Ref. Certif. No.

KR-KETI2008

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product Produit	**6ZONE 8 Local 1/6 Remote SOURCE DIGITAL H.O.M.E. SYSTEM**
Name and address of the applicant Nom et adresse du demandeur	**Amcli International Corp.** 5F, No.8, Alley 11, Lane 327, Sec. 2 Chung-San Rd., Chung-Ho Dist, New Taipei City.
Name and address of the manufacturer Nom et adresse du fabricant	**Amcli International Corp.** 5F, No.8, Alley 11, Lane 327, Sec. 2 Chung-San Rd., Chung-Ho Dist, New Taipei City
Name and address of the factory Nom et adresse de l'usine Note: *When more than one factory, please report on page 2* Note: *Lorsque il y plus d'une usine, veuillez utiliser la 2ème page*	**Amcli International Corp.** 2F, No.14, Lane 327, Sec. 2 Chung-San Rd., Chung-Ho Dist, New Taipei City ☐ Additional Information on page 2
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	I/P : 220-230 V~, 50 Hz, 1A
Trademark (if any) Marque de fabrique (si elle existe)	AMC
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	
Model / Type Ref. Ref. De type	X86, X86i
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2ème page	☐ Additional Information on page 2
A sample of the product was tested and found to be in conformity with IEC Un échantillon de ce produit a été essayé et a été considéré conforme à laCEI	IEC 60065:2001 (Seventh Edition) + A1:2005 + A2:2010
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	W14-65-032

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme**National de Certification**

Korea Testing Certification (KTC)
24, 1gil, Sebang-Cheon, Gunpo-City, Gyeonggi-Do, 435-862,
KOREA, REPUBLIC OF

Seung-In Yang

Date:2014.05.14

Signature:Seung-In Yang

Test Report issued under the responsibility of:

Korea Testing Certification

TEST REPORT
IEC 60065
Audio, video and similar electronic apparatus - Safety requirements

Report Number. .....:	W14-65-032
Date of issue .....:	May 09, 2014
Total number of pages.....:	35 pages
Applicant's name.....:	Amcli International Corp.
Address .....:	5F, No.8, Alley 11, Lane 327, Sec. 2 Chung-San Rd., Chung-Ho Dist, New Taipei City.
Test specification:	
Standard .....:	IEC 60065:2001 (Seventh Edition) + A1:2005 + A2:2010
Test procedure.....:	CB Scheme
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60065K
Test Report Form(s) Originator.....:	Intertek Semko AB
Master TRF .....:	Dated 2010-10

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 .....:	6ZONE 8 Local 1/6 Remote SOURCE DIGITAL H.O.M.E. SYSTEM
Trade Mark .....:	AMC
Manufacturer.....:	Same as applicant
Model/Type reference .....:	X86, X86i
Ratings .....:	I/P : 220-230 V~, 50 Hz, 1A

Testing procedure and testing location:			
☒	**CB Testing Laboratory:**	**Korea Testing Certification**	
Testing location/ address .....:		**22 Heungan-daero 27beon-gil, Gunpo-City, Gyeonggi-Do, 435-862, Korea Republic of**	
☐	**Associated CB Laboratory:**		
Testing location/ address .....:			
	Tested by (name + signature) ..... :	**Y.J.KIM**	
	Approved by (name + signature).. :	**B.Y.CHOI**	
☐	**Testing procedure: TMP**		
Testing location/ address .....:			
	Tested by (name + signature) ..... :		
	Approved by (name + signature).. :		
☐	**Testing procedure: WMT**		
Testing location/ address .....:			
	Tested by (name + signature) ..... :		
	Witnessed by (name + signature). :		
	Approved by (name + signature).. :		
☐	**Testing procedure: SMT**		
Testing location/ address .....:			
	Tested by (name + signature) ..... :		
	Approved by (name + signature).. :		
	Supervised by (name + signature) :		
☐	**Testing procedure: RMT**		
Testing location/ address .....:			
	Tested by (name + signature) ..... :		
	Approved by (name + signature).. :		
	Supervised by (name + signature) :		

List of Attachments (including a total number of pages in each attachment):

- National Differences (37 pages)
- Photo Documentation (9 pages)

Total number of pages in each attachment is indicated in individual attachment.

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
5 Marking and instructions 7 Heating under normal operating conditions 8 Constructional requirements with regard to the protection against electric shock 9 Electric shock hazard under normal operating conditions 10 Insulation requirements 11 Fault conditions 12 Mechanical strength 13 Clearances and creepage distances 14 Components 15 Terminals 17 Electrical connections and mechanical fixings 19 Stability and mechanical hazards 20 Resistance to fire	Refer to page 2

Summary of compliance with National Differences

List of countries addressed:

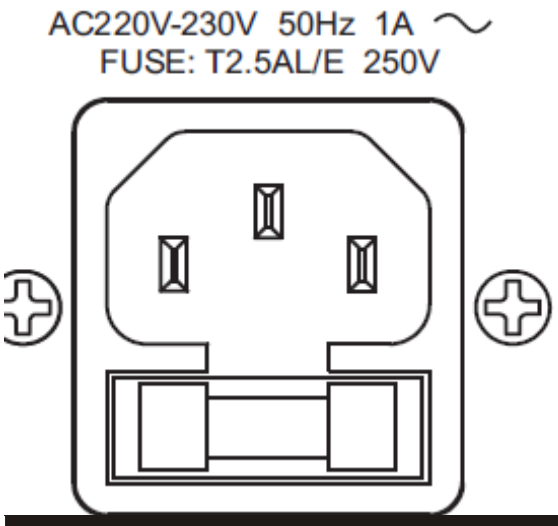
EU Group Differences, EU Special National Conditions, DK, FI, SE, CN.

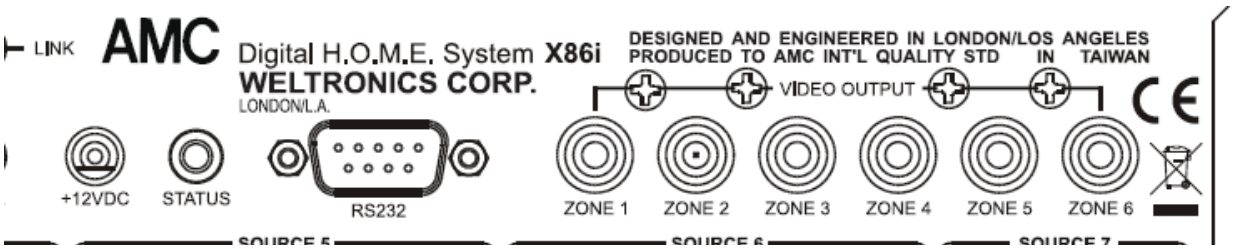
DK=Denmark, FI=Finland, SE=Sweden, CN=China

☒ **The product fulfils the requirements of EN 60065:2002 + A1:2006 + A11:2008 + A2:2010 + A12:2011**

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.





Test item particulars .....:	
Classification of installation and use.....:	Class I apparatus
Supply Connection .....:	Applicant inlet
.....:	--
Possible test case verdicