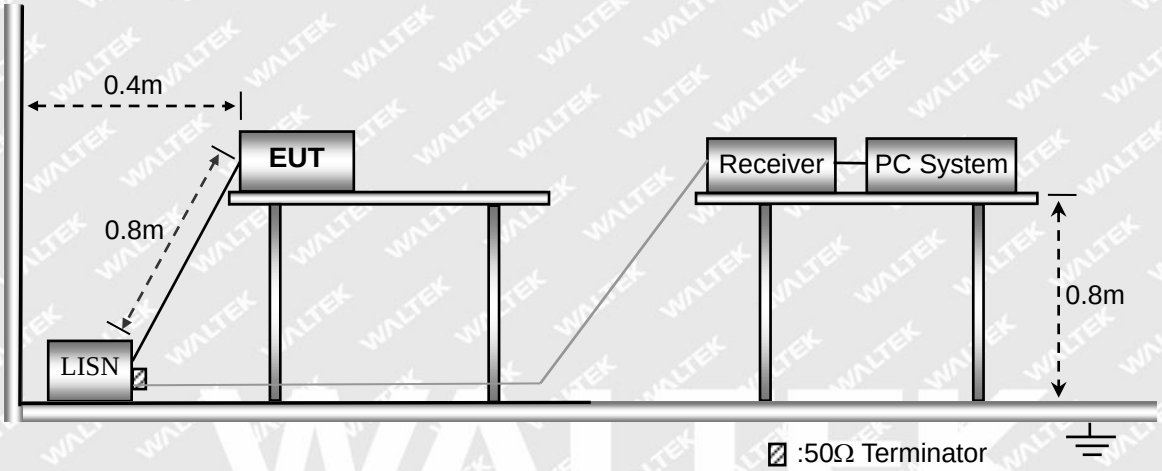
Description of Test	Result
§15.107(a) Conducted Emission	Compliant
§15.109(a) Radiated Emission	Compliant

3. Conducted Emissions

3.1 Test Procedure

The test is conducted under the description of ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

3.2 Basic Test Setup Block Diagram



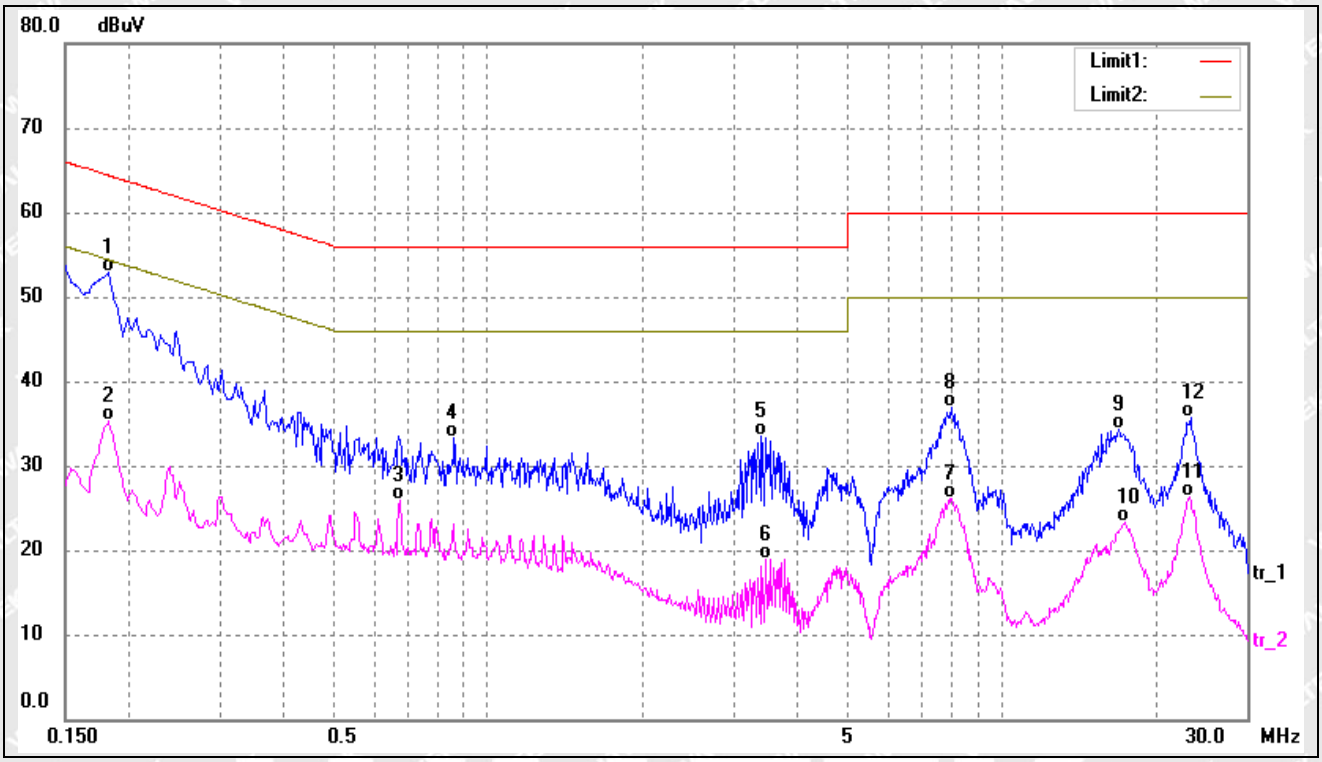
3.3 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	54 %
ATM Pressure:	997 mbar

3.4 Summary of Test Results

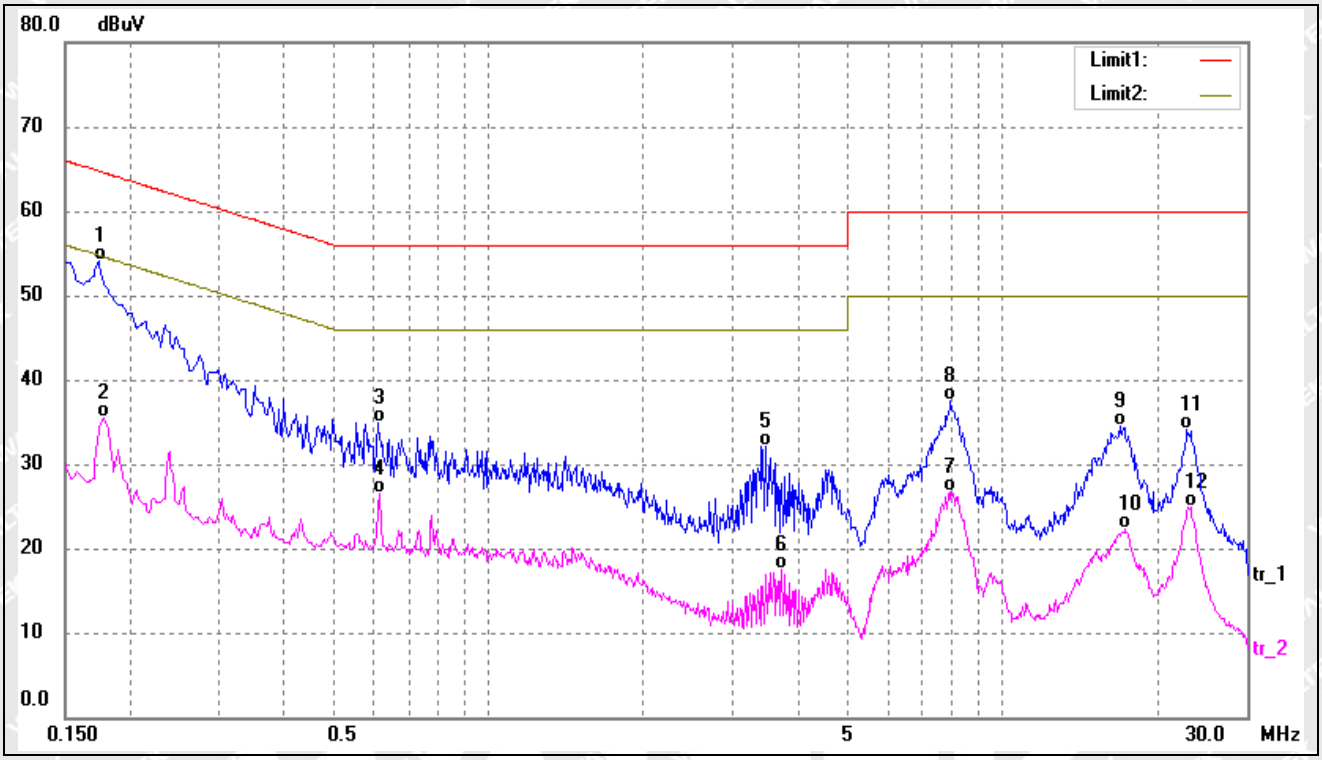
Please find the results below:

Test mode:	TM1	Polarity:	Line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1*	0.1819	42.58	10.39	52.97	64.39	-11.42	QP
2	0.1819	24.83	10.39	35.22	54.39	-19.17	AVG
3	0.6740	15.65	10.20	25.85	46.00	-20.15	AVG
4	0.8580	23.20	10.17	33.37	56.00	-22.63	QP
5	3.4140	23.08	10.35	33.43	56.00	-22.57	QP
6	3.4780	8.65	10.35	19.00	46.00	-27.00	AVG
7	7.9100	15.77	10.38	26.15	50.00	-23.85	AVG
8	7.9780	26.45	10.38	36.83	60.00	-23.17	QP
9	16.9180	24.10	10.28	34.38	60.00	-25.62	QP
10	17.3620	13.02	10.30	23.32	50.00	-26.68	AVG
11	23.1980	15.93	10.32	26.25	50.00	-23.75	AVG
12	23.2660	25.31	10.32	35.63	60.00	-24.37	QP

Test mode:	TM1	Polarity:	Neutral



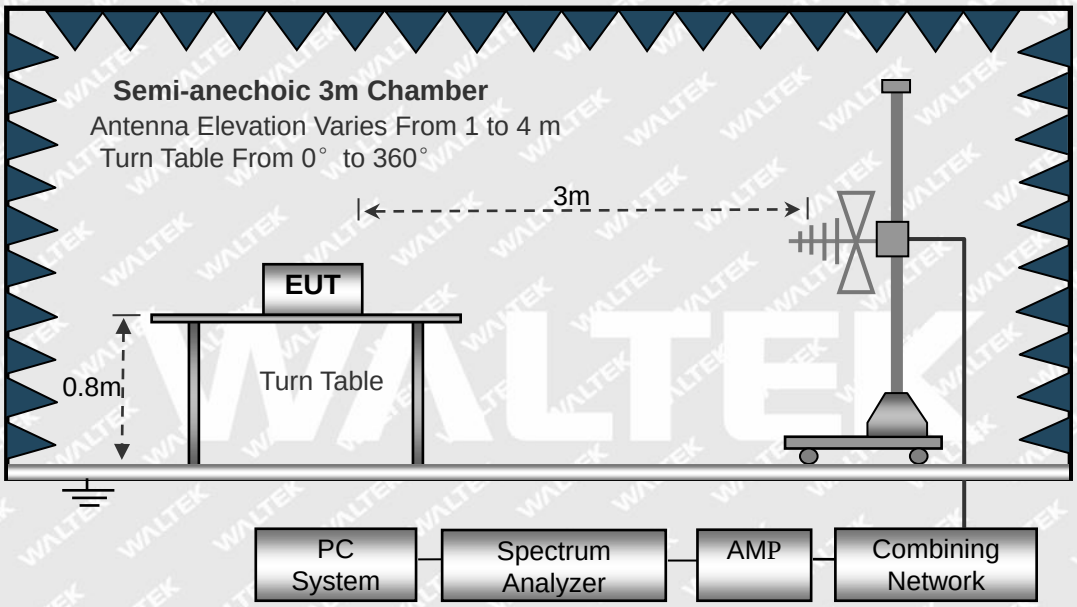
No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1*	0.1740	43.77	10.39	54.16	64.76	-10.60	QP
2	0.1780	25.16	10.39	35.55	54.57	-19.02	AVG
3	0.6100	24.72	10.22	34.94	56.00	-21.06	QP
4	0.6140	16.23	10.22	26.45	46.00	-19.55	AVG
5	3.4700	21.78	10.35	32.13	56.00	-23.87	QP
6	3.7260	7.06	10.36	17.42	46.00	-28.58	AVG
7	7.9180	16.36	10.38	26.74	50.00	-23.26	AVG
8	7.9700	27.11	10.38	37.49	60.00	-22.51	QP
9	16.9820	24.28	10.28	34.56	60.00	-25.44	QP
10	17.3900	11.94	10.30	22.24	50.00	-27.76	AVG
11	22.9540	23.87	10.33	34.20	60.00	-25.80	QP
12	23.2860	14.63	10.32	24.95	50.00	-25.05	AVG

4. RADIATED EMISSION

4.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15.109 Limit.
The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.

4.2 Block Diagram of Test Setup



4.3 Test Receiver Setup

Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=120KHz,	RBW=1MHz,
VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold
Detector function = peak, QP	Detector function = peak, AV

4.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Correct

Correct=Ant.Factor + Cable Loss - Ampl.Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for a Class B device. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Part 15.109(a) Limit

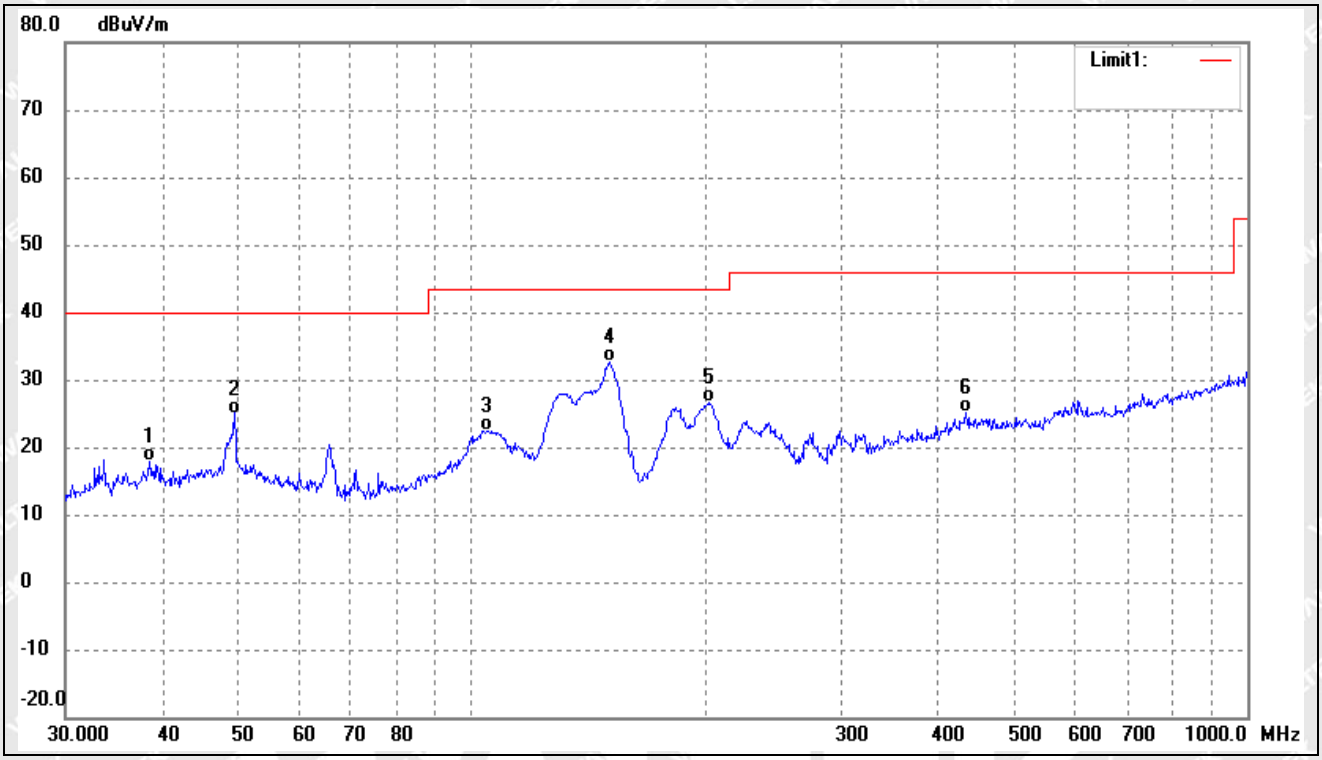
4.5 Environmental Conditions

Temperature:	23.5 °C
Relative Humidity:	54 %
ATM Pressure:	997 mbar

4.6 Summary of Test Results

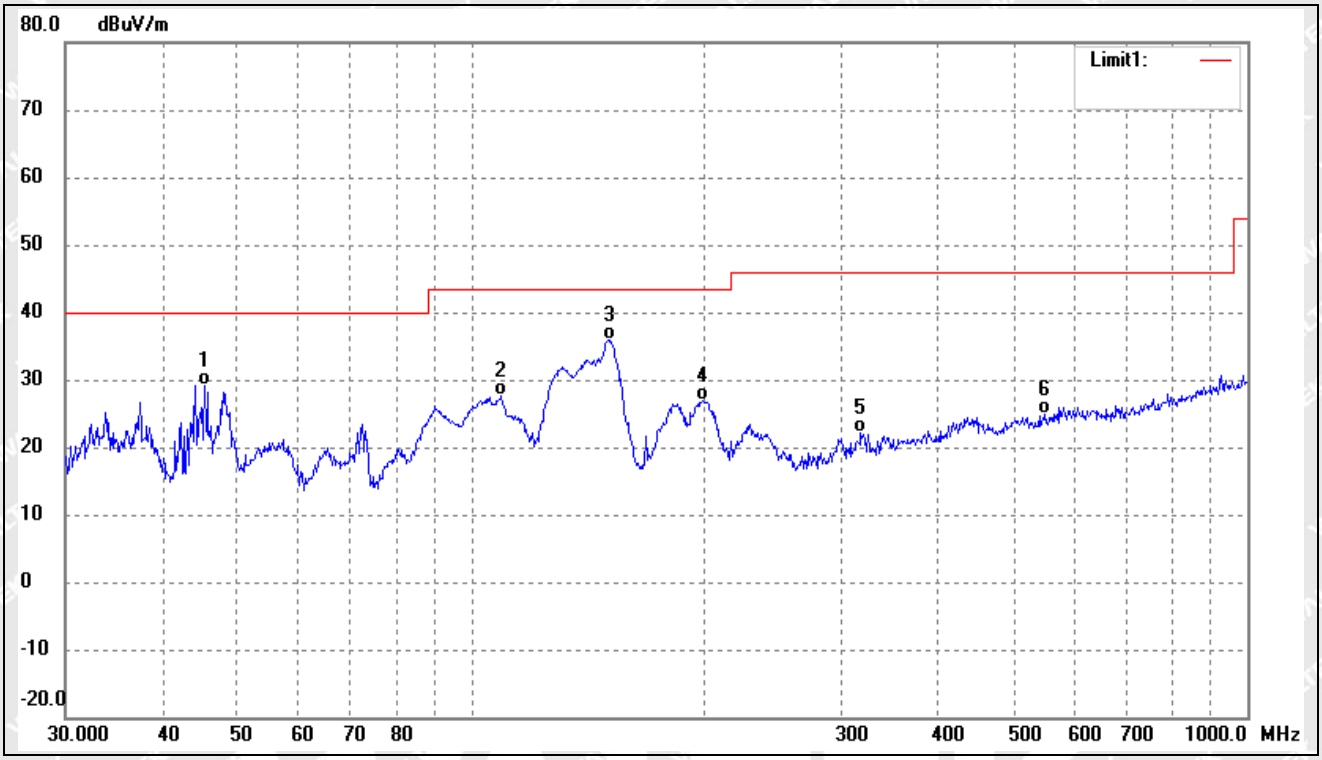
Please find the results below:

Test mode:	TM1	Polarity:	Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	38.4809	29.84	-12.01	17.83	40.00	-22.17	QP
2	49.5328	35.23	-10.23	25.00	40.00	-15.00	QP
3	104.5361	34.65	-12.27	22.38	43.50	-21.12	QP
4	151.0666	47.34	-14.79	32.55	43.50	-10.95	QP
5	202.1005	37.77	-11.25	26.52	43.50	-16.98	QP
6	434.0651	29.64	-4.40	25.24	46.00	-20.76	QP

Test mode:	TM1	Polarity:	Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	45.3755	39.79	-10.54	29.25	40.00	-10.75	QP
2	109.4116	39.88	-12.18	27.70	43.50	-15.80	QP
3	150.5378	50.76	-14.81	35.95	43.50	-7.55	QP
4	198.5879	38.19	-11.41	26.78	43.50	-16.72	QP
5	317.7010	29.51	-7.35	22.16	46.00	-23.84	QP
6	549.0193	28.60	-3.82	24.78	46.00	-21.22	QP

EXHIBIT 1 - PRODUCT LABELING

Proposed FCC Label Format

Specifications: Text is Black in color and is justified. Labels are printed in indelible ink on permanent adhesive backing or silk-screened onto the EUT or shall be affixed at a conspicuous location on the EUT. Where the EUT is constructed in two or more sections connected by wires and marketed together, the above statement is required to be affixed only to the main control unit. When the EUT is so small or for such use that it is not practicable to place the statement on it, the above information shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed.

Proposed Label Location on EUT

EXHIBIT 2 - EUT PHOTOGRAPHS

EUT View 1

EUT View 2

EUT View 3

EUT View 4

EUT View 5

EUT View 6

EUT View 7

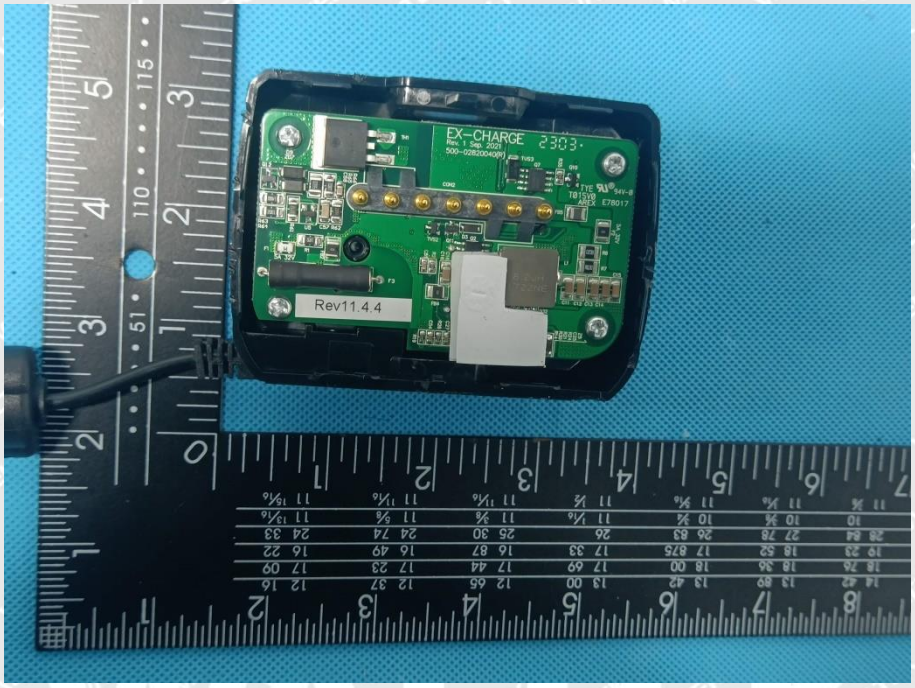
EUT View 8

EUT View 9

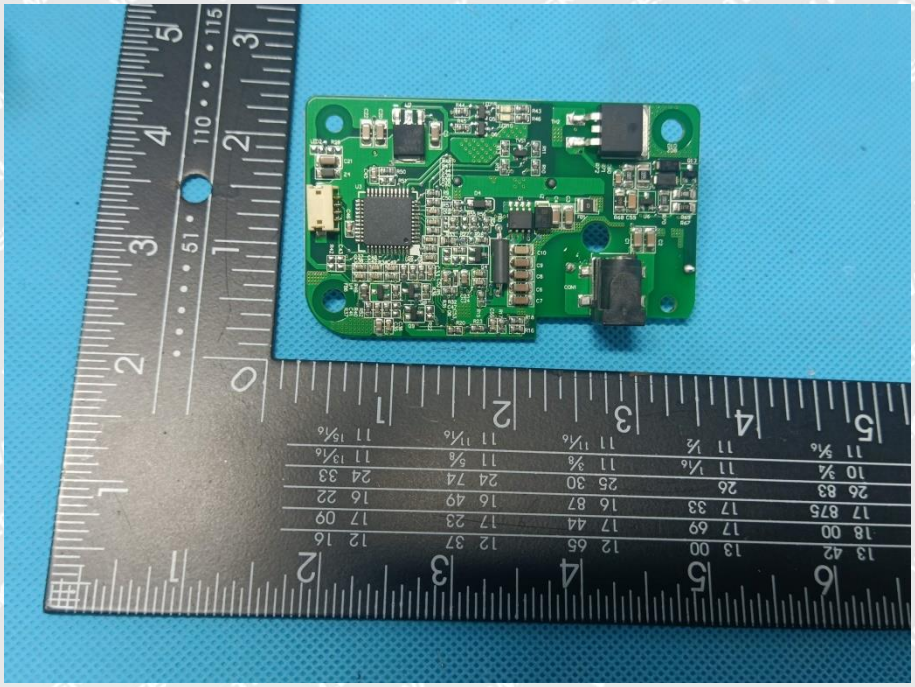

X-plore 8000 Standard Charger
Dräger
Part-No. : R59780
Serial-No. : ARSH-F062
Input: 16 V ⎓ 3,75 A
Output: 9-12,6 V ⎓ 4 A
IP 30
T50
www.draeger.com
Made in China
Dräger Safety AG & Co. KGaA, 23560 Lübeck, Germany
Importer (UK): Draeger Safety UK Ltd., Blyth, UK

EXHIBIT 3 - EUT INTERNAL PHOTOGRAPHS

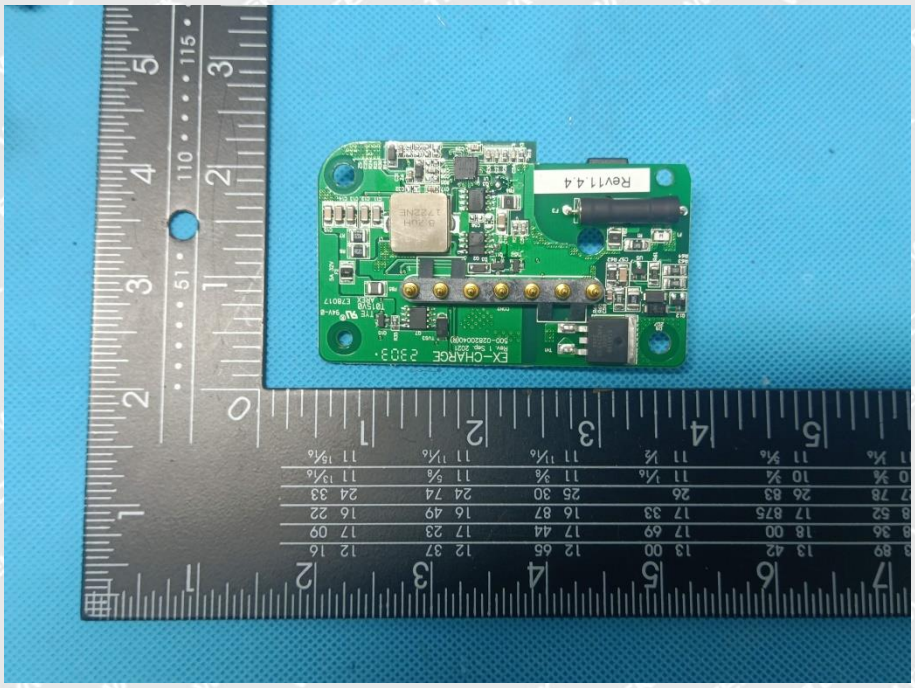
EUT Housing and Board View 1



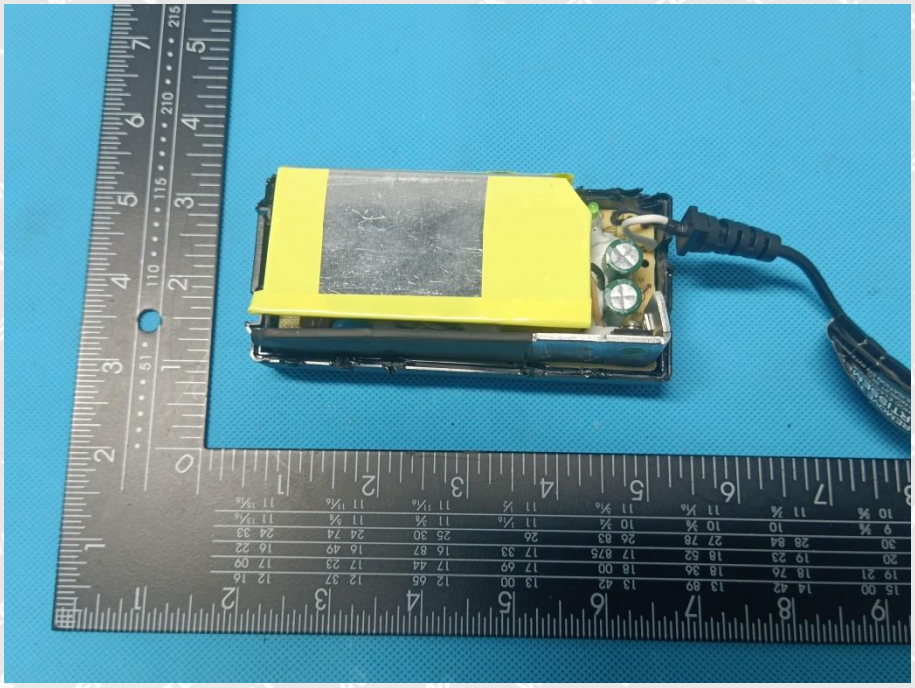
Solder Board-Component View 2



Solder Board-Component View 3



Solder Board-Component View 4



Solder Board-Component View 5

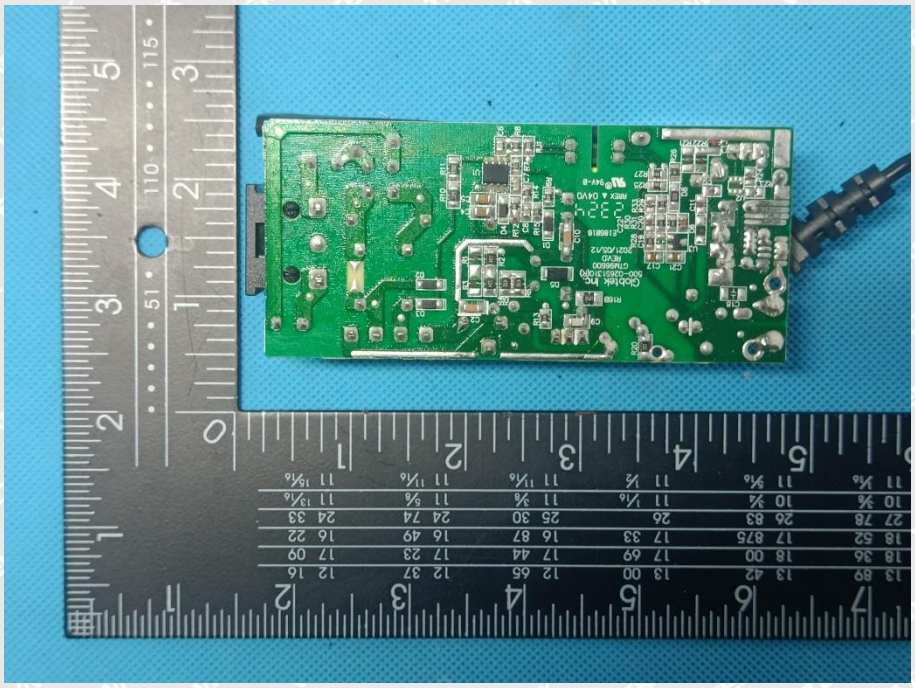
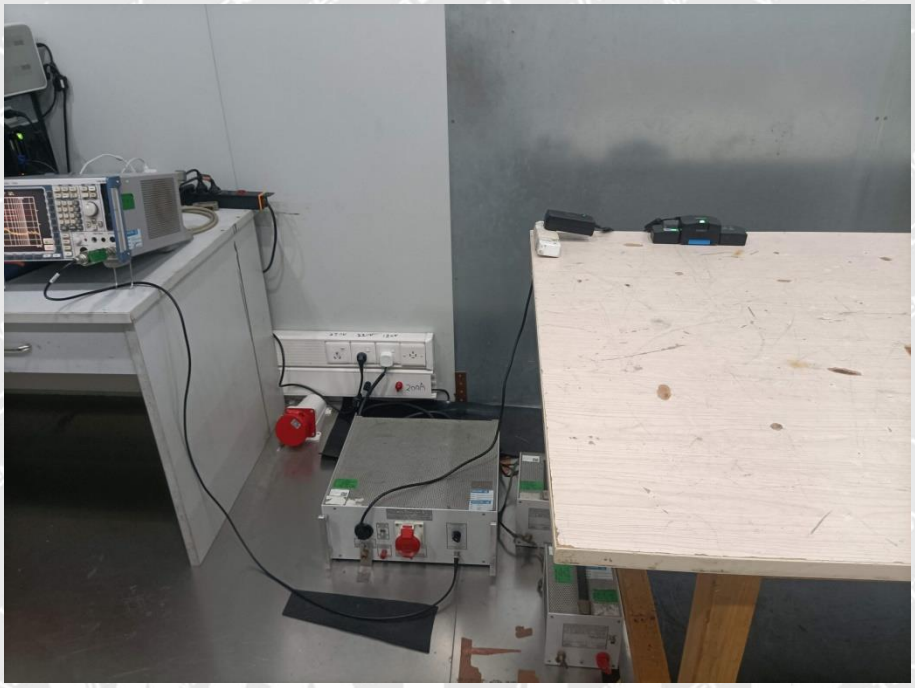


EXHIBIT 4 - TEST SETUP PHOTOGRAPHS

Conducted Emission Test Setup



Radiation Emission Test View

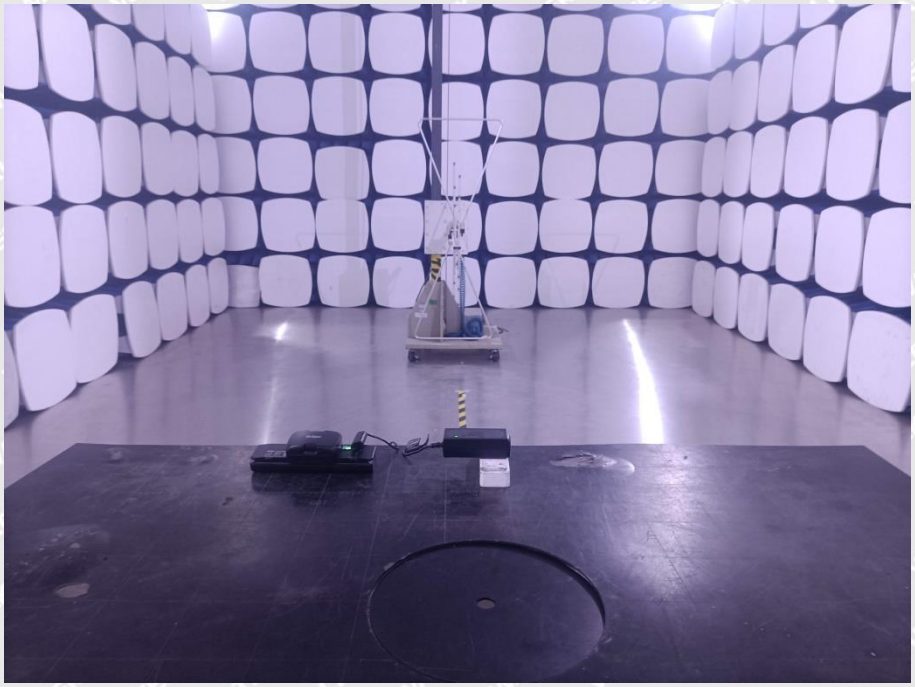


EXHIBIT 5 - USERS MANUAL

Information to Users

According to the FCC Part 15.19, 15.21, and 15.105 rules, for this EUT, the instructions or operation manual furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

FCC Caution

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

******* END OF REPORT *******