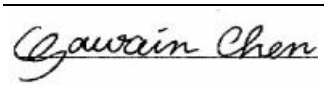
Test Report issued under the responsibility of:

TEST REPORT
IEC 60950-1
Information technology equipment - Safety - Part 1: General requirements

Report Reference No ..... :	E142692-A138-CB-3
Date of issue ..... :	2012-08-06
Total number of pages ..... :	56
CB Testing Laboratory ..... :	Underwriters Laboratories Taiwan Co., Ltd.
Address ..... :	260 Da-Yeh Road, 112 Peitou Taipei City, Chinese Taipei
Applicant's name ..... :	QUANTA COMPUTER INC
Address ..... :	188 WEN-HWA 2ND RD KUEI SHAN HSIANG TAOYUAN HSIEN 333 TAIWAN
Test specification:	
Standard ..... :	IEC 60950-1:2005 (2nd Edition); Am 1:2009
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60950_1B
Test Report Form originator ..... :	SGS Fimko Ltd
Master TRF ..... :	2010-04

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description ..... :	Laptop Computer (OLPC)
Trade Mark ..... :	OLPC
Manufacturer ..... :	QUANTA COMPUTER INC 188 WEN-HWA 2ND RD KUEI SHAN HSIANG TAOYUAN HSIEN 333 TAIWAN
Model/Type reference ..... :	XO-1.75
Ratings ..... :	Model: XO-1.75 12 Vdc, 2 A or 13.5Vdc, 1.85A

Testing procedure and testing location:			
[x]	**CB Testing Laboratory**		
	Testing location / address..... :	Underwriters Laboratories Taiwan Co., Ltd. 260 Da-Yeh Road, 112 Peitou Taipei City, Chinese Taipei	
[ ]	**Associated CB Test Laboratory**		
	Testing location / address..... :		
	Tested by (name + signature) ..... :	Scott Chen	
	Approved by (name + signature) ... :	Gawain Chen	
[ ]	**Testing Procedure: TMP**		
	Tested by (name + signature) ..... :		
	Approved by (+ signature) ..... :		
	Testing location / address..... :		
[ ]	**Testing Procedure: WMT**		
	Tested by (name + signature) ..... :		
	Witnessed by (+ signature)..... :		
	Approved by (+ signature) ..... :		
	Testing location / address..... :		
[ ]	**Testing Procedure: SMT**		
	Tested by (name + signature) ..... :		
	Approved by (+ signature) ..... :		
	Supervised by (+ signature) ..... :		
	Testing location / address..... :		
[ ]	**Testing Procedure: RMT**		
	Tested by (name + signature) ..... :		
	Approved by (+ signature) ..... :		
	Supervised by (+ signature) ..... :		
	Testing location / address..... :		

List of Attachments

National Differences (38 pages)

Enclosures (42 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at Underwriters Laboratories Taiwan Co., Ltd. 260 Da-Yeh Road, 112 Peitou Taipei City, Chinese Taipei.

	Tests performed (name of test and test clause)	**Testing location / Comments**
	Input: Single-Phase (1.6.2)	

Limited Power Source Measurements (2.5)

Stability (4.1)

Steady Force (4.2.1 - 4.2.4)

Impact (4.2.5, 4.2.1, Part 22 10.2)

Stress Relief (4.2.7, 4.2.1)

Battery (4.3.8)

Lithium Battery Reverse Current Measurement (4.3.8)

Heating (4.5.1, 1.4.12, 1.4.13)

Component Failure (5.3.1, 5.3.4, 5.3.7)

Overload of Operator Accessible Connector (5.3.7)

Summary of Compliance with National Differences:

Countries outside the CB Scheme membership may also accept this report.

List of countries addressed: AT, BE, BG, BY, CA, CH, CN, CZ, DE, DK, EU, FI, FR, GB, GR, HU, IT, JP, KR, NL, NO, PL, RO, SE, SG, SI, SK, UK, US

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.

Test item particulars :	
Equipment mobility ..... :	transportable
Connection to the mains ..... :	not directly connected to the mains
Operating condition ..... :	continuous
Access location ..... :	operator accessible
Over voltage category (OVC) ..... :	OVC I
Mains supply tolerance (%) or absolute mains supply values ..... :	No direct connection
Tested for IT power systems ..... :	No
IT testing, phase-phase voltage (V) ..... :	N/A
Class of equipment ..... :	Class III (supplied by SELV)
Considered current rating of protective device as part of the building installation (A) ..... :	20A
Pollution degree (PD) ..... :	PD 2
IP protection class ..... :	IP 20
Altitude of operation (m) ..... :	less than 2000 meters
Altitude of test laboratory (m) ..... :	less than 2000 meters
Mass of equipment (kg) ..... :	1.49 (max.)
Possible test case verdicts:	
- test case does not apply to the test object ..... :	N / A
- test object does meet the requirement ..... :	P(Pass)
- test object does not meet the requirement ..... :	F(Fail)
Testing:	
Date(s) of receipt of test item ..... :	2011-11-22
Date(s) of Performance of tests ..... :	2011-11-22 to 2011-11-24

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Manufacturer's Declaration per Sub Clause 6.25 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory and a declaration form the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... Yes

When differences exist, they shall be identified in the General Product Information section.

Name and address of Factory(ies): 1. TECH-FULL COMPUTER (CHANGSHU) CO LTD,

8 JINZHOU RD, HIGH-TECH INDUSTRIAL PARK, CHANGSHU ECONOMIC DEVELOPMENT ZONE, CHANGSHU JIANGSU 215500, CHINA

2. TECH-FRONT (SHANGHAI) COMPUTER CO LTD
SONGJIANG EXPORT PROCESSING ZONE,
68 SAN-ZHUANG RD, SHANGHAI 201613, CHINA

3. TECH-PRO (SHANGHAI) COMPUTER CO LTD
SONGJIANG EXPORT PROCESSING ZONE,
6 LANE 58 SANZHUANG RD, SHANGHAI, CHINA

4. TECH-COM (SHANGHAI) COMPUTER CO LTD
68 SANZHUANG RD,
SONGJIANG EXPORT PROCESSING ZONE,
SHANGHAI 201613, CHINA

GENERAL PRODUCT INFORMATION:

Report Summary

All applicable tests according to the referenced standard(s) have been carried out.

Product Description

Electronic components are mounted on PWB, which is enclosed by plastic enclosure and accompanied with three USB ports, one Card Reader.

The OLPC XO is a laptop computer system consisting of a (a) laptop computer, (b) direct-plug in power supply (power adapter) and (c) removable battery pack. The OLPC XO is intended for use as a child development tool primarily by children five years of age and older. In addition to IEC 60950-1, CSA/UL 60950-1 and EN 60950-1, applicable parts of ASTM F 963, 2007 Edition, Standard Consumer Safety Specification on Toy Safety, were applied to address use of the product by the intended user group.

Model Differences

NA

Additional Information

- The label is a draft of an artwork for marking plate pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

- Model: XO-1.75 => CPU information: VIA / C7-M / 1.0 GHz.
- Model: XO-1.75 => CPU information: Marvell ARMADA 610 / 1.0 GHz.

-This test report shall be read in conjunction with the original report no.:
1.E142692-A138-CB-2, issued 2011-12-06, with CB Certificate, DK-5290, issued 2011-12-07.

-This is a reissue report due to modify as below:
(1) upgrade standard from IEC/UL 60950-1 1st to IEC/UL 60950-1 2nd+A1
(2) Delete the Model XO-1 and XO-1.5 information.

(3) Add the Power Adapter (DARFON ELECTRONICS CORP / BB0J-C)

- No tests conducted under this investigation due to reissue of CB Test Report Ref. No. E142692-A138-CB-2, All required tests were carried out under the original investigation

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 45°C

- The product was investigated to the following additional standards: 1. UL Standard for Safety for Electric Toys, UL 696, Ninth Edition, Dated March 15, 1996, Revisions: This Standard contains revisions through and including June 12, 2006., 2. ASTM F963, 2007 Edition, Standard Consumer Safety Specification on Toy Safety.,

- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): USB ports, MIC, Head phone

- The power supply in this equipment was: Investigated to IEC/UL 60950-1 2nd edition. As part of the investigation of this product, the power supply and its test report were reviewed and found to comply with IEC/UL 60950-1 2nd edition, amendment 1.

- Technical Considerations - Engineering Considerations: The OLPC XO is a laptop computer system consisting of a (a) laptop computer, (b) direct-plug in power supply (power adapter) and (c) removable battery pack. The OLPC XO is intended for use as a child development tool primarily by children five years of age and older. In addition to IEC 60950-1, CSA/UL 60950-1 and EN 60950-1, applicable parts of ASTM F 963, 2007 Edition, Standard Consumer Safety Specification on Toy Safety, were applied to address use of the product by the intended user group. --

Abbreviations used in the report:

- normal condition	N.C.	- single fault condition	S.F.C
- operational insulation	OP	- basic insulation	BI
- basic insulation between parts of opposite polarity:	BOP	- supplementary insulation	SI
- double insulation	DI	- reinforced insulation	RI

Indicate used abbreviations (if any)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1	**GENERAL**		Pass
1.5	Components		Pass
1.5.1	General		Pass
	Comply with IEC 60950-1 or relevant component standard	(see appended table 1.5.1)	Pass
1.5.2	Evaluation and testing of components	Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this Standard. Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component Standard. Components, for which no relevant IEC-Standard exist, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.	Pass
1.5.3	Thermal controls		N/A
1.5.4	Transformers		N/A
1.5.5	Interconnecting cables	Interconnecting cables comply with the relevant requirements of this standard.	Pass
1.5.6	Capacitors bridging insulation		N/A
1.5.7	Resistors bridging insulation	Class III product.	N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A
1.6	**Power interface**		Pass
1.6.1	AC power distribution systems		N/A
1.6.2	Input current	(see appended table 1.6.2)	Pass
1.6.3	Voltage limit of hand-held equipment	The unit is not a hand-held equipment.	N/A
1.6.4	Neutral conductor	No AC mains direct connection.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.7	**Marking and instructions**		Pass
1.7.1	Power rating and identification markings	The unit did not provided with means for connection to mains.	Pass
1.7.1.1	Power rating mark	Class III unit is optional provided.	Pass
	Multiple mains supply connections ..... :		N/A
	Rated voltage(s) or voltage range(s) (V) ..... :	Optional provided, 12 Vdc or 13.5Vdc	Pass
	Symbol for nature of supply, for d.c. only ..... :	IEC 60417 No. 5031 provided on marking label (Optional).	Pass
	Rated frequency or rated frequency range (Hz) .... :		N/A
	Rated current (mA or A) ..... :	Optional provided, 2 A or 1.85A	Pass
1.7.1.2	Identification markings		Pass
	Manufacturer's name or trademark or identification mark ..... :	Quanta computer Inc., or OLPC	Pass
	Model identification or type reference ..... :	XO-1.75	Pass
	Symbol for Class II equipment only ..... :		N/A
	Other markings and symbols ..... :	Additional symbols may be provided when submitted for national Approval.	Pass
1.7.2	Safety instructions and marking	Operating/safety instructions made available to the user.	Pass
1.7.2.1	General	See Enclousure for detail.	Pass
1.7.2.2	Disconnect devices		N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT Power distribution systems		N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone		N/A
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment ..... :	Equipment is designed for single voltage operation.	N/A
	Method and means of adjustment; reference to installation instructions ..... :		N/A
1.7.5	Power outlets on the equipment ..... :	No standard power outlets are provided.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) ..... :		N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals ..... :		N/A
1.7.7.2	Terminals for a.c. mains supply conductors		N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		Pass
1.7.8.1	Identification, location and marking ..... :		N/A
1.7.8.2	Colours ..... :	Controls are only functional and clearly do not involve safety.	Pass
1.7.8.3	Symbols according to IEC 60417 ..... :	The stand-by switch is marked with the correct symbol according to 60417-1-IEC-5009.	Pass
1.7.8.4	Markings using figures..... :	Figures are not used for indicating different positions of controls.	Pass
1.7.9	Isolation of multiple power sources ..... :		N/A
1.7.10	Thermostats and other regulating devices ..... :		N/A
1.7.11	Durability	All markings provided on UL Recognized Component labels suitable for surface they are applied upon and meet the durability test.	Pass
1.7.12	Removable parts	No marking is located on removable part(s).	Pass
1.7.13	Replaceable batteries..... :	The required warning is in the service manual.	Pass
	Language(s) ..... :	May be provided in other languages upon request from the manufacturer. Reviewed only English markings/instructions.	-
1.7.14	Equipment for restricted access locations..... :		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2	**PROTECTION FROM HAZARDS**		Pass
2.1	Protection from electric shock and energy hazards		Pass
2.1.1	Protection in operator access areas	All access bare parts are SELV and no bare TNV Circuit.	Pass
2.1.1.1	Access to energized parts	No OPERATOR access to energized parts	Pass
	Test by inspection..... :	The operator has access to bare parts of SELV CIRCUITS.	Pass
	Test with test finger (Figure 2A) ..... :	The test finger was unable to contact bare hazardous parts, basic insulation, or ELV circuits.	Pass
	Test with test pin (Figure 2B)..... :	The test pin was unable to contact bare hazardous parts.	Pass
	Test with test probe (Figure 2C)..... :		N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring		N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm) ..... :		-
2.1.1.4	Access to hazardous voltage circuit wiring		N/A
2.1.1.5	Energy hazards ..... :	There are no hazardous energy levels in this product.	Pass
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Measured voltage (V); time-constant (s) ..... :		-
2.1.1.8	Energy hazards - d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply .. :		N/A
	b) Internal battery connected to the mains supply :		N/A
2.1.1.9	Audio amplifiers..... :		N/A
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.2	**SELV circuits**		Pass
2.2.1	General requirements	Class III unit.	Pass
2.2.2	Voltages under normal conditions (V) ..... :	All accessible voltages are less than 42.4 Vp or 60 V dc and are classified as SELV.	Pass
2.2.3	Voltages under fault conditions (V) ..... :		N/A
2.2.4	Connection of SELV circuits to other circuits ..... :	SELV circuits are only connected to other secondary circuits.	Pass
2.3	**TNV circuits**		N/A
2.3.1	Limits		N/A
	Type of TNV circuits ..... :		-
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions ..... :		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed..... :		-
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed..... :		-
2.3.5	Test for operating voltages generated externally		N/A
2.4	**Limited current circuits**		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	Frequency (Hz)..... :		-
	Measured current (mA)..... :		-
	Measured voltage (V) ..... :		-
	Measured circuit capacitance (nF or uF)..... :		-
2.4.3	Connection of limited current circuits to other circuits		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.5	**Limited power sources**		Pass
	a) Inherently limited output	Model XO-1.75 - Following connectors are data ports only and compliance with Table 2B under Maximum V. I. and VA. measurements: - MIC - Head phone	Pass
	b) Impedance limited output		N/A
	c) Regulating network limited output under normal operating and single fault condition		Pass
	d) Overcurrent protective device limited output		Pass
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	The USB (CN4, CN5, CN7) outputs complied with the limited power source requirements 1. USB(CN4, CN5, CN7) three ports are used one IC U56 to protector. Max. Uoc = 4.9 V Max. Isc = 1.3 A Max. VA = 5.4VA 2. USB CN4 as representative connector, IC U56 (pin 2, 3 to pin 6,7 short) Max. Uoc = 4.94 V Max. Isc = 1.9 A Max. VA = 8.4VA ========== Model XO-1.75 (See Enclosures / Miscellaneous Id 7-06 for details.)	-
	Current rating of overcurrent protective device (A) :	--	-
	Use of integrated circuit (IC) current limiters ..... :	Use UL approved Protect IC, shall determined in National Approved.	-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6	**Provisions for earthing and bonding**		N/A
2.6.1	Protective earthing	Class III unit.	N/A
2.6.2	Functional earthing		N/A
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm²), AWG ..... :		-
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm²), AWG ..... :		-
	Protective current rating (A), cross-sectional area (mm²), AWG..... :		-
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (ohm), voltage drop (V), test current (A), duration (min) ..... :		N/A
2.6.3.5	Colour of insulation..... :		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm) ..... :		-
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.7	**Overcurrent and earth fault protection in primary circuits**		N/A
2.7.1	Basic requirements	Class III unit.	N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3.7		N/A
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices ..... :		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel ..... :		N/A
2.8	**Safety interlocks**		N/A
2.8.1	General principles	Class III unit.	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) ..... :		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test		N/A
2.8.8	Mechanical actuators		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.9	**Electrical insulation**		Pass
2.9.1	Properties of insulating materials	Natural rubber, materials containing asbestos and hygroscopic materials are not used as insulation.	Pass
2.9.2	Humidity conditioning		N/A
	Relative humidity (%), temperature (°C)..... :		-
2.9.3	Grade of insulation	Functional insulation.	N/A
2.9.4	Separation from hazardous voltages		Pass
	Method(s) used..... :	Supplied by approved Power Supplied with SELV output	-

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

2.10	**Clearances, creepage distances and distances through insulation**		Pass
2.10.1	General	Pollution Degree 2 applicable.	Pass
2.10.1.1	Frequency..... :	less than 30KHz	Pass
2.10.1.2	Pollution degrees..... :	PD 2	Pass
2.10.1.3	Reduced values for functional insulation		Pass
2.10.1.4	Intervening unconnected conductive parts		N/A
2.10.1.5	Insulation with varying dimensions		N/A
2.10.1.6	Special separation requirements		N/A
2.10.1.7	Insulation in circuits generating starting pulses		N/A
2.10.2	Determination of working voltage	Evaluated during separate certification of the power supply.	Pass
2.10.2.1	General		Pass
2.10.2.2	RMS working voltage		Pass
2.10.2.3	Peak working voltage		Pass
2.10.3	Clearances	See below.	Pass
2.10.3.1	General	- FUNCTIONAL INSULATION complied with Sub-clause 5.3.4. (see appended table 2.10.3 and 2.10.3.4)	Pass
2.10.3.2	Mains transient voltages		N/A
	a) AC mains supply ..... :		N/A
	b) Earthed d.c. mains supplies ..... :		N/A
	c) Unearthed d.c. mains supplies ..... :		N/A
	d) Battery operation ..... :		N/A
2.10.3.3	Clearances in primary circuits	Evaluated as part of power supply unit.	Pass
2.10.3.4	Clearances in secondary circuits	See 5.3.4 and appended tables 2.10.3 & 2.10.4 for details.	Pass
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply..... :		N/A
2.10.3.7	Transients from d.c. mains supply..... :		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems ..... :		N/A
2.10.3.9	Measurement of transient voltage levels		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	a) Transients from a mains supply		N/A
	For an a.c. mains supply ..... :		N/A
	For a d.c. mains supply ..... :		N/A
	b) Transients from a telecommunication network		N/A
2.10.4	Creepage distances	See appended table 2.10.3 & 2.10.4	Pass
2.10.4.1	General		Pass
2.10.4.2	Material group and comparative tracking index		Pass
	CTI tests ..... :	Material group IIIb assumed; 100 <= CTI < 175.	-
2.10.4.3	Minimum creepage distances		N/A
2.10.5	Solid insulation		N/A
2.10.5.1	General		N/A
2.10.5.2	Distances through insulation		N/A
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		N/A
2.10.5.5	Cemented joints		N/A
2.10.5.6	Thin sheet material - General		N/A
2.10.5.7	Separable thin sheet material		N/A
	Number of layers (pcs) ..... :		-
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material - standard test procedure		N/A
	Electric strength test ..... :		-
2.10.5.10	Thin sheet material - alternative test procedure		N/A
	Electric strength test ..... :		-
2.10.5.11	Insulation in wound components		N/A
2.10.5.12	Wire in wound components		N/A
	Working voltage ..... :		N/A
	a) Basic insulation not under stress ..... :		N/A
	b) Basic, supplementary, reinforced insulation..... :		N/A
	c) Compliance with Annex U ..... :		N/A
	Two wires in contact inside wound component; angle between 45° and 90° ..... :		N/A
2.10.5.13	Wire with solvent-based enamel in wound components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Electric strength test ..... :		-
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage ..... :		N/A
	- Basic insulation not under stress ..... :		N/A
	- Supplementary, reinforced insulation ..... :		N/A
2.10.6	Construction of printed boards		N/A
2.10.6.1	Uncoated printed boards		N/A
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation		N/A
	Number of insulation layers (pcs) ..... :		N/A
2.10.7	Component external terminations		N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test		N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3	**WIRING, CONNECTIONS AND SUPPLY**		Pass
3.1	General		Pass
3.1.1	Current rating and overcurrent protection		Pass
3.1.2	Protection against mechanical damage	The wires are routed away from sharp edges and parts which could damage insulation.	Pass
3.1.3	Securing of internal wiring		Pass
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage. For the insulation material see 3.1.1.	Pass
3.1.5	Beads and ceramic insulators		N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections		N/A
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors		N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.2	**Connection to mains supply**		N/A
3.2.1	Means of connection	Class III unit.	N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm) ..... :		-
3.2.4	Appliance inlets		N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type ..... :		-
	Rated current (A), cross-sectional area (mm²), AWG ..... :		-
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N) ..... :		-
	Longitudinal displacement (mm) ..... :		-
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards		N/A
	Diameter of minor dimension D (mm); test mass (g) ..... :		-
	Radius of curvature of cord (mm) ..... :		-
3.2.9	Supply wiring space		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals	Class III product	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm²) ..... :		-
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm) ..... :		-
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	**Disconnection from the mains supply**		N/A
3.4.1	General requirement		N/A
3.4.2	Disconnect devices		N/A
3.4.3	Permanently connected equipment		N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles - single-phase and d.c. equipment		N/A
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A
3.5	**Interconnection of equipment**		Pass
3.5.1	General requirements		Pass
3.5.2	Types of interconnection circuits ..... :	Interconnection circuits are SELV CIRCUITS.	Pass
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment		Pass

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Clause	Requirement + Test	Result - Remark	Verdict
4	**PHYSICAL REQUIREMENTS**		Pass
4.1	Stability		N/A
	Angle of 10°	Based on construction, the test was deemed not necessary.	N/A
	Test force (N)..... :		N/A
4.2	**Mechanical strength**		N/A
4.2.1	General		N/A
	Rack-mounted equipment		N/A
4.2.2	Steady force test, 10 N		N/A
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N		N/A
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm)..... :	No hazardous parts or in the reduction of CREEPAGE DISTANCES or CLEARANCES within subject unit.	N/A
4.2.7	Stress relief test	No hazardous parts or in the reduction of CREEPAGE DISTANCES or CLEARANCES within subject unit.	N/A
4.2.8	Cathode ray tubes	The equipment does not have any CRT's	N/A
	Picture tube separately certified..... :		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N)..... :		N/A
4.2.11	Rotating solid media		N/A
	Test to cover on the door..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.3	**Design and construction**		Pass
4.3.1	Edges and corners	All edges and corners are judged to be sufficiently well rounded so as not to constitute a hazard.	Pass
4.3.2	Handles and manual controls; force (N) ..... :	No hazardous parts or in the reduction of CREEPAGE DISTANCES or CLEARANCES within subject unit.	N/A
4.3.3	Adjustable controls	The equipment does not have a voltage selector.	N/A
4.3.4	Securing of parts	No loosening of parts impairing creepage distances or clearances over supplementary or reinforced insulation is likely to occur.	Pass
4.3.5	Connection by plugs and sockets		N/A
4.3.6	Direct plug-in equipment	Not direct plug-in equipment.	N/A
	Torque ..... :		N/A
	Compliance with the relevant mains plug standard:		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries	Model XO-1.75 See Critical Components Table for RTC protected components details.	Pass
	- Overcharging of a rechargeable battery		Pass
	- Unintentional charging of a non-rechargeable battery		Pass
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		Pass
4.3.9	Oil and grease		N/A
4.3.10	Dust, powders, liquids and gases		N/A
4.3.11	Containers for liquids or gases		N/A
4.3.12	Flammable liquids..... :		N/A
	Quantity of liquid (l)..... :		N/A
	Flash point (°C)..... :		N/A
4.3.13	Radiation	The equipment does not generate ionizing radiation or	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
		contain flammable liquids or gases.	
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation		N/A
	Measured radiation (pA/kg) ..... :		-
	Measured high-voltage (kV) ..... :		-
	Measured focus voltage (kV)..... :		-
	CRT markings..... :		-
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N/A
	Part, property, retention after test, flammability classification ..... :		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation ..... :		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs		N/A
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class ..... :		-
4.3.13.5.2	Light emitting diodes (LEDs)		N/A
4.3.13.6	Other types ..... :		N/A
4.4	**Protection against hazardous moving parts**		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas..... :		N/A
	Household and home/office document/media shredders		N/A
4.4.3	Protection in restricted access locations ..... :		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A
4.4.5.1	General		N/A
	Not considered to cause pain or injury. a)..... :		N/A
	Is considered to cause pain, not injury. b)..... :		N/A
	Considered to cause injury. c)..... :		N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning..... :		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.5	**Thermal requirements**		Pass
4.5.1	General		Pass
4.5.2	Temperature tests	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established. (see appended table 4.5)	Pass
	Normal load condition per Annex L ..... :	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established.	-
4.5.3	Temperature limits for materials		Pass
4.5.4	Touch temperature limits		Pass
4.5.5	Resistance to abnormal heat..... :		N/A
4.6	**Openings in enclosures**		Pass
4.6.1	Top and side openings		Pass
	Dimensions (mm) ..... :	No openings.	-
4.6.2	Bottoms of fire enclosures		Pass
	Construction of the bottom, dimensions (mm)..... :	No openings.	-
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) ..... :		-
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks) ..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict
4.7	**Resistance to fire**		Pass
4.7.1	Reducing the risk of ignition and spread of flame	Method 1: Selection and application of components and materials which minimize the possibility of ignition and spread of flame.	Pass
	Method 1, selection and application of components wiring and materials		Pass
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure		Pass
4.7.2.1	Parts requiring a fire enclosure	A fire enclosure covers all parts.	Pass
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		Pass
4.7.3.1	General	See below.	Pass
4.7.3.2	Materials for fire enclosures	Equipment is transportable with mass less than 18 kg. Fire enclosure material is V-1 minimum.	Pass
4.7.3.3	Materials for components and other parts outside fire enclosures	Fire enclosure covers all parts.	Pass
4.7.3.4	Materials for components and other parts inside fire enclosures	PWB are rated minimum V-1 and internal plastics are rated minimum V-2	Pass
4.7.3.5	Materials for air filter assemblies		N/A
4.7.3.6	Materials used in high-voltage components		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		Pass
5.1	Touch current and protective conductor current		N/A
5.1.1	General		N/A
5.1.2	Configuration of equipment under test (EUT)		N/A
5.1.2.1	Single connection to an a.c. mains supply		N/A
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit		N/A
5.1.4	Application of measuring instrument		N/A
5.1.5	Test procedure		N/A
5.1.6	Test measurements		N/A
	Supply voltage (V) ..... :		-
	Measured touch current (mA)..... :		-
	Max. allowed touch current (mA)..... :		-
	Measured protective conductor current (mA)..... :		-
	Max. allowed protective conductor current (mA)... :		-
5.1.7	Equipment with touch current exceeding 3,5 mA		N/A
5.1.7.1	General..... :		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	No telecommunication networks and cable distribution systems.	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V) ..... :		-
	Measured touch current (mA)..... :		-
	Max. allowed touch current (mA)..... :		-
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports ..... :		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.2	**Electric strength**		N/A
5.2.1	General		N/A
5.2.2	Test procedure		N/A
5.3	**Abnormal operating and fault conditions**		Pass
5.3.1	Protection against overload and abnormal operation		N/A
5.3.2	Motors		N/A
5.3.3	Transformers		N/A
5.3.4	Functional insulation ..... :	Functional insulation complies with the requirements (c).	Pass
5.3.5	Electromechanical components	The equipment does not have any electromechanical components in the secondary.	N/A
5.3.6	Audio amplifiers in ITE..... :		N/A
5.3.7	Simulation of faults	Connectors overloaded.	Pass
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	No fire, emission of molten metal or deformation was noted during the tests.	Pass
5.3.9.1	During the tests		Pass
5.3.9.2	After the tests		Pass
6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements		N/A
	Supply voltage (V) ..... :		-
	Current in the test circuit (mA)..... :		-
6.1.2.2	Exclusions..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.2	**Protection of equipment users from overvoltages on telecommunication networks**		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test		N/A
6.2.2.2	Steady-state test		N/A
6.2.2.3	Compliance criteria		N/A
6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A) ..... :		-
	Current limiting method ..... :		-
7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test		N/A
7.4.3	Impulse test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
A	**ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples ..... :		-
	Wall thickness (mm) ..... :		-
A.1.2	Conditioning of samples; temperature (°C) ..... :		N/A
A.1.3	Mounting of samples ..... :		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D ..... :		N/A
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s) ..... :		-
	Sample 2 burning time (s) ..... :		-
	Sample 3 burning time (s) ..... :		-
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material ..... :		-
	Wall thickness (mm) ..... :		-
A.2.2	Conditioning of samples; temperature (°C) ..... :		N/A
A.2.3	Mounting of samples ..... :		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C ..... :		-
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s) ..... :		-
	Sample 2 burning time (s) ..... :		-
	Sample 3 burning time (s) ..... :		-
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s) ..... :		-
	Sample 2 burning time (s) ..... :		-
	Sample 3 burning time (s) ..... :		-
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
A.3.3	Compliance criterion		N/A
B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		N/A
B.1	General requirements		N/A
	Position ..... :		-
	Manufacturer ..... :		-
	Type ..... :		-
	Rated values ..... :		-
B.2	Test conditions		N/A
B.3	Maximum temperatures		N/A
B.4	Running overload test		N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days) ..... :		-
	Electric strength test: test voltage (V) ..... :		-
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V) ..... :		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V) ..... :		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		N/A
B.10	Test for series motors		N/A
	Operating voltage (V) ..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict
C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		N/A
	Position ..... :		-
	Manufacturer ..... :		-
	Type ..... :		-
	Rated values ..... :		-
	Method of protection ..... :		-
C.1	Overload test		N/A
C.2	Insulation		N/A
	Protection from displacement of windings ..... :		N/A
D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		N/A
D.1	Measuring instrument		N/A
D.2	Alternative measuring instrument		N/A
E	**ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)**		N/A
F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)**		Pass

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Clause	Requirement + Test	Result - Remark	Verdict

G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply ..... :		N/A
G.2.2	Earthed d.c. mains supply ..... :		N/A
G.2.3	Unearthed d.c. mains supply ..... :		N/A
G.2.4	Battery operation ..... :		N/A
G.3	Determination of telecommunication network transient voltage (V) : ..... :		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks ..... :		N/A
G.4.2	Transients from telecommunication networks ..... :		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	Determination of minimum clearances ..... :		N/A

H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**		N/A

J	**ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		N/A
	Metal(s) used ..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict

K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)**		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V) ..... :		N/A
K.3	Thermostat endurance test; operating voltage (V) :		N/A
K.4	Temperature limiter endurance; operating voltage (V) ..... :		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation		N/A

L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)**		Pass
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		Pass

M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz) ..... :		-
M.3.1.2	Voltage (V) ..... :		-
M.3.1.3	Cadence; time (s), voltage (V) ..... :		-
M.3.1.4	Single fault current (mA) ..... :		-
M.3.2	Tripping device and monitoring voltage ..... :		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
N	**ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)**		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	**ANNEX P, NORMATIVE REFERENCES**		Pass
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		N/A
	a) Preferred climatic categories..... :		N/A
	b) Maximum continuous voltage..... :		N/A
	c) Pulse current ..... :		N/A
R	**ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES**		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	**ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	**ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		N/A
	..... :		-
U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		N/A
	..... :		-

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Clause	Requirement + Test	Result - Remark	Verdict

V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		N/A
V.1	Introduction		N/A
V.2	TN power distribution systems		N/A

W	**ANNEX W, SUMMATION OF TOUCH CURRENTS**		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A

X	**ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)**		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A

Y	**ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)**		N/A
Y.1	Test apparatus..... :		N/A
Y.2	Mounting of test samples..... :		N/A
Y.3	Carbon-arc light-exposure apparatus..... :		N/A
Y.4	Xenon-arc light-exposure apparatus ..... :		N/A

Z	**ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)**	N/A

AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**	N/A

BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
CC	**ANNEX CC, EVALUATION OF INTEGRATED CIRCUIT (IC) CURRENT LIMITERS**		Pass
CC.1	General	Only comply with UL approved standard (UL subject	Pass
CC.2	Test program 1 ..... :		N/A
CC.3	Test program 2 ..... :		N/A
DD	**ANNEX DD, REQUIREMENTS FOR THE MOUNTING MEANS OF RACK-MOUNTED EQUIPMENT**		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N ..... :		N/A
DD.3	Mechanical strength test, 250 N, including end stops ..... :		N/A
DD.4	Compliance..... :		N/A
EE	**ANNEX EE, HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS**		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols ..... :		N/A
	Information of user instructions, maintenance and/or servicing instructions..... :		N/A
EE.3	Inadvertent reactivation test ..... :		N/A
EE.4	Disconnection of power to hazardous moving parts		N/A
	Use of markings or symbols ..... :		N/A
EE.5	Protection against hazardous moving parts ..... :		N/A
	Test with test finger (Figure 2A)		N/A
	Test with wedge probe (Figure EE1 and EE2) ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	**TABLE: list of critical components**				Pass
object/part or Description	manufacturer/ trademark	type/model	technical data	standard (Edition or year)	mark(s) of conformity[1])
01 Connectors and Receptacles (secondary ELV/SELV circuits)	--	Metal/Plastic	Copper alloy pins housed in bodies of plastic rated V-2 min.	UL94, UL498, UL1977	UL, --
02 Insulating Tubing/Sleeving	Various	Various	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; 105 degree C, 300V.	UL224	UL, --
03 Label	Various	Various	60 degree C if Max. surface temperature not specified	UL969	UL, --
04. Wiring, internal, secondary	Various	Various	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; min 30 V, 60 degree C, routed away from primary uninsulated live parts, and unless insulated for the highest voltage involved, from insulated primary circuit wiring	UL758	UL, --
05 Internal Plastic Part Materials	Various	Various	Min. V-2	UL94, UL746C	UL, --
06 Printed Wiring Board	Various	Various	V-1 min., rated min. 105 degree C	UL796	UL, --
07 Plastic Material of Flexible Printed Wiring	Various	Various	V-2 min. or VTM-2 min. when no components mounted on surface	UL94, UL746C	UL, --
08 Enclosure	CHI MEI	PC-540	V-0, 1.5 mm	UL94, UL746C	UL, ---

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Clause	Requirement + Test	Result - Remark	Verdict

	CORPORATION		min., 60 degree C, overall 231.0 x 244.0 x 32.8 (with LCD panel) or 231.0 x 244.0 x 22.0 (without LCD panel area)		
09 Power Adaptor (Alternate) (For Rating 12V/2A only)	Bestec Power Electronics Co., Ltd	NA0241WAA (NAwww1WyA)#	I/P: 100-240Vac, 1A, 50/60Hz; O/P: 12Vdc/2A (Class II)	UL60950-1, 2nd Edition; IEC60950-1:2001	UL, JPTUV-024176
09a Power Adaptor (Alternate) (For Rating 13.5V/1.85A only)	Bestec Power Electronics Co., Ltd	BT-AG250SDFxy (X="-", y=A-Z or blank. For marketing purpose	I/P: 100-240Vac, 50/60 Hz, 0.4A; O/P: 13.5V, 1.85A	UL60950-1, 2nd Edition; IEC60950-1:2001	UL, DK-19690
09b. Power Adaptor (Alternate) (For Rating 13.5V/1.85A only)	DARFON ELECTRONICS CORP	BB0J-C	I/P: 100-240Vac, 50/60 Hz, 1A; O/P: 13.5V, 1.85A	UL60950-1, 2nd Edition; IEC60950-1/A1:2009	UL, CBTC(SG-OF-05619) & CBTR(081-110404-000)
10 Battery pack	BYD	CL1	6.5 V, 3,100 mAh (Li-ion)	UL60950-1 UL2054	UL, --
10a Battery pack (Alternate)	Sylva Industries Ltd Rechargeable Battery Div	NTA2488	6.0 V, 3,000 mAh (Ni-MH)	UL60950-1 UL2054	UL, --
10b Battery pack (Alternate)	Sylva Industries Ltd Rechargeable Battery Div	NTA2490	7.3 V, 2800 mAh (Li-Fe)	UL60950-1 UL2054	UL, --
12 Speakers	Various	Various	Rated 8 ohm, max. 1.0 Watt, max. two provided	--	--, --
13 Keyboard	Various	Various	Min. flame HB	UL94 UL746C	UL, --
14 LCD panel	Various	Various	7.5" TFT-LCD type, LED backlight module.	--	--, --
15 Printed wiring board, flexible	Various	Various	Min V-2 or VTM-2, 105 degree C	UL796 UL94	UL, --
Following Components for Model XO-1.75	--	--	See Enclosure Id 3-28, 3-29 for motherboard and	--	--, --

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Clause	Requirement + Test	Result - Remark	Verdict

only			other details. Use with Battery pack :BYD / CL1 only Use with Adapter (Bestec) only.		
16. Mother board (for model XO-1.75)	Various	Various	--	--	--, --
16-1 Wireless LAN Card	Various	Various	3.3Vdc	--	--, --
16-2. Protect IC U9 (for USB use)	Diodes Inc	AP2171, AP2161	2.7-5.5Vdc, Cont. Current 1.0A, Prot. Current 2.0A	UL 2367, IEC 60950-1 2nd +A1	UL, CBTC(NO62499) with CBTR (168141)
16-2. R.T.C. Battery (alternate)	HITACHI MAXELL ENERGY LTD	ML1220	3 Vdc; Max Charging Voltage 12 Vdc; Max Charging Current 100 mA	UL1642	UL, --
16-2-1. RTC Battery protect components	--	--	The RTC battery is protected by following: resistors (R35, R27/1kohm) (R26/4.7Kohm) (R23/1.2Kohm), a transistor (Q1) and a diode (D14).	--	--, --
Supplementary information: [1]) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	**TABLE: Opto Electronic Devices**			N/A
Manufacturer.....:				
Type.....:				
Separately tested.....:				
Bridging insulation.....:				
External creepage distance.....:				
Internal creepage distance.....:				
Distance through insulation.....:				
Tested under following conditions.....:				
Input.....:				
Output.....:				
supplementary information:				
Additional types may be described in Enclosure - Miscellaneous				

1.6.2	**TABLE: electrical data (in normal conditions)**					Pass
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	condition/status
12Vdc	1.420	1.42	17.1	--	--	Maximum normal load with empty battery pack , A and D.
12Vdc	1.430	1.42	17.2	--	--	Maximum normal load with empty battery pack , A and E.
12Vdc	1.420	1.42	17.1	--	--	Maximum normal load with empty battery pack, B and D.
12Vdc	1.420	1.42	17.1	--	--	Maximum normal load with empty battery pack , B and E.
12Vdc	1.420	1.42	17.1	--	--	Maximum normal load with empty battery pack , C and D.
12Vdc	1.420	1.42	17.1	--	--	Maximum normal load with empty battery pack , C and E.
6.5Vdc	1.090	--	7.1	--	--	Maximum normal load with system discharge Battery pack power only D
6 Vdc	1.070	--	6.9	--	--	Maximum normal load with system discharge Battery pack power only E

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Clause	Requirement + Test	Result - Remark	Verdict

--	--	--	--	---	--	Alternate Battery Pack, Sylva Industries Ltd Rechargeable Battery Div., Li-Fe Battery Pack, Model: NTA2490, rated 7.3 Vdc, 2800mAh
12Vdc	1.440	1.42	17.1	--	--	Maximum normal load with empty battery pack, A and F.
7.3 Vdc	1.500	--	11	--	--	Maximum normal load with system discharge Battery pack power only F
--	--	--	--	--	--	Model XO-1.5 (Power Supply: Bestec / NA0241WAA, Battery pack: BYD / CL1)
12Vdc	1.920	2	23.04	--	--	Max normal load with empty battery pack.
12Vdc	1.740	2	20.88	--	--	System off with empty battery pack charging mode.
6.5Vdc	1.880	--	12.22	--	--	System off with empty battery pack charging mode (Measure battery pack connector)
6.5Vdc	1.920	--	12.48	--	--	Maximum normal load supplied by battery pack discharge mode (Measure battery pack connector)
13.5Vdc	1.700	1.85	22.95	--	--	Maximum normal load with empty battery pack, G and D.
13.5Vdc	1.500	1.85	20.25	--	--	Battery charge only,G
-	-	-	-	-	--	Model XO-1.75 with Alternate Mainboard (Test with Battery Pack BYD / CL1 and power supply as noted)
12Vdc	1.480	2.0	17.76	--	--	Max normal load.(Bestec / NA0241WAAA)
12Vdc	1.400	2.0	16.80	--	--	Max. normal load with Battery charge only.(Bestec / NA0241WAAA,)
6.99Vdc	1.540	--	10.78	--	--	System off with empty battery pack charging mode (Measure battery pack connector)
6.42Vdc	2.100	--	13.48	--	--	Maximum normal load supplied by battery pack discharge mode (Battery pack connector)
13.5Vdc	1.480	1.85	19.98	--	--	Max normal load. (Bestec / BT-AG250SDFxy)
13.5Vdc	1.260	1.85	17.01	--	--	Max. Normal load with Battery charge only.(Bestec / BT-AG250SDFxy)
6.99Vdc	1.520	--	10.58	--	--	System off with empty battery

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Clause	Requirement + Test	Result - Remark	Verdict

						pack charging mode (Measure battery pack connector)
6.42Vdc	2.100	--	13.48	--	--	Maximum normal load supplied by battery pack discharge mode (Battery pack connector)

supplementary information:

2.1.1.5 c) 1)	**TABLE: Max. V, A, VA test**				Pass
Voltage(rated) (V)	Current(rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
-	-	-	-	-	

supplementary information:

Approved Adpater output was less than 250VA.

2.1.1.5 c) 2)	**TABLE: Stored energy**		Pass
Capacitance C (µF)	Voltage U (V)	Energy E (J)	
-	-	-	

supplementary information:

Approved Adpater output was less than 250VA.

2.2	**TABLE: Evaluation of voltage limiting components in SELV circuits**			Pass
Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components	
	V Peak	V d.c.		
-	-	-	-	
Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)			
-	-			

supplementary information:

Approved Power Supply used and supplied by SELV.

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Clause	Requirement + Test	Result - Remark	Verdict

2.5	**TABLE: limited power sources**				Pass
Circuit output tested:	-				
Measured Uoc (V) with all load circuits disconnected:	-				
	Isc (A)		VA		
	Meas.	Limit	Meas.	Limit	
-	-	-	-	-	
-	-	-	-	-	
-	-	--	-	-	
supplementary information:					
See Enclosure Miscellaneous for detail.					

2.10.2	**TABLE: working voltage measurement**			Pass
Location	RMS Voltage (V)	Peak voltage (V)	Comments	
--	--	--	--	
supplementary information:				
--				

2.10.3 and 2.10.4	**TABLE: clearance and creepage distance measurements**					Pass
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
--	--	--	--	-	--	--
Functional:						
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
-	-	-	-	-	-	-
Basic/supplementary:						
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
-	-	-	-	-	-	-
Reinforced:						

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Clause	Requirement + Test	Result - Remark	Verdict

Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
-	-	-	-	-	-	-
supplementary information:						
Only functional insulation is required and complies with sub clause 5.3.4 c).						

2.10.5	**TABLE: distance through insulation measurements**				N/A
Distance through insulation (DTI) at/of:	U peak (V)	Urms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
supplementary information:					

4.3.8	**TABLE: Batteries**								Pass
The tests of 4.3.8 are applicable only when appropriate battery data is not available.									
Is it possible to install the battery in a reverse polarity position?				No					
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. specs.		Meas. current	Manuf. specs.	Meas. current	Manuf. specs.	Meas. current	Manuf. specs.
Max. current during normal operation	-	-	-	-	-	-	-	-	-
Max. current during fault operation	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

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Clause	Requirement + Test	Result - Remark	Verdict

Test results:		Verdict
- Chemical leaks	-	Pass
- Explosion of the battery	-	Pass
- Emission of flame or expulsion of molten metal	-	Pass
- Electric strength tests of equipment after completion of tests	-	Pass
supplementary information:		
Approved Battery Pack used and critical component table for detail.		

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Clause	Requirement + Test	Result - Remark	Verdict

4.3.8	**TABLE: Batteries**			Pass
Battery Category (Lithium, NiMh, NiCad, Lithium ion, etc.).....:	-	-	-	
Manufacturer.....:	-	-	-	
Type/Model.....:	-	-	-	
Voltage.....:	-	-	-	
Capacity (mAh).....:	-	-	-	
Tested and Certified by (incl. Ref. No.).....:	-	-	-	
Circuit protection diagram (Refer indicated supplement of Enclosure-Miscellaneous).....:	-	-	-	
-	-	-	-	
MARKINGS AND INSTRUCTIONS (1.7.12, 1.7.15)				
Location of replaceable battery.....:	-	-	-	
Language(s).....:	-	-	-	
Close to the battery.....:	-	-	-	
In the servicing instructions.....:	-	-	-	
In the operating instructions.....:	-	-	-	
In the operating instructions	-	-	-	
supplementary information:				
See Critical Component Table and Approved battery Pack information for detail.				

4.5	**TABLE: Thermal requirements**						Pass
	Supply voltage (V)..... :	See below	--	--	--	--	—
	Ambient Tmin (°C) ..... :	--	--	--	--	--	—
	Ambient Tmax (°C) ..... :	--	--	--	--	--	—

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Clause	Requirement + Test	Result - Remark	Verdict

Maximum measured temperature T of part/at:	T (°C)					allowed Tmax (°C)
Normal Condition	Condition 1 (Original)	Condition 1 (Shift to 45)	Condition 2 (Original)	Condition 2 (Shift to 45)	--	--
1.Amibent	25	45	25	45	--	--
2. RTC battery	41	61	34	54	--	100
3. CPU near PWB	43	63	38	58	--	105
4. Enclosure inside, top section, near CPU	39	59	36	56	--	70
5. Outside enclosure, top section, near CPU	34	54	32	52	--	95
6. Outside enclosure, top section, front panel LCD	31	51	29	49	--	75
7. Outside enclosure, bottom section, near mouse control board	26	46	26	46	--	75
8. Outside enclosure, bottom surface, battery pack (BYD)	30	50	30	50	--	75
9. Outside enclosure, bottom surface, battery pack (Sylva Industries Ltd Rechargeable Battery Div.,)	27	47	29	49	--	75
10. Enclosure inside near T1 (Adaptor)	35	55	26	46	--	95
Alternate Battery Pack, Sylva Industries Ltd Rechargeable Battery Div., Li-Fe Battery Pack, Model: NTA2490, rated 7.3 Vdc, 2800mAh	Condition 3 (Original)	Condition 3 (Shift to 45)	Condition 4 (Original)	Condition 4 (Shift to 45)	--	--
1.Amibent	25	45	25	45	--	--
2. RTC battery	42	62	39	59	--	100
3. CPU near PWB	42	62	44	64	--	105
4. Enclosure inside, top section, near CPU	39	59	40	60	--	70
5. Outside enclosure, top section, near CPU	35	55	35	55	--	95
6. Outside enclosure, top section, front panel LCD	31	51	30	50	--	75
7. Outside enclosure, bottom section, near mouse control board	26	46	26	46	--	75
8. Outside enclosure, bottom surface, battery pack (Sylva Industries Ltd Rechargeable Battery Div.,)	27	47	28	48	--	75
9. Enclosure inside near T1 (Adaptor)	48	68	32	52	--	95
For Model XO-1.5	--	--	--	--	--	--
Normal Condition	Maximum Normal Load (Original)	Maximum Normal Load (Shift to 45)	Discharge battery pack only (Original)	Discharge battery pack only (Shift to 45)	--	--
1.U19 near PWB	45.2	66.6	40.8	62.9	--	105
2.U20 near PWB	43.5	64.9	38.5	60.6	--	105
3.RTC battery	42.8	64.2	40.0	62.1	--	100
4.U17 near PWB	39.5	60.9	37.4	59.5	--	105
5.Enclosure inside near U19	35.6	57.0	33.0	55.1	--	60

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6.Enclosure outside near U19		28.5	49.9	27.2	49.3	--	60
7.Enclosure outside near mouse control board		23.9	45.3	23.1	45.2	--	60
8.Enclosure outside near battery pack		28.2	49.6	27.0	49.1	--	60
9.Ambient		23.6	45.0	22.9	45.0	--	--
For Model XO-1.75		--	--	--	--	--	--
Normal condition (See Input Table for Max. Load condition, tested w/battery BYD, Model CLI)		Max. normal load	Max. normal load (shift to 45)	Discharge	Discharge (shift to 45)	--	--
1.U19 near PWB		39.5	59.3	38	58.3	--	105
2.U20 near PWB		39.5	59.3	37.5	57.8	--	105
3.RTC battery		36.5	56.3	33.5	53.8	--	100
4.Enclosure inside near U19		34.5	54.3	33.1	53.4	--	60
5.Enclosure outside near U19		34	53.8	33	53.3	--	60
6.Enclosure outside near front panel		31.5	51.3	30.5	50.8	--	60
7.Enclosure outside near mouse control board		31.5	51.3	31.5	51.8	--	60
8.Enclosure outside near battery pack		25.9	45.7	25.3	45.6	--	60
9.Ambient		25.2	45	24.7	45	--	--
temperature T of winding:	t_1 (°C)	R_1 (Ω)	t_2 (°C)	R_2 (Ω)	T (°C)	allowed T_{max} (°C)	insulation class
--	--	--	-	--	--	--	--

supplementary information:

Test Condition 1: Maximum normal load 12 Vdc, Duration 15hrs.50mins. Test Condition 2: Discharge battery pack only, Duration 2hrs.50mins. Test Condition 3: Maximum normal load 12 Vdc, Duration 15hrs.50mins. Test Condition 4: Discharge battery pack only, Duration 2hrs.50mins. Comments: The temperatures were measured under worst case normal mode defined in 1.2.2.1 load as described in 1.6.2 at voltages as described in 1.4.5. With max. ambient temperature specified as 45 degree C, the ore, the maximum temperature rise is calculated as follows: Components with: Max.temp.of 105 degree C(PWB) Max.temp.of 100 degree C(RTC) User accessible area: material is plastic 70 degree C (for Enclosure inside, top section, near CPU) material is plastic 75 degree C (for Outside enclosure, top section, front panel LCD) material is plastic 75 degree C (for Outside enclosure, bottom section, near mouse control board) material is plastic 75 degree C (for Outside enclosure, bottom surface, battery pack (BYD)/ (Sylva Industries Ltd Rechargeable Battery Div.,)) material is plastic 95 degree C (for Enclosure inside near T1 (Adaptor))

4.5.5	**TABLE: Ball pressure test of thermoplastic parts**		N/A
	allowed impression diameter (mm) ..... :	less than or equal to 2.0	—
part		test temperature (°C)	impression diameter (mm)

supplementary information:

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Clause	Requirement + Test	Result - Remark	Verdict

4.7	**TABLE: resistance to fire**				Pass
part	manufacturer of material	type of material	thickness (mm)	flammability class	Evidence
-	-	-	-	-	-
supplementary information:					
Refer to Table 1.5.1 Critical component list.					

5.1	**TABLE: touch current measurement**		N/A
Measured between:	Measured (mA)	Limit (mA)	Comments/Conditions
supplementary information:			

5.2	**TABLE: electric strength tests, impulse tests and voltage surge tests**		N/A
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:			
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Basic/supplementary:			
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Reinforced:			
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

supplementary information:

5.3	**TABLE: fault condition tests**						Pass
	ambient temperature (° C) ..... :				25 degree C		—
	Power source for EUT: Manufacturer, model/type, output rating ..... :				(see appended table 1.5.1)		—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation	
--	--	--	--	--	--	Clause 4.3.8 -Battery Overcharge/Discharge Tests	
Q33 (pin 1-3) (Overcharging Test,)	Short	12Vdc	14 hrs 30mins.	--	--	PA, PB, PC, No hazard., Ambient =29 dgree C. Enclosure inside = 29 degree C	
D18 D-S (Rapid Discharging Test)	Short	--	14 hrs 30mins.	--	--	PA, PB, PC, No hazard., Ambient =29 dgree C. Enclosure inside = 29 degree C	
--	--	--	--	--	--	4.3.8 Lithium battery reverse current measurement test	
RTC battery reverse current test	Normal	12Vdc	--	--	--	Charging current is 0 mA	
RTC battery reverse current test D18	Short	12Vdc	--	--	--	Charging current is 0.56 mA	
RTC battery reverse current test Q33 (pin1-3)	Short	12Vdc	--	--	--	Charging current is 0 mA	
RTC battery reverse current test Q33 (pin1-2)	Short	12Vdc	--	--	--	Charging current is 0 mA	

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Clause	Requirement + Test	Result - Remark	Verdict

RTC battery reverse current test R275	Short	12Vdc	--	--	--	Charging current is 0 mA
--	--	--	--	--	--	5.3.6 Overload of operator accessible connector test:
USB1 (CN7) pin1	Overload	12Vdc	1hrs	--	--	NC,NT Open circuit voltage=4.9Vdc Maximum available current =1210mA
USB1 (CN7) pin2~4	Overload	12Vdc	--	--	--	B Open circuit voltage=0Vdc Maximum available current =0mA
USB2 (CN6) pin1	Overload	12Vdc	1hrs	--	--	NC, NT, Open circuit voltage=4.9Vdc Maximum available current =1220mA
USB2 (CN6) pin2-4	Overload	12Vdc	--	--	--	B, Open circuit voltage=0Vdc ,Maximum available current =0mA
USB3 (CN4) pin1	Overload	12Vdc	1hrs	--	--	NC, NT, Open circuit voltage=4.9Vdc, Maximum available current =1210mA
USB4(CN4) pin2-4	Overload	12Vdc	--	--	--	B, Open circuit voltage=0Vdc, Maximum available current =0mA
--	--	--	--	--	--	For Model XO-1.5
--	--	--	--	--	--	4.3.8 Lithium battery reverse current measurement test
RTC battery reverse current test	Normal	12Vdc	--	--	--	Charging current is 0 mA
RTC battery reverse current test R309	Short	12Vdc	--	--	--	Charging current is 0 mA
RTC battery reverse current test D20	Short	12Vdc	--	--	--	Charging current is 0.56 mA
RTC battery	Short	12Vdc	--	--	--	Charging current is 0 mA

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

reverse current test Q24 (pin1-3)						
RTC battery reverse current test R305	Short	12Vdc	--	--	--	Charging current is 0 mA
--	--	--	--	--	--	For Model XO-1.75
--	--	--	--	--	--	4.3.8 Lithium battery reverse current measurement test
RTC battery reverse current test	Normal	13.5Vdc	--	--	--	Charging current is 2 mA
R26	Short	13.5Vdc	--	--	--	Charging current is 4 mA
R23	Short	13.5Vdc	--	--	--	Charging current is 2 mA
Q1(pin 1-3) short	Short	13.5Vdc	--	--	--	Charging current is 2 mA
D14	Short	13.5Vdc	--	--	--	Charging current is 3 mA
R35	Short	13.5Vdc	--	--	--	Charging current is 3 mA
--	--	--	--	--	--	5.3.6 Overload of operator accessible connector test
USB (CN11), pin 1	Overload	13.5Vdc	--	--	--	NC, NT, Open circuit voltage=4.95Vdc, Maximum available current =1310mA
USB (CN11), Pin 2-4	Overload	13.5Vdc	--	--	--	B
USB (CN9) , pin 1	Overload	13.5Vdc	--	--	--	NC, NT, Open circuit voltage=4.95Vdc, Maximum available current =1310mA
USB (CN9) , Pin 2-4	Overload	13.5Vdc	--	--	--	B
USB (CN12) , pin 1	Overload	13.5Vdc	--	--	--	NC, NT, Open circuit voltage=4.95Vdc, Maximum available current =1310mA
USB (CN12) , Pin 2-4	Overload	13.5Vdc	--	--	--	B
MIC (CN3), Pin 1 to 6	Overload	13.5Vdc	--	--	--	B
Headphone (CN4), Pin 1 to 6	Overload	13.5Vdc	--	--	--	B
Card	Overload	13.5Vdc	--	--	--	C

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Clause	Requirement + Test	Result - Remark	Verdict

reader (CN19), Pin 4						
Card reader (CN19), Pin 1-3 and 5-13	Overload	13.5Vdc	--	--	--	B
supplementary information:						

C.2	**TABLE: transformers**						N/A
Loc.	Tested insulation	Working voltage peak /V (2.10.2)	Working voltage rms /V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)
Loc.	Tested insulation			Test voltage / V	Measured clearance / mm	Measured creepage dist./mm	Measured distance thr. insul / mm; number of layers
Transformer type number				Enclosure - Miscellaneous ID			
supplementary information:							

Enclosure

National Differences

Austria**
Belarus*
Belgium**
Bulgaria**
China*
Czech Republic**
Denmark
Finland
France**
Germany
Greece**
Group
Hungary**
Italy**
Japan*
Korea
Netherlands**
Norway
Poland**
Romania**
Singapore*
Slovakia**
Slovenia**
Sweden
Switzerland
USA / Canada
Ukraine*
United Kingdom

* No National Differences Declared
** Only Group Differences

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
Denmark - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.2.4.1	In Denmark, certain types of Class I appliances (see sub-clause 3.2.1.1) may be provided with plug not establishing earthing continuity when inserted into Danish socket-outlets.		N/A
1.7.5	In Denmark, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For stationary equipment, the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a.		N/A
1.7.5	For CLASS II EQUIPMENT the socket outlet shall be in accordance with Standard Sheet DKA 1-4a. (Heavy Current Regulations, Section 107-2-D1)		N/A
3.2.1.1	Supply cord of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. CLASS I EQUIPMENT provided with socket-outlets with earth contact or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

Finland - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined by annex, 6.1.2.2.		N/A
1.7.2.1	CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan"		N/A
2.3.2	Requirements according to this annex 6.1.2.1 and 6.1.2.2 apply.		N/A
2.10.5.13	Requirements according to this annex 6.1.2.1 and 6.1.2.2 apply.		N/A
5.1.7.1	Touch current measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment: - STATIONARY PLUGGABLE EQUIPMENT TYPE A that: (1) is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and (2) has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and (3) is provided with instructions for the installation		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	of that conductor by a SERVICE PERSON; - STATIONARY PLUGGABLE EQUIPMENT TYPE B - STATIONARY PERMANENTLY CONNECTED EQUIPMENT		
6.1.2.1	Add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994 (EN 60384-14:2005), subclass Y2. A capacitor classified Y3 according to EN 132400 [EN 60384-14:2005], may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400 [EN 60384-14], which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400 [EN 60384-14]; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400 [EN 60384-14], in the sequence of tests as described in EN 132400 [EN 60384-14].		
6.1.2.2	The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication center, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	Requirements according to this annex 6.1.2.1 and 6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
Germany - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.7.2.1	According to GPSG, section 2, clause 4: If certain rules on the use, supplementation or maintenance of an item of technical work equipment or ready-to-use commodity must be observed in order to guarantee safety and health, instructions for use in German must be supplied when it is brought into circulation.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
Group - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.1.1	Replace the text of NOTE 3 by the following: NOTE 3 The requirements of EN60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the Safety of Multimedia Equipment. For television sets, EN60065 applies.		N/A
1.2.3	Add the following definition. 1.2.3.Z1 Portable Sound System Small battery powered audio equipment -whose prime purpose is to listen to recorded or boardcasted sound; and -that uses headphones or earphones that can be worn in or on or around the ears; and -that allows the user to walk around NOTE: Examples are mini-disk or CD players, MP3 audio players or similar equipment.		N/A
1.5.1	Add the following NOTE Z1: The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC		N/A
1.7.2.1	Delete NOTE Z1 and addd the following paragraph at the end of the subclause: In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	of 5.3 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for PLUGGABLE EQUIPMENT TYPE B or PERMANENTLY CONNECTED EQUIPMENT, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for PLUGGABLE EQUIPMENT TYPE A the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		
2.7.2	Void		N/A
3.2.3	Delete the NOTE and conduit sizes in parentheses in Table 3A		N/A
3.2.5.1	Replace: "60245 IEC 53" by "H05 RR-F" "60227 IEC 52" by "H03 VV-F or H03 VVH2-F" "60227 IEC 53" by "H05 VV-F or H05 VVH2-F" In Table 3B, replace the first four lines by the following: Up to and including 6 0.75 a) Over 6 up to and including 10 0.75 b) 1.0 Over 10 up to and including 16 1.0 c) 1.5 In the conditions applicable to table 3B, delete the words "in some countries" in condition a). In Note 1, applicable Table 3B, to delete the second sentence.		N/A
3.3.4	In table 3D, delete the fourth line: conductor		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	sizes for 10 to 13 A, and replace with the following: "Over 10 up to and including 16 1.5 to 2.5 1.5 to by 4" Delete the fifth line: conductor sizes for 13 to 16A.		
4.3.13.6	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artificial optical radiation). Standards taking into account this Recommendation which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE - These values appear in Directive 96/29/Euratom. Delete NOTE 2.		N/A
Zx	Protection against excessive sound pressure from personal music players		N/A
Zx.1	General - This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a portable equipment for personal use, that: - is designed to allow the user to listen to recorded		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	or broadcast sound or video; and - primarily uses headphones or earphones that can be worn in or on or around the ears; and - allows the user to walk around while in use. NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment. A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: - while the personal music player is connected to an external amplifier; or - while the headphones or earphones are not used. NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player. The requirements do not apply to: - hearing aid equipment and professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment. - analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. For equipment which is clearly designed or intended for use by young children, the limits of EN		

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	71-1 apply.		
Zx.2	Equipment Requirements - No safety provision is required for equipment that complies with the following: - equipment provided as a package (personal music player with its listening device), where the acoustic output LAeq,T is ≤ 85 dBA measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and - a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level LAeq,T is meant. See also Zx.5 and Annex Zx. All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and NOTE 2 Examples of means include visual or audible signals. Action from the user is always required. NOTE 3 The 20 h listening time is the accumulative		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	listening time, independent how often and how long the personal music player has been switched off. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a package (player with Its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed “programme simulation noise” described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” described in EN 50332-1. For music where the average sound pressure (long term LAeq,T) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song. NOTE 4 Classical music typically has an average sound pressure (long term LAeq,T) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.		
Zx.3	Warning - The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: - the symbol of Figure 1 (IEC 60417-6044) with a minimum height of 5 mm; and - the following wording, or similar:		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	"To prevent possible hearing damage, do not listen at high volume levels for long periods." Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level		
Zx.4	Requirements for Listening devices (headphones and earphones)		N/A
Zx.4.1	Wired listening devices with analogue input With 94 dBA sound pressure output LAeq,T, the input voltage of the fixed "programme simulation noise" described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control). NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.		N/A
Zx.4.2	Wired listening devices with digital input With any playing device playing the fixed "programme simulation noise" described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA. This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.). NOTE An example of a wired listening device with digital input is a USB headphone.		N/A
Zx.4.3	Wireless listening devices In wireless mode:		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	- with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and - respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and - with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.)set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output LAeq,T of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.		
Zx.5	Measurement Methods Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s. NOTE Test method for wireless equipment provided without listening device should be defined.		N/A

Korea - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.5.101	Plugs for the connection of the apparatus to the mains supply shall comply with the Korean requirement (KSC 8305)		N/A
8	EMC - The apparatus shall comply with the relevant CISPR standards		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

Norway - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.2.13.14	Requirements according to this annex 1.7.2.1 and 7.3 apply.		N/A
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.8	Due to the IT power system used (see annex V, figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).		N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A
1.7.2.1	CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be: "Apparatet må tilkoples jordet stikkontakt"		N/A
1.7.2.1	In Norway, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: "Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing - and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)." NOTE: In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr - og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel-TV nettet."		
2.2.4	Requirements according to this annex, 1.7.2.1, 6.1.2.1 and 6.1.2.2 apply.		Pass
2.3.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.3.4	Requirements according to this annex, 1.7.2.1, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.10.5.13	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
5.1.7.1	TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment: - STATIONARY PLUGGABLE EQUIPMENT TYPE A that: (1) is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and (2) has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and (3) is provided with instructions for the installation of that conductor by a SERVICE PERSON; - STATIONARY PLUGGABLE EQUIPMENT TYPE B - STATIONARY PERMANENTLY CONNECTED EQUIPMENT		N/A
6.1.2.1	Add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 123400 [EN 60384-14:2005], may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400 [EN 60384-14], which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1; - the additional testing shall be performed on all the test specimens as described in EN 132400 [EN 60384-14]; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400 [EN 60384-14], in the sequence of tests as described in EN 132400 [EN 60384-14.]		
6.1.2.2	The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3	Refer to EN 60728-11:2005 for installation conditions		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
7.3	Requirements according to this annex 1.2.13.14 and 1.7.2.1 apply.		N/A
Sweden - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.2.13.14	Requirements according to this annex 1.7.2.1 and 7.3 apply.		N/A
1.5.7.1	Resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.2. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.		N/A
1.5.9.4	The third dashed sentence is applicable only to equipment as defined by this annex, 6.1.2.2		N/A
1.7.2.1	CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text shall be:"Apparaten skall anslutas till jordat uttag"		N/A
1.7.2.1	In Sweden, the screen of the cable distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation need to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by e.g. a retailer. The user manual shall then have the following or similar information in Norwegian and Swedish		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	language respectively, depending on in what country the equipment is intended to be used in: "Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing - and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)." NOTE: In Norway, due to regulation for installations of cable distribution systems, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Swedish: "Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet."		
2.3.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
2.10.5.13	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply.		N/A
5.1.7.1	TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s are permitted only for the following equipment: STATIONARY PLUGGABLE EQUIPMENT TYPE A that: (1) is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and (2) has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and (3) is provided with instructions for the installation		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	of that conductor by a SERVICE PERSON; - STATIONARY PLUGGABLE TYPE B - STATIONARY PERMANENTLY CONNECTED EQUIPMENT		
6.1.2.1	Add the following text between the first and second paragraph of the compliance clause: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either - two layers of thin sheet material, each of which shall pass the electric strength test below, or - one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. Alternatively for components, there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that CLEARANCES and CREEPAGE DISTANCES do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition - passes the tests and inspection criteria of 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV. It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). It is permitted to bridge this insulation with a capacitor complying with EN 132400:1994, subclass Y2. A capacitor classified Y3 according to EN 132400 [EN 60384-14:2005], may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 132400 [EN 60384-14], which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in EN 60950-1:2006, 6.2.2.1;		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	- the additional testing shall be performed on all the test specimens as described in EN 132400 [EN 60384-14]; - the impulse test of 2,5 kV is to be performed before the endurance test in EN 132400 [EN 60384-14], in the sequence of tests as described in EN 132400 [EN 60384-14.]		
6.1.2.2	The exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT and PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	Requirements according to this annex, 6.1.2.1 and 6.1.2.2 apply with the term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.		N/A
7.3	Requirements according to this annex 1.2.13.14 and 1.7.2.1 apply.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

Switzerland - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
3.2.1.1	Supply cords of equipment having a RATED CURRENT not exceeding 10A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2 1991 Plug Type 15 3P+N+PE SEV 6533-2 1991 Plug Type 11 L+N SEV 6534-2 1991 Plug Type 12 L+N+PE In general, EN 60309 applies for plugs for currents exceeding 10A. However, a 16A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February, 1998. SEV 5932-2 1998:Plug Type 25 3L+N+PE SEV 5933-2 1998:Plug Type 21 L+N SEV 5934-2 1998:Plug Type 23 L+N+PE		N/A
3.2.4	Requirements according to this annex 3.2.1.1 apply.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

USA / Canada - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
1.1	Equipment able to be installed in accordance with the National Electrical Code ANSI/NFPA 70 and the Canadian Electrical Code, Part1, and when applicable, the National Electrical Safety Code, IEEE C2.		Pass
1.1.1	Equipment able to be installed in accordance with ANSI/NFPA 75 and NEC Art. 645 unless intended for use outside of computer room and provided with such instructions.		Pass
1.1.2	Equipment in wire-line communication facilities serving high-voltage electric power stations operating at greater than 1kV are excluded.		N/A
1.1.2	Special requirements apply to equipment intended for use outdoors.		N/A
1.4.14	For PLUGGABLE EQUIPMENT TYPE A, the protection in the installation is assumed to be 20 A.		N/A
1.5.1	All IEC standards for components identified in Annex P.1 replaced by the relevant requirements of CSA and UL component standards in Annex P.1.		Pass
1.5.1	All IEC standards for components identified in Annex P.2 alternatively satisfied by the relevant requirements of CSA and UL component standards in Annex P.2.		Pass
1.5.5	Interconnecting cables acceptable for the application regarding voltage, current, temperature, flammability, mechanical serviceability and the like.		Pass

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
1.5.5	For other than limited power and TNV circuits, the type of output circuit identified for output connector.		N/A
1.5.5	External cable assemblies that exceed 3.05 m in length to be types specified in the NEC and CEC.		N/A
1.5.5	Detachable external interconnecting cables 3.05 m or less in length and provided with equipment marked to identify the responsible organization and the designation for the cable.		N/A
1.5.5	Building wiring and cable for use in ducts, plenums and other air handling space subject to special requirements and excluded from scope.		N/A
1.5.5	Telephone line and extension cords and the like comply with UL 1863 and CSA C22.2 No. 233.		N/A
1.6.1.2	Equipment intended for connection to a d.c. power (mains) distribution system is subject to special circuit classification requirements (e.g., TNV-2)		N/A
1.6.1.2	Earthing of d.c. powered equipment provided.		N/A
1.7	Lamp replacement information indicated on lampholder in operator access area.		N/A
1.7.1	Special marking format for equipment intended for use on a supply system with an earthed neutral and more than one phase		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	conductor.		
1.7.1	Equipment voltage rating not higher than rating of the plug except under special conditions.		N/A
1.7.6	Special fuse replacement marking for operator accessible fuses.		N/A
1.7.7	Identification of terminal connection of the equipment earthing conductor.		N/A
1.7.7	Connectors and field wiring terminals for external Class 2 or Class 3 circuits provided with marking indicating minimum Class of wiring to be used.		N/A
1.7.7	Marking located adjacent to terminals and visible during wiring.		N/A
2.1.1.1	Bare TNV conductive parts in the interior of equipment normally protected against contact by a cover intended for occasional removal are exempt provided instructions include directions for disconnection of TNV prior to removal of the cover.		N/A
2.3.1.b	Other telecommunication signaling systems (e.g., message waiting) than described in 2.3.1(b) are subject to M.4.		N/A
2.3.1.b	For TNV-2 and TNV-3 circuits with other than ringing signals and with voltages exceeding 42.4 Vp or 60 V d.c., the maximum current limit through a 2000 Ohm or greater resistor with loads disconnected is 7.1 mA peak or 30 mA d.c. under normal conditions.		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
2.3.1.b	Limits for measurements across 5000 ohm resistor in the event of a single fault are replaced after 200 ms with the limits of M.3.1.4.		N/A
2.3.2.1	In the event of a single fault, the limits of 2.2.3 apply to SELV circuits and accessible conductive parts.		N/A
2.3.2.4	Enamel coating on signal transformer winding wire allowed as an alternative to Basic insulation in specific telecommunication applications when subjected to special construction requirements and routine testing.		N/A
2.5	Overcurrent protection device required for Class 2 and Class 3 limiting in accordance with the NEC, or for a Limited Power Source, not interchangeable with devices of higher ratings if operator replaceable.		N/A
2.6	Equipment having receptacles for output a.c. power connectors generated from an internal separately derived source have the earthed (grounded) circuit conductor suitably bonded to earth.		N/A
2.6.3.3	For PLUGGABLE EQUIPMENT TYPE A, if a) b) or c) are not applicable, the current rating of the circuit is taken as 20 A		N/A
2.6.3.3	The first column on Table 2D requirement: “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration."		N/A
2.6.3.4	Capacity of connection between earthing terminal and parts required to be earthed subject to		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	special conditions based on the current rating of the circuit.		
2.6.3.4	Protective bonding conductors and their terminals of non-standard constructions (e.g. PWB traces) evaluated to limited short-circuit test of CSA C22.2 No.0.4.		N/A
2.6.4.1	Field wiring terminals for earthing conductors suitable for wire sizes (gauge) used in US and Canada.		N/A
2.7.1	Data for selection of special external branch circuit overcurrent devices marked on the equipment.		N/A
2.7.1	Standard supply outlets protected by overcurrent device in accordance with the NEC, and CEC, Part 1.		N/A
2.7.1	Overcurrent protection for individual transformers that distribute power to other units over branch circuit wiring.		N/A
2.7.1	Additional requirements for overcurrent protection apply to equipment provided with panelboards.		N/A
2.7.1	Non-motor-operated equipment requiring special overcurrent protective device marked with device rating.		N/A
2.10.5.12	Multi-layer winding wire subject to UL component wire requirements in addition to 2.10.5.12 and Annex U.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
3.1.1	Permissible combinations of internal wiring/external cable sizes for overcurrent and short circuit protection.		Pass
3.1.1	All interconnecting cables protected against overcurrent and short circuit.		Pass
3.2	Wiring methods permit connection of equipment to primary power supply in accordance with the NEC and CEC, Part 1.		N/A
3.2.1	Permitted use for flexible cords and plugs.		N/A
3.2.1	Flexible cords provided with attachment plug rated 125% of equipment current rating.		N/A
3.2.1	Any Class II equipment provided with 15 or 20 A standard supply outlets, Edison-base lampholders or single pole disconnect device provided with a polarized type attachment plug.		N/A
3.2.1.2	Equipment intended for connection to DC mains supply power systems complies with special wiring requirements (e.g., no permanent connection to supply by flexible cord).		N/A
3.2.1.2	Equipment with one pole of the DC mains supply connected to both the equipment mains input terminal and the main protective earthing terminal provided with special instructions and construction provisions for earthing.		N/A
3.2.1.2	Equipment with means for connecting supply to earthing electrode conductor has no switches or protective devices between supply		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	connection and earthing electrode connection.		
3.2.1.2	Special markings and instructions for equipment with provisions to connect earthed conductor of a DC supply circuit to earthing conductor at the equipment.		N/A
3.2.1.2	Special markings and instructions for equipment with earthed conductor of a DC supply circuit connected to the earthing conductor at the equipment.		N/A
3.2.1.2	Terminals and leads provided for permanent connection of DC powered equipment to supply marked to indicate polarity if reverse polarity may result in a hazard.		N/A
3.2.3	Permanently connected equipment has provision for connecting and securing a field wiring system (i.e. conduit, or leads etc.) per the NEC and CEC, Part 1.		N/A
3.2.3	Permanently connected equipment may have terminals or leads not smaller than No. 18 AWG (0.82 mm²) and not less than 150 mm in length for connection of field installed wiring.		N/A
3.2.3	If supply wires exceed 60 °C, marking indicates use of 75 °C or 90 °C wiring for supply connection as appropriate.		N/A
3.2.3	Equipment compatible with suitable trade sizes of conduits and cables.		N/A
3.2.5	Power supply cords are required to be no longer than 4.5 m in length.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	Minimum cord length is required to be 1.5 m, with certain constructions such as external power supplies allowed to consider both input and output cord lengths into the requirement. Flexible power supply cords are required to be compatible with Article 400 of the NEC, and Tables 11 and 12 of the CEC.		
3.2.5	Conductors in power supply cords sized according to NEC and CEC, Part I.		N/A
3.2.5	Power supply cords and cord sets incorporate flexible cords suitable for the particular application.		N/A
3.2.6	Strain relief provided for non-detachable interconnecting cables not supplied by a limited power source.		N/A
3.2.9	Adequate wire bending space and volume of field wiring compartment required to properly make the field connections.		N/A
3.2.9	Equipment intended solely for installation in Restricted Access Locations using low voltage d.c. systems may not need provision for connecting and securing a field wiring system. A method of securing wiring or instructions provided to ensure the wiring is protected from abuse.		N/A
3.3	Field wiring terminals provided for interconnection of units for other than LPS or Class 2 circuits also comply with 3.3.		N/A
3.3	Interconnection of units by LPS or Class 2 conductors may have field wiring connectors other		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	than those specified in 3.3 if wiring is reliably separated.		
3.3.1	Terminals for the connection of neutral conductor identified by a distinctive white marking or other equally effective means.		N/A
3.3.3	Wire binding screw terminal permitted for connection of No. 10 AWG (5.3 mm²) or smaller conductor if provided with upturned lugs, cupped washer or equivalent retention.		N/A
3.3.4	Terminals accept wire sizes (gauge) used in the U.S. and Canada.		N/A
3.3.4	Terminals accept current-carrying conductors rated 125% of the equipment current rating.		N/A
3.3.5	First column of Table 3E requirement: “Smaller of the RATED CURRENT of the equipment or the PROTECTIVE CURRENT RATING of the circuit under consideration.”		N/A
3.3.6	Field wiring terminals marked to indicate the material(s) of the conductor appropriate for the terminals used.		N/A
3.3.6	Connection of an aluminum conductor not permitted to terminal for equipment earthing conductor.		N/A
3.3.6	Field wiring connections made through the use of suitable pressure connectors (including set screw type), solder lugs or splices to flexible leads.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
3.4.2	Separate motor control device(s) required for cord-connected equipment rated more than 12 A, or with motor rated more than 1/3 hp or more than 120 V.		N/A
3.4.8	Vertically mounted disconnect devices oriented so up position of handle is "on".		N/A
3.4.11	For computer-room applications, equipment with battery systems capable of supplying 750 VA for 5 min require battery disconnect means.		N/A
4.2.8.1	Special opening restrictions for enclosures around CRTs with face dimension of 160 mm or more.		N/A
4.2.9	Compartment housing high-pressure lamp marked to indicate risk of explosion.		N/A
4.2.11	For equipment intended for mounting on racks and provided with slide/rails allowing the equipment to slide away from the rack for installation, service and maintenance, additional construction, performance and marking requirements are applicable to determine the adequacy of the slide/rails.		N/A
4.3.2	Loading test for equipment with handle(s) used to support more than 9 kg tested at four times the weight of the unit.		N/A
4.3.6	In addition to the IEC requirements, Direct Plug-in Equipment complies with UL 1310 or CSA 223 mechanical assembly requirements.		N/A
4.3.12			N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	The maximum quantity of flammable liquid stored in equipment complies with ANSI/NFPA 30(Table NAE.6).		
4.3.12	Equipment using replenishable liquids marked to indicate type of liquid to be used.		N/A
4.3.13.2	Equipment that produces x-radiation and does not comply with 4.3.12 under all conditions of servicing marked to indicate the presence of radiation where readily visible.		N/A
4.3.13.5	Requirements contained in the applicable national codes and regulations apply to lasers (21 CFR 1040 and REDR C1370).		N/A
4.7	Automated information storage equipment intended to contain more than 0.76 m^3 of combustible media requires provision for automatic sprinklers or a gaseous agent extinguishing system.		N/A
4.7.3.1	Equipment for use in environmental air space other than ducts or plenums provided with metal enclosure or with non-metallic enclosure having adequate fire-resistance and low smoke producing characteristics. Low smoke-producing characteristics evaluated according to UL 2043. Equipment for installation in space used for environmental air as described in Sec. 300-22(c) of the NEC provided with instructions indicating suitability for installation in such locations.		N/A
4.7.3.1	Flame spread rating for external surface of combustible material with exposed area greater than 0.93 m^2 or a single dimension greater than 1.8 m; 50 or less for computer room applications or 200 or less for other applications.		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
4.7.3.4	Wire marked "VW-1" or "FT-1" considered equivalent.		Pass
5.1.8.2	Special earthing provisions and instructions for equipment with high touch current due to telecommunication network connections.		N/A
5.1.8.3	Touch current due to ringing voltage for equipment containing telecommunication network leads.		N/A
5.3.7	Overloading of SELV connectors and printed wiring board receptacles accessible to the operator.		Pass
5.3.7	Tests interrupted by opening of a component repeated two additional times.		N/A
5.3.9.1	Test interrupted by opening of wire or trace subject to certain conditions.		N/A
6	Specialized instructions provided for telephones that may be connected to a telecommunications network.		N/A
6	Marking identifying function of telecommunication type connectors not used for connection to a telecommunication network.		N/A
6.3	Equipment remotely powered over telecommunication wiring systems provided with specialized markings adjacent to the connection.		N/A
6.3	Overcurrent protection incorporated into		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	equipment to provide power over telecommunication wiring system not interchangeable with devices of higher ratings if operator replaceable.		
6.4	Additional requirements for equipment intended for connection to a telecommunication network using cable subject to overvoltage from power line failures (Fig. 6C).		N/A
6.4	Where 26 AWG line cord required by Fig. 6C, either the cord is provided with the equipment or described in the safety instructions.		N/A
7	Equipment associated with the cable distribution system may need to be subjected to applicable parts of Chapter 8 of the NEC.		N/A
H	Ionizing radiation measurements made under single fault conditions in accordance with the requirements of the Code of Federal Regulations 21 CFR 1020 and the Canadian Radiation Emitting Devices Act, REDR C1370.		N/A
M.2	Continuous ringing signals evaluated to Method A subjected to special accessibility considerations.		N/A
M.4	Special requirements for message waiting and similar telecommunications signals.		N/A
NAC	Equipment intended for use with a generic secondary protector marked with suitable instructions.		N/A
NAC	Equipment intended for use with a specific		N/A

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SubClause	Difference + Test	Result - Remark	Verdict
	primary or secondary protector marked with suitable instructions.		
NAD	Acoustic pressure from an ear piece less than 140 dBA for short duration disturbances, and less than 125 dBA for handsets, 118 dBA for headsets and insert earphones, for long duration disturbances.		N/A
NAD	Equipment connected to a telecommunication and cable distribution networks and supplied with an earphone intended to be held against, or in the ear is required to comply with special acoustic pressure requirements.		N/A
EE.5	UL articulated accessibility probe (Fig. EE.3) required for assessing accessibility to document/media shredders, instead of Figure 2A test finger.		N/A

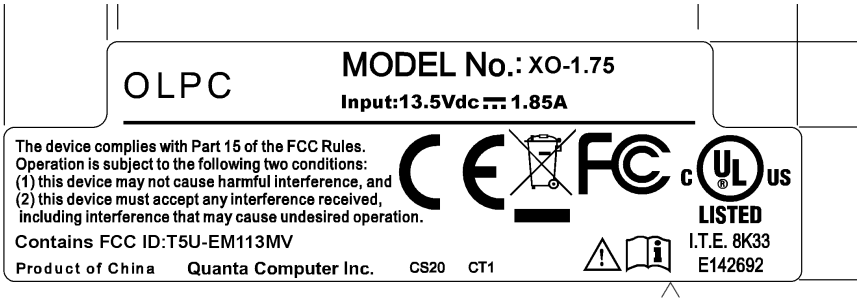
IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
United Kingdom - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
2.6.3.3	The current rating of the circuit shall be taken as 13 A, not 16 A.		N/A
2.7.1	To protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.		N/A
3.2.1.1	Apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a "standard plug" in accordance with Statutory Instrument 1786: 1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE: "Standard plug" is defined in SI 1786: 1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.		N/A
3.2.5.1	A power supply cord with conductor of 1.25 mm² is allowed for equipment with a rated current over 10A and up to and including 13A.		N/A
3.3.4	The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current of over 10 A up to and including 13 A is 1.25 mm² to 1.5 mm² nominal cross-sectional area.		N/A
4.3.6	The torque test is performed using a socket outlet complying with BS 1363 part 1:1995,		N/A

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict
	including Amendment 1:1997 and Amendment 2:2003 and the plug part of DIRECT PLUG-IN EQUIPMENT shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16 and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		

Enclosures

Type	Supplement Id	Description
Photographs	3-06	NB top view
Photographs	3-07	NB front open view
Photographs	3-08	NB left side view
Photographs	3-09	NB right side view
Photographs	3-10	NB bottom view with battery pack A32-V2
Photographs	3-12	NB bottom internal view
Photographs	3-28	(XO-1.75) Motherboard-1
Photographs	3-29	(XO-1.75) Motherboard-2
Photographs	3-30	NB bottom internal view(alternate)
Diagrams		
Schematics + PWB		
Manuals	6-01	User Manaul
Miscellaneous	7-04	Datasheets for UL 696
Miscellaneous	7-05	Datasheets ASTM F963
Miscellaneous	7-06	Table 2.5 - Limited Power Source Measurement (Not for FUS investigation)
Miscellaneous	7-07	Client Instrument list
Miscellaneous	7-08	Multi-factories Declaration
Licenses		
Marking Plate	13-04	Label (XO-1.75)

MarkingPlate ID 13-04



Photographs ID 3-06

Photographs ID 3-07

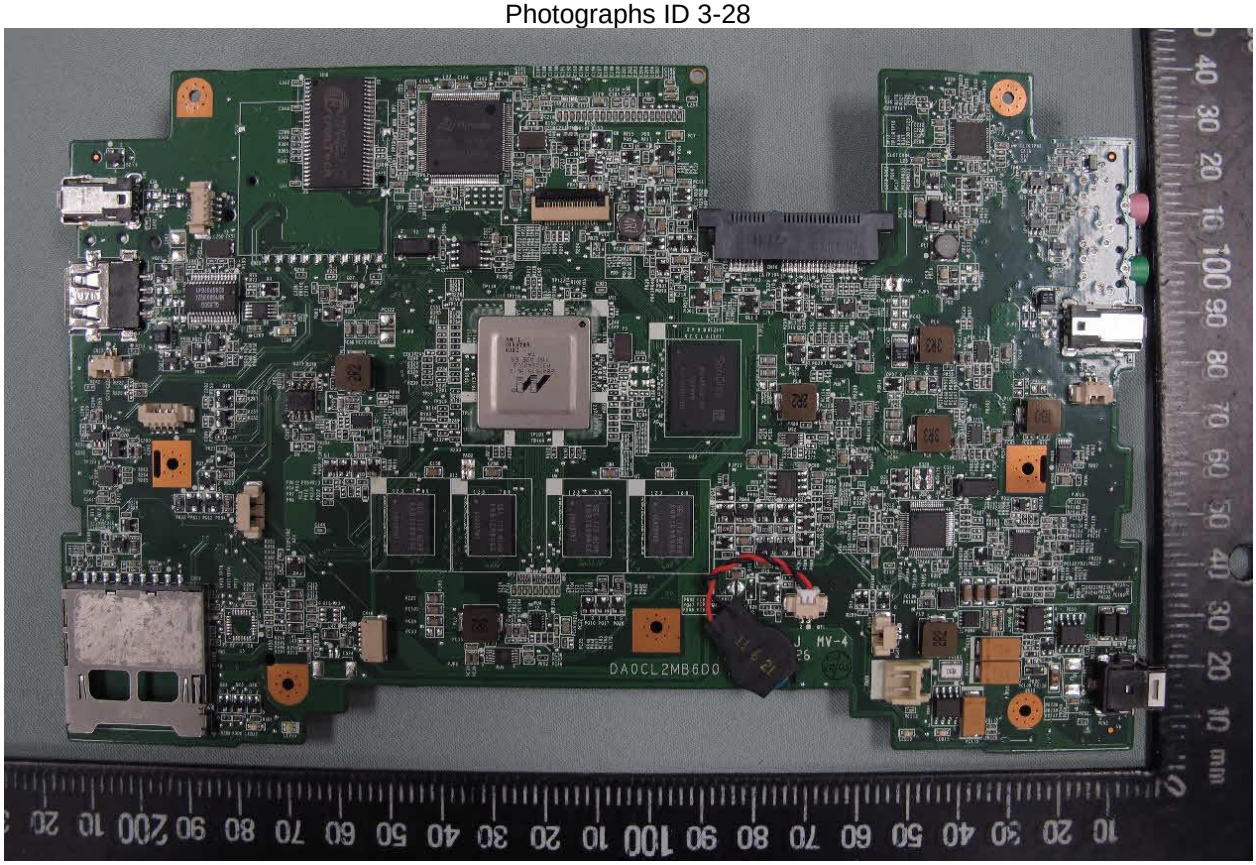
Photographs ID 3-08

Photographs ID 3-09

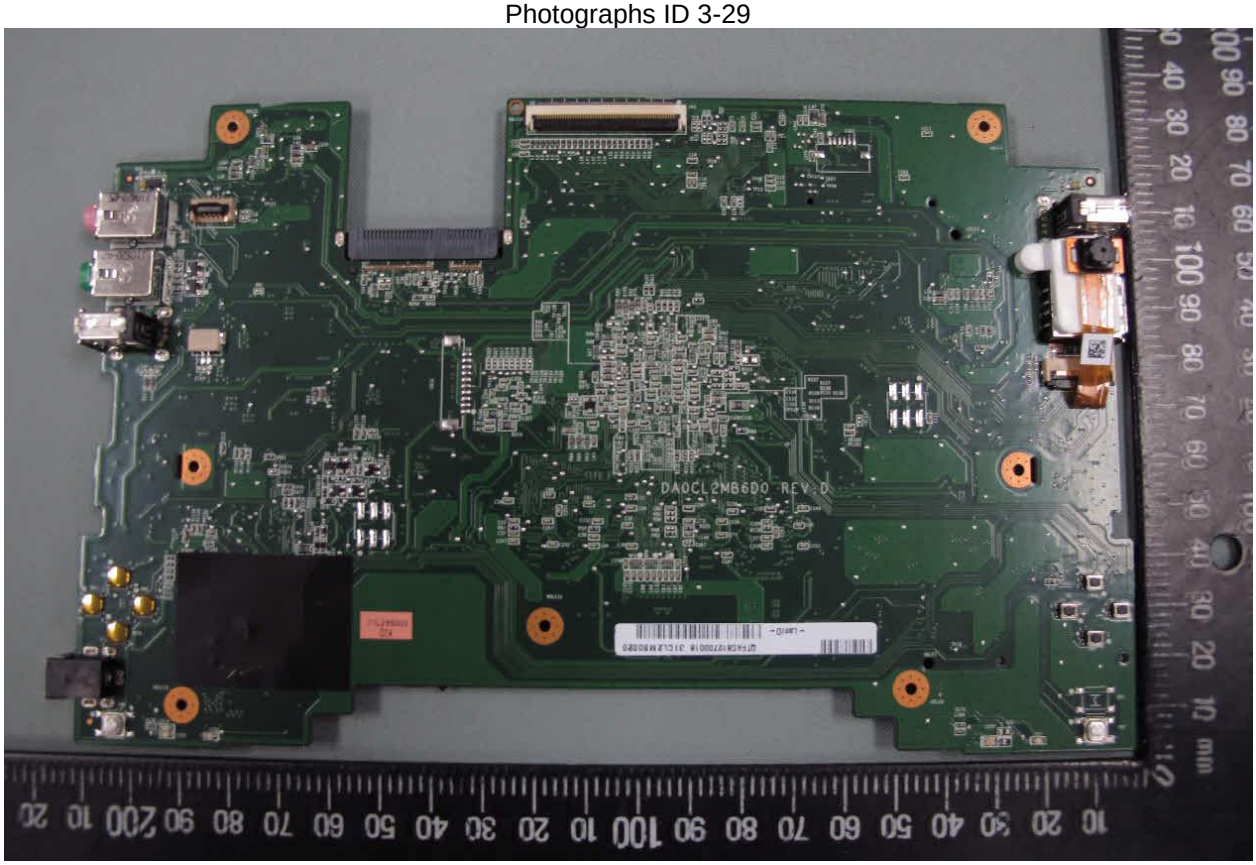
Photographs ID 3-10

Photographs ID 3-12

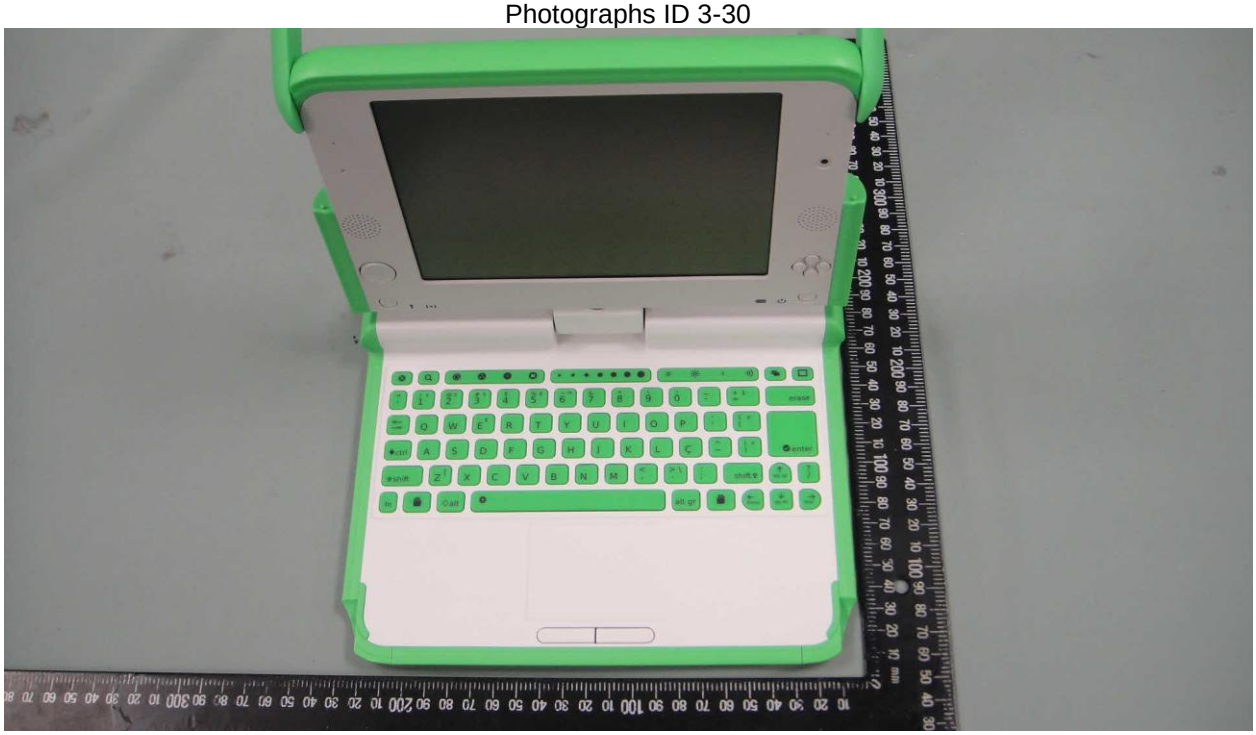
Photographs ID 3-28



Photographs ID 3-29



Photographs ID 3-30



Enclosures

Manuals ID 6-01

Safety

Your XO laptop is checked for safety against the European Union's RoHS Directive, which ensures that it contains no hazardous or unsafe materials. Its NiMH batteries contain no toxic heavy metals.

Virus protection

As you may know, it is possible for some computers to be "infected" with a "virus" when connected to other computers. Viruses are programs that can copy themselves and often cause problems for the computer that runs them. The XO laptop cannot be easily infected by viruses, because of its unique security system that isolates each Activity. Currently you do not need to install separate anti-virus software or firewall software.

Internet safety

Please realize that the XO laptop is designed for easy-to-use wireless connection to the Internet and other networks. While the Internet lets you access lots of useful information and talk to lots of people, not all of the information or people are good and safe. You should be careful and ask your teacher or parent for help and protection while browsing on the Internet.
Parents and teachers, we recommend that you filter Internet content as appropriate for your school district or home, stay in touch with what the students are reading and finding on the Internet, and ask your Internet Service Provider for assistance with filtering what parts of the Internet your XO can access.

Usage Precautions

- The XO laptop is intended for primary school students and children with minimum age of seven (7) years old and above.
- As with all electrical products, precautions should be observed during handling and use to prevent electric shock. The power supply (adapter) should not be handled by the children under the age of seven (7) years old.
- As with all electrical products, precautions should be observed during handling and use to prevent electric shock. The child at least of age of seven (7) and above, should be very careful while handling the power supply (adapter), in particular plugging the power supply into the receptacle (power outlet).
- The XO laptop should not be placed on the bare skin (lap) of the child for long periods. The laptop should be placed on another surface, like desk tabletop, if intending to use it for more than a few minutes.
- The XO laptop should not be left in the rain or subjected to exposure to water. If cleaning is necessary do not immerse in water; wipe clean with damp cloth.
- The XO laptop should not be dropped, crushed (stepped on) or otherwise abused.
- The Children should be careful with the interconnect cable (wiring) between the power supply (adapter) and laptop, in particular as a potential trip hazard.
- An adult should inspect the XO laptop periodically for damage, and replace if necessary. Similarly, if a child notices damaged/broken parts, this should be reported to the teacher immediately so that the damaged parts can be replaced.

Enclosures

Manuals ID 6-01

CAUTIONS

CAUTION – ELECTRICALLY OPERATED PRODUCT. THIS IS NOT A TOY. TO AVOID RISK OF ELECTRIC SHOCK OR FIRE IT SHOULD NOT BE USED WITHOUT ADULT SUPERVISION OR PLACED WHERE SMALL CHILDREN CAN REACH IT.

CAUTION – ELECTRICALLY OPERATED PRODUCT. Not recommended for children under seven (7) years of age. As with all electrical products, precautions should be observed during handling and use of electrical products to reduce the risk of electric shock.

Manuals ID 6-01

Published : 2012-02-22

XO-1.5/XO-1.75: OLPC USER'S MANUAL

Enclosures

Misc ID 7-04

Project No. OLPC File NA Page 1
LABORATORY DATA PACKAGE Date 10-19-07

Number of pages in this package __7__

TEST LOCATION:			
[X]UL or Affiliate	**[]**WTDP	**[]**CTDP	**[]**OTHER
Company Name UL			
Address NBK			

CLIENT INFORMATION	
Company Name	OLPC
Address	

AUDIT INFORMATION:			
Description of Tests	Per Standard No.	UL 696	Edition Ninth
Standard Title	Electric Toys	Rev Date	June 12, 2006
		ASTM F963	Edition 2007
[X] Tests Conducted by +	Steve Modlin (Printed name)		Steve Modlin (Signature)
[] UL Staff witnessing testing (WTDP only)	(Printed name)		(Signature)
Reviewed and accepted by qualified Project Handler	W. Alfred Fung (Printed Name)		(Signature)

TESTS TO BE CONDUCTED:

Test No.	Done	Test Name	**[X]** Comments/Parameters **[]**Tests Conducted by ++
		0.010 INCH WIRE ACCESSIBILITY TEST:	
		1/4 INCH ROD ACCESSIBILITY TEST:	
1	10-19-07	COATINGS AND PLATINGS:	Laptop and accessories
		PACKAGING FILM THICKNESS TEST:	
		ATTACHMENT PLUG TEST:	
		ENCLOSURE ABUSE TESTS:	
		HANDLES AND KNOBS ABUSE TESTS:	
		LEAKAGE CURRENT TEST:	
		HUMIDITY CONDITIONING TEST:	
		STRAIN RELIEF TESTS:	

ULS-00696-XNIZ-Datasheet-2001 Form Issued: 2002-12-18
Form Page 1 Form Revised: 2006-09-19

Enclosures

Misc ID 7-04

Project No. OLPC File NA Page 2
LABORATORY DATA PACKAGE Date 10-19-07

TESTS TO BE CONDUCTED:			
Test No.	Done	Test Name	[X] Comments/Parameters [] Tests Conducted by ++
		POWER INPUT TEST:	
		TEMPERATURE TEST:	
		DIELECTRIC VOLTAGE WITHSTAND TEST:	
		SWITCH OVERLOAD TEST:	
		ABNORMAL OPERATION TEST:	
		STEAM ENGINE TESTS:	
		STABILITY TEST:	
		PERMANENCE OF MARKING TEST:	

[]The test facility [was][was not] deemed to have the environment and capabilities necessary to perform the tests included in this data package. (WTDP Only)

[]Tests conducted in accordance with _____ that were considered representative of the same tests required by _____ are identified with dual paragraph/clause references in the title of each test on the individual datasheets. Where test names differ or additional test were conducted in accordance with _____, they are identified by the standard and paragraph/clause information enclosed by parenthesis.

Test Equipment- See "TEST EQUIPMENT INFORMATION"
Samples - See "TEST SAMPLE IDENTIFICATION"

Instructions -
+ - When all tests are conducted by one person, printed name and signature can be inserted here instead of including printed name and signature on each page containing data. Must indicate number of pages in the data package.
++ - When test conducted by more than one person, printed name and signature of person conducting the test can be inserted next to the test name instead of including printed name and signature on each page containing data. Must indicate number of pages in the data package.

Special Instructions -

Unless specified otherwise in the individual Methods, the tests shall be conducted under the following ambient conditions. Confirmation of these conditions shall be recorded at the time the test is conducted.

Ambient Temperature, C N/A Relative Humidity, % N/A Barometric Pressure, mBar N/A

Enclosures

Misc ID 7-04

Project No. OLPC File NA Page 3

Tested by: _____ Date _____

Printed Name Signature

TEST EQUIPMENT INFORMATION

Inst. ID No.	Instrument Type	Test Number +, Test Title or Conditioning	Function /Range	Last Cal. Date	Next Cal. Date

+ - If Test Number is used, the Test Number must be identified on the data sheet pages or on the Data Sheet Package cover page.

The following additional information is required when using client's or rented equipment, or when a UL ID Number for an instrument number is not used. The Inst. ID No. below corresponds to the Inst. ID No. above.

Inst. ID No.	Make/Model/Serial Number/Asset No.

The M&TE used for tests **[** have **][** do not have **]** minimum required accuracy and range/functions, and **[** were **][** were not **]** calibrated to assure these levels.

[]Test equipment information is recorded on UL's Laboratory Project Management (LPM)/Laboratory Equipment Management (LEM) database. (This statement may be selected only if datasheets are completed electronically at a UL facility)

Enclosures

Misc ID 7-04

Project No. OLPC File NA Page 4

Tested by: _____ Date _____

Printed Name Signature

TEST SAMPLE IDENTIFICATION:

The table below is provided to provide correlation of sample numbers to specific product related information. Refer to this table when a test identifies a test sample by "Sample No." only.

Sample Card No.	Date Received	[x] Test No.	Sample No.	Manufacturer, Product Identification and Ratings
954029-001	8-28-07	1	1	Laptop Computer, Battery, Power Supply
959690-001	9-13-07			(2) Batteries, (2) Sets of Labels, Sylva Industries, Ltd.
956629-001	9-5-07			(1) Battery, Shanghai BYD Co. Ltd.
934828-001	7-5-07			(1) Battery, (Unidentified purple bar bode label) - GP
959838-001	9-13-07			(4) Adaptors (Power Supplies), Delta Electronics, Inc.
961240-001	9-18-07			(7) Adaptors (Power Supplies), PI Electronics, Ltd.
FedEx Pkg				(3) Labels "OLPC XO-1" & (3) Labels "Attention"
FedEx Pkg				(24) Adaptor Labels
DHL Pkg				(1) Battery, (Unidentified white bar bode label) - GP

+ - If Test Number is used, the Test Number or Numbers the sample was used in must be identified on the data sheet pages or on the Data Sheet Package cover page.

[] Sampling Procedure -

Enclosures

Misc ID 7-04

Project No. OLPC File NA Page 5

Tested by: _____ Date _____

Printed Name Signature

COATINGS AND PLATINGS: Section 7

METHOD

The accessible liquid coating materials (such as paint, enamel, lacquer, ink, and the like) applied to a toy were evaluated for lead, antimony, arsenic, barium, cadmium, chromium, mercury, or selenium. A liquid coating material is considered to be accessible if it can be contacted by persons before or after compliance with the performance requirements described in Abuse Tests

RESULTS

The surface coatings **[**exceeded**]** **[**did not exceed**]** total levels of Pb (600 ppm), and did (not) exceed soluble levels of the following elements:

Pb (90 mg/kg), As (25 mg/kg), Sb (60mg/kg), Ba (500 mg/k), Cd (75 mg/kg), Cr (60 mg/kg), Hg (60 mg/kg) or Se (500 mg/kg)

as specified in paragraph 4.3.5 of the Consumer Safety Specification on Toy Safety, ASTM F963.

Notes:

1. The requirements for a liquid coating material do not apply to ink applied to a container or packing material.

2. From ASTM F963 – 4.3.5.1 The regulation prohibits the use of paints or similar surface-coating materials that contain lead or lead compounds and in which the lead content (calculated as lead metal **[**Pb**]**) is in excess of 0.06 % (600 ppm) of the weight of the total nonvolatile content of the paint or the weight of the dried paint film.

3. From ASTM F963 – Table 1 – the total Maximum Soluble Migrated Element in ppm (mg/kg):

Antimony,	Arsenic,	Barium,	Cadmium,	Chromium,	Lead,	Mercury,	Selenium,
(SB)	(As)	(Ba)	(Cd)	(Cr)	(Pb)	(Hg)	(Se)
60	25	1000	75	60	90	60	500

RESULTS –

***** NO TOXICOLOGY TESTING IS NEEDED. See explanations below. *****

Enclosures

Misc ID 7-04

Project No. OLPC File NA Page 6

Tested by: _____ Date _____

Printed Name Signature

+ Sample preparation for the Laptop, battery and power supply involves scraping the various colors on the machine to remove the paint/ink. However, there appears to be no surface coatings on the laptop for any of the colors. All colors appear to be embedded into the plastic and are therefore considered not to be surface coatings, therefore testing is not necessary.

++ Sample preparation for labels involves scraping the labels to remove the paint/ink. If the amount of sample scraped is less than 10 mg then testing is not performed. Also, if the paint is unable to be scraped off due to a coating over the paints then testing is not performed. In the case of the labels for this project, there is a clear coating over the ink/paint on the labels and after attempting to scrape the samples the paint could not be scraped off and in one case 10 mg of sample could not be obtained, therefore testing is not necessary.

The areas scraped (color) are as follows:

Laptop –

- Body (White)
- Body Edges (Green)
- The "X" on the Body Top (Orange)
- The "Circle/Dot" on the Body Top (Yellow)
- The Key Pad (Green)
- The Key Pad Lettering (Black)
- The Edges around the Screen (White)
- The "Mouse" area by the Key Pad (White)
- Label "Bar Code/SN" inside the Battery Compartment(Black & White)
- Label "C-Test Sample" inside the Battery Compartment(Black & White)

AC Adaptor –

- The AC Adaptor Body (Green)
- The Barcode Label attached to the Cord (Black)
- The Label on the AC Adaptor Body (Green, Black, White)

Battery Pack –

- Body (White)
- Labels "OLPC XO-1" & "Attention" (Black & White)
- Label "Bar Code & S/N" (Yellow & Black)

Enclosures

Misc ID 7-04

Project No. OLPC File NA Page 7

Tested by: _____ Date _____

Printed Name Signature

END OF DATASHEET PACKAGE. THIS PAGE INTENTIONALLY LEFT BLANK

Enclosures

Misc ID 7-05

Project No. 07NB48870 File XXXX Page 1
LABORATORY DATA PACKAGE Date 2007-10-2

Number of pages in this package 17

TEST LOCATION:			
[x]UL or Affiliate	[]WTDP	[]CTDP	[]OTHER
Company Name	ULC - Vancouver, LES		
Address			

CLIENT INFORMATION	
Company Name	OLPC
Address	XXXX

AUDIT INFORMATION:		
Description of Tests	Per Standard No. ASTM F963	Edition 2007
[x] Tests Conducted by +	W. Alfred Fung	
	Printed name	Signature
[] UL Staff witnessing testing (WTDP only)		
	Printed name	Signature
Reviewed and accepted by qualified Project Handler	W. Alfred Fung	
	Printed Name	Signature

TESTS TO BE CONDUCTED:

Test No.	Done	Test Name	[] Comments/Parameters []Tests Conducted by ++
		MATERIAL QUALITY / HAZARDOUS SUBSTANCES	
1		FLAMMABILITY - COMPLETE PRODUCTS	
		FLAMMABILITY - REMOVABLE FABRICS	
		TOXICOLOGY - SURFACE COATINGS	
		TOXICOLOGY - STUFFING MATERIALS	
		ELECTRIC/THERMAL ENERGY	
		IMPULSIVE NOISES	
2		ABUSE TESTS	
3		IMPACT TESTS	
4		COMPONENT TORQUE TEST	
5		COMPONENT TENSION TEST	
		SEAM TENSION TEST	

ULS-01967-XNPY-DataSheet-2001 Form Issued: 2000-03-11
Form Page 1 Form Revised: 2005-06-02

Enclosures

Misc ID 7-05

Project No. 07NB48870 File XXXX Page 2
LABORATORY DATA PACKAGE Date 2007-10-2

TESTS TO BE CONDUCTED:			
Test No.	Done	Test Name	[] Comments/Parameters []Tests Conducted by ++
6		COMPRESSION TEST	
7		PACKAGING FILM	
		CORDS AND ELASTICS	
		WHEELS, TIRES OR AXLES	
		FOLDING MECHANISMS	
		SIMULATED PROTECTIVE DEVICES	
8		BATTERY OPERATED TOYS	

[]The test facility [was][was not] deemed to have the environment and capabilities necessary to perform the tests included in this data package. (WTDP Only)

[]Tests conducted in accordance with _____ that were considered representative of the same tests required by _____ are identified with dual paragraph/clause references in the title of each test on the individual datasheets. Where test names differ or additional test were conducted in accordance with _____, they are identified by the standard and paragraph/clause information enclosed by parenthesis.

Test Equipment- See "TEST EQUIPMENT INFORMATION"
Samples - See "TEST SAMPLE IDENTIFICATION"

Instructions -
+ - When all tests are conducted by one person, printed name and signature can be inserted here instead of including printed name and signature on each page containing data. Must indicate number of pages in the data package.
++ - When test conducted by more than one person, printed name and signature of person conducting the test can be inserted next to the test name instead of including printed name and signature on each page containing data. Must indicate number of pages in the data package.

Special Instructions -

Unless specified otherwise in the individual Methods, the tests shall be conducted under the following ambient conditions. Confirmation of these conditions shall be recorded at the time the test is conducted.

Ambient Temperature, C	N/A	Relative Humidity, %	N/A	Barometric Pressure, mBar	N/A

Enclosures

Misc ID 7-05

Project No. 07NB48870 File XXXX Page 3

Tested by: _____ Date _____

Printed Name Signature

TEST EQUIPMENT INFORMATION

Inst. ID No.	Instrument Type	Test Number +, Test Title or Conditioning	Function /Range	Last Cal. Date	Next Cal. Date

+ - If Test Number is used, the Test Number must be identified on the data sheet pages or on the Data Sheet Package cover page.

The following additional information is required when using client's or rented equipment, or when a UL ID Number for an instrument number is not used. The Inst. ID No. below corresponds to the Inst. ID No. above.

Inst. ID No.	Make/Model/Serial Number/Asset No.

The M&TE used for tests **[** have **][** do not have **]** minimum required accuracy and range/functions, and **[** were **][** were not **]** calibrated to assure these levels.

[X] Test equipment information is recorded on UL's Laboratory Project Management (LPM)/Laboratory Equipment Management (LEM) database. (This statement may be selected only if datasheets are completed electronically at a UL facility)

ULG-01967-XNPY-DataSheet-2001 Form Issued: 2000-03-11
Form Page 3 Form Revised: 2005-06-02

Enclosures

Misc ID 7-05

Project No. 07NB48870 File XXXX Page 4

Tested by: _____ Date _____

Printed Name Signature

TEST SAMPLE IDENTIFICATION:

The table below is provided to provide correlation of sample numbers to specific product related information. Refer to this table when a test identifies a test sample by "Sample No." only.

Sample Card No.	Date Received	[X] Test No.	Sample No.	Manufacturer, Product Identification and Ratings
954524001	2007-08-29	8	9	OLPC Laptop
954524001	2007-08-29	2,4,5,6	12	OLPC Laptop
954524001	2007-08-29	3	9	OLPC Laptop
954524001	2007-08-29	8	01	Adaptor
959798001	2007-09-13	2,3,8	02	Battery, GP, model number is NTA2490 LiFe, (weighted 293 gm) S/N 10102070802200000002, 6Vdc, 3.0Ah
954524001	2007-08-29	1	11	OLPC Laptop
954524001	2007-08-29	7	13	Bag size 345 x 150 mm
954524001	2007-08-29	7	14	Bag size 335 x 275 mm

+ - If Test Number is used, the Test Number or Numbers the sample was used in must be identified on the data sheet pages or on the Data Sheet Package cover page.

Enclosures

Misc ID 7-05

Project No. 07NB48870 File XXXX Page 5

Tested by: _____ Date _____

Printed Name Signature

[] Sampling Procedure –

Enclosures

Misc ID 7-05

Project No. 07NB48870 File XXXX Page 6

Tested by: _____ Date _____

Printed Name Signature

FLAMMABILITY - COMPLETE PRODUCTS

METHOD

Per Section 4.2 and Title 16 CFR 1500.3(c)(6)(vi), complete products were subjected to the Title 16 CFR 1500.44 Flame Test.

RESULTS

Date: 2007-10-05

The test shall be conducted under the following ambient conditions.

Ambient Temperature, C	20-30	Relative Humidity, %	20-70	Barometric Pressure, mBar	N/A

Lab Ambient:

Ambient Temperature, C	24	Relative Humidity, %	34	Barometric Pressure, mBar	-

1500.44 Flame Test

Model/ Sample #	Ignite Point	Unburned Length (mm)	Burned Length (mm)	Burn Time (Second)	Burn Rate (mm/Sec)
11	Left side antenna end, antenna open	290	30	60	0.5
11	Main housing, right side antenna end, entenna close	310	-	-	-
11	Handle corner at foot	310	-	-	-

For complete products, the burn rate did ~~+~~not~~+~~ exceed 2.5 mm/sec.

Enclosures

Misc ID 7-05

Project No. 07NB48870 File XXXX Page 7

Tested by: _____ Date _____

Printed Name Signature

ABUSE TESTS

METHOD

Per Section 8.6, each toy was subjected to the appropriate Abuse Test(s) listed below as required for the toy type and age grade, followed by visual inspection for Small Parts, Sharp Edges, Sharp Points, Projections or other Hazards.

SMALL PARTS Per Section 4.6 – Before and after the applicable Use and Abuse Tests, the toy and any detached parts or components of the toy were evaluated for small parts with the small parts cylinder (Fig 7).

SHARP EDGES Per Section 4.7 – Before and after the applicable Use and Abuse Tests, the toy and any detached parts or components of the toy were evaluated for sharp edges with the sharp edge tester (Fig 8).

SHARP POINTS Per Section 4.8 – Before and after the applicable Use and Abuse Tests the toy and any detached parts or components of the toy were evaluated for sharp points with the sharp point tester (Fig 9).

PROJECTIONS Per Section 4.9 – Before and after the applicable Use and Abuse Tests, the toy and any detached parts or components of toys which contain rigid projections were evaluated for puncture hazards.

RESULTS

Lab Ambient:

Ambient Temperature, C	23	Relative Humidity, %	35	Barometric Pressure, mBar	–

Toy Model/ Sample #	Required Abuse Tests	Small Parts	Sharp Edges	Sharp Points	Projection Points
9	DR, IM	No	No	No	No
12	TO,CT,CO	No	No	No	No

There were ~~no~~ small parts, sharp edges, sharp points, projections or other hazards before and after the Abuse Tests. See each individual test for details.

Abuse Test Codes – DR = Drop, TI = Tip, TU = Tumble, IM = Impact, TO = Torque, CT = Component Tension, ST = Seam Tension, CO = Compression

Misc ID 7-05

Project No. 07NB48870 File XXXX Page 8

Tested by: _____ Date _____
Printed Name Signature

IMPACT TEST

METHOD

Per Sec 8.7, each toy was subjected to each of the appropriate type impact test(s), then subjected to a visual exam for hazards per Section 4.6, 4.7, 4.8, 4.9 or any other hazard.

Drop – Per Sec 8.7.1 toys less than ~~(3)~~ (4) ~~(10)~~ lbs were dropped ~~(10)~~ (4) times in a random orientation from ~~(4.5)~~ (3.0) ft onto a 2.5" thick concrete floor covered with 1/8" type IV tile. The toy was allowed to come to rest before inspection.

RESULTS

Date: 2007-10-05
Lab Ambient:

Ambient Temperature, C	23	Relative Humidity, %	31	Barometric Pressure, mBar	-

Toy ~~Model/~~ Sample #	Required Abuse Tests	Small Parts	Sharp Edges	Sharp Points	Projection Points
9(firstdrop)	Left side antenna, antenna open	No	No	No	No
9 (second drop)	Right side antenna corner, antenna close	No	No	No	No
9 (third drop)	Handle	No	No	No	No
9 (fourth drop)	Screen & keyboard open face	No	No	No	No

There were ~~(no)~~ hazards per Section 4.6, 4.7, 4.8, 4.9 or any other hazard.

Note: After third drop the top handle cover came over from the laptop, no hazard was found.

Tip Over – Per Sec 8.7.2 (10), large bulky toys with (projected area > 400 in^2) ~~or (volume > 3 ft^3) were tipped over 3 times in the worst orientation onto a 2.5" concrete floor covered with 1/8" type IV tile. The toy was allowed to come to rest before inspection~~

Enclosures

Misc ID 7-05

Project No. 07NB48870 File XXXX Page 9

Tested by: _____ Date _____

Printed Name Signature

RESULTS

~~Toy Model/ Sample #~~	~~Required Abuse Tests~~	~~Small Parts~~	~~Sharp Edges~~	~~Sharp Points~~	~~Projection Points~~

~~There were (no) hazards per Section 4.6, 4.7, 4.8, 4.9 or any other hazard.~~

Enclosures

Misc ID 7-05

Project No. 07NB48870 File XXXX Page 10

Tested by: _____ Date _____

Printed Name Signature

COMPONENT TORQUE TEST

METHOD

Per Sec 8.8, toys with component capable of being grasped by the thumb and forefinger or teeth was subjected to a torque of ~~(2) (3)~~ (4) inlb in clockwise and counterclockwise directions applied within 5 sec to 180 degrees or the specified value (except for screws), and held for an additional 10 sec. After the torque application, the toy was then subjected to a visual exam for hazards per Section 4.6, 4.7, 4.8, 4.9 or any other hazard.

RESULTS

Date: 2007-10-04
Lab Ambient:

Ambient Temperature, C	24	Relative Humidity, %	33	Barometric Pressure, mBar	-

Toy ~~Model~~ Sample #	Required Abuse Tests	Small Parts	Sharp Edges	Sharp Points	Projection Points
12	Antenna, right	No	No	No	No

There were ~~(~~no~~)~~ hazards per Section 4.6, 4.7, 4.8, 4.9 or any other hazard.

Enclosures

Misc ID 7-05

Project No. 07NB48870 File XXXX Page 11

Tested by: _____ Date _____

Printed Name Signature

COMPONENT TENSION TEST

METHOD

Per Sec 8.9, toys with components capable of being grasped by the thumb and forefinger or teeth was subjected to a tensile load of ~~(10)~~ (15) lbf applied perpendicular to the components securement within 5 sec. and held for an additional 10 sec. After the tensile load application, the toy was then subjected to a visual exam for hazards per Section 4.6, 4.7, 4.8, 4.9 or any other hazard.

RESULTS

Date: 2007-10-04
Lab Ambient:

Ambient Temperature, C	23	Relative Humidity, %	33	Barometric Pressure, mBar	-

Toy ~~Model~~ Sample #	Required Abuse Tests	Small Parts	Sharp Edges	Sharp Points	Projection Points
12	Antenna, left	No	No	No	No

There were ~~(no)~~ hazards per Section 4.6, 4.7, 4.8, 4.9 or any other hazard.

Enclosures

Misc ID 7-05

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Tested by: _____ Date _____

Printed Name Signature

COMPRESSION TEST

METHOD

Per Section 8.10, parts which are accessible to the user, but not to the Impact Test, were subject to a compression load of ~~(20) (25)~~ (30) lbf applied perpendicular to the part with a weight scale using a 1.125" od, 0.375" thick rigid metal disk with a 1/32" radius edge within 5 sec and held for and additional 10 sec. After the compression load application, the toy was then subjected to a visual exam for hazards per Section 4.6, 4.7, 4.8, 4.9 or any other hazard.

RESULTS

Date: 2007-10-04
Lab Ambient:

Ambient Temperature, C	22	Relative Humidity, %	34	Barometric Pressure, mBar	-

Toy ~~Model~~ Sample #	Required Abuse Tests	Small Parts	Sharp Edges	Sharp Points	Projection Points
12	Touch pad	No	No	No	No
12	Keyboard pad	No	No	No	No

There were ~~no~~ hazards per Section 4.6, 4.7, 4.8, 4.9 or any other hazard.

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PACKAGING FILM ASTM F963 – Sections 4.12, 8.22

METHOD

A measuring device (dial-type thickness gage or equivalent) capable of measuring thickness to an accuracy of 4 µm was used. Measurements were taken at 10 equidistant points across the diagonal of any 3.94 by 3.94-in. (100 by 100-mm) area of the film. For plastic bags, the sample was prepared by cutting the sides, without stretching, into two single sheets.

RESULTS

Date: 2007-10-05
Lab Ambient:

Ambient Temperature, C	24	Relative Humidity, %	31	Barometric Pressure, mBar	–

	Sample 13	Sample 14
	Bag size 345 x 150 mm	Bag size 335 x 275 mm
	Thickness (mm)	Thickness (mm)
1	0.051	0.056
2	0.050	0.056
3	0.048	0.055
4	0.050	0.056
5	0.049	0.055
6	0.048	0.055
7	0.049	0.054
8	0.050	0.053
9	0.052	0.053
10	0.051	0.053
Average thickness	0.0498	0.0546
Minimum thickness	0.048	0.053

The average thickness of the ten measurements ~~[were]~~ [were not] less than 0.00150 inch (0.03810 mm).

[None] ~~[Some]~~ of the measurements were below the 0.00125 inch (0.03175 mm) minimum thickness.

****

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This requirement does not apply to the following:

Shrink film in the form of an over wrap that would normally be destroyed when the package is opened by a consumer.

Bags or plastic film with a minor dimension of 3.94 inch (100 mm) or less. Bag dimensions were measured while in the form of a bag not cut open into a single thickness sheet.

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Tested by: _____ Date _____

Printed Name Signature

BATTERY OPERATED TOYS

METHOD

Per Section 4.27, toys or components of toys which contain batteries were evaluated for potential electric shock, thermal hazards, toxicity, fire, explosion or other hazards associated with batteries in normal and reasonable foreseeable use before and after Use and Abuse Tests.

RESULTS

Date: 2007-10-04/05
Lab Ambient:

Ambient Temperature, C	22	Relative Humidity, %	37	Barometric Pressure, mBar	-

~~The battery compartment was (not) marked to show the battery type, rating and the correct position and did (not) allow for the escape of emitted gases.~~
Battery is special made for OLPC.

~~The max measured voltage between two accessible points was (not) greator than 24 V dc, and the only point of contact was (not) at the battery terminals.~~
Point of contact is not accessible.

There was ~~(no)~~ adequate protection (by physical or electrical design) to prevent charging rechargeable batteries in the wring position (polarity).

There was ~~+no+~~ access of batteries without the use of tools (coin or common tools) for toys intended for children < 36 months.

There was ~~+no+~~ accesses of batteries without the use of tools (coin or common tools) for toys intended for children < 36 months before/after Abuse Tests.

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BATTERY OPERATED TOYS (Continued)

There was ~~+no+~~ access of batteries without the use of tools (coin or common tools) any toys before/after the Abuse Tests using the recommended batteries.

There was ~~+no+~~ mixing of battery types, potentials or capacities in a single electric circuit or which provide different functions.

The battery surface did ~~+not+~~ exceed 71C during normal/abnormal, or short circuit conditions, and did ~~+not+~~ explode or leak. See UL696 and 697 test.

Max Measured Temperature: 32.7°C

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Tested by: _____ Date _____

Printed Name Signature

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Enclosures

Misc ID 7-06

2.5 - LIMITED POWER SOURCE MEASUREMENTS

RESULTS

Test Voltage: 12 [~~Vac,~~ ___ ~~Hz~~] [Vdc]

Output Tested	Measured		Single Fault Condition	Maximum		
	From	To		U_{oc}	I_{sc}60s	VA 60 s
USB 1 (CN14)	1	Earth	Normal	4.98	1.02	4.60
USB 2 (CN9)	1	Earth	Normal	4.98	1.02	4.60
USB 3 (CN8)	1	Earth	Normal	4.98	1.04	4.76
USB 1 (CN14)	1	Earth	U5 pin 2-7 short	4.98	3.58	11.41
USB 2 (CN9)	1	Earth	U5 pin 2-7 short	4.98	3.61	12.35
USB 3 (CN8)	1	Earth	U5 pin 2-7 short	4.98	3.63	12.21
MIC (CN1)	1	Earth	Normal	0	0	0
Head phone (CN2)	1	Earth	Normal	0	0	0

Enclosures

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Output Tested	Measured		Single Fault Condition	Maximum			Comments
	From	To		U_{oc}	I_{sc} 5s	VA 5s	
Model XO-1.75							
USB (CN11)	Pin 1	Earth	Normal	4.95	1.31	5.28	Protect by U9
USB (CN9)	Pin 1	Earth	Normal	4.95	1.31	5.28	Protect by U9
USB (CN12)	Pin 1	Earth	Normal	4.95	1.31	5.18	Protect by U9
Card Reader (CN19)	Pin 4	Earth	Normal	2.22	0	0	signal
MIC (CN3)	Pin 1	Earth	Normal	0	0	0	signal
Earphone (CN4)	Pin 1	Earth	Normal	0	0	0	signal

Enclosures

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TEST INSTRUMENTS REFERENCE LIST

No.	Article	Manufacturer	Model	Asset no.	Use Range	Calibrated Date	Calibrated Due
6	ELECTRONIC LOAD	PRODIGIT	PAL200	5020008 (88351)	50Vdc,40A	2011/05/19	2012/05/18
7	ELECTRONIC LOAD	PRODIGIT	3311C	890800174 (00900C137)	60Vdc,50A	2011/05/19	2012/05/18
15	HYBRID RECORDER	YOKOGAWA	HR1300	B8510057 (45VH0692)	Type: J 0~100℃ ; 0-24hrs; CH20	2011/05/13	2012/05/12
25	ELECTRONIC SCALE (Balance)	TSCALE	AHW-30+	0316007002	30 Kg (MAX)	2011/05/16	2012/05/15
27	Timer	CASIO	HS-3V	710Q03R	Full Range	2011/05/13	2012/05/12
34	DIGITAL MULTIMETER	FLUKE	87V	13920329 (990102397)	1000Vac/Vdc,10A, 10Mohm	2010/09/06	2011/09/05
C1	Tissue Paper	ED&D	ATP-01	--	Soft and strong, lightweight wrapping paper of grammage generally between 12 g-m^2 and 30 g-m^2. (UL - IEC 60950-1)		
C2	Cheesecloth	ED&D	ACC-01	--	Bleached cotton cloth approx. 40 g-m^2 (UL - IEC 60950-1)		
22	DIGIMATIC CALIPER	MITUTOYO	500-197	0082066	0-200 mm	2011/05/17	2012/05/16

Enclosures

Misc ID 7-08

Multiple factory confirmation letter

Product	OLPC
Name and address of the Applicant	QUANTA COMPUTER INC 188 WEN-HWA 2ND RD KUEI SHAN HSIANG TAOYUAN HSIEN 333 TAIWAN
Name and address of the Manufacturer	QUANTA COMPUTER INC 188 WEN-HWA 2ND RD KUEI SHAN HSIANG TAOYUAN HSIEN 333 TAIWAN
Name and address of the Factory(ies)	1. TECH-FULL COMPUTER (CHANGSHU) CO LTD, 8 JINZHOU RD, HIGH-TECH INDUSTRIAL PARK, CHANGSHU ECONOMIC DEVELOPMENT ZONE, CHANGSHU JIANGSU 215500, CHINA 2. TECH-FRONT (SHANGHAI) COMPUTER CO LTD SONGJIANG EXPORT PROCESSING ZONE, 68 SAN-ZHUANG RD, SHANGHAI 201613, CHINA 3. TECH-PRO (SHANGHAI) COMPUTER CO LTD SONGJIANG EXPORT PROCESSING ZONE, 6 LANE 58 SANZHUANG RD, SHANGHAI, CHINA 4. TECH-COM (SHANGHAI) COMPUTER CO LTD 68 SANZHUANG RD, SONGJIANG EXPORT PROCESSING ZONE, SHANGHAI 201613, CHINA

This form is to acknowledge that the above information has been reviewed and the material has been found to be accurate as stated. This is also to record client's confirmation that above factories manufacture product(s) that are equal to those submitted for testing and certification. (Refer to IECEE 02, Sub-clause 6.2.5: "When the application covers more than one factory, the address of each factory shall be stated in the CB Test Certificate and the NCB shall take steps to ensure that the products from all the factories are equal. That shall be confirmed in the Test Report.")

Signed: Jenny Wang **Dated:** 2011-11-22

*__Definitions__ per IECEE 02 (http://www.iecee.com/cbscheme/pdf/IECEE02.pdf):
Applicant: A firm or a person who applies to an NCB for obtaining a CB Test Certificate.
Manufacturer: An organization, situated at a stated location or locations, that carries out or controls such stages in the manufacture, assessment, handling and storage of a product that enables it to accept responsibility for continued compliance of the product with the relevant requirements and undertakes all obligations in that connection.
Factory: The location(s) at which the product is produced or assembled and follow-up service is established by the NCB.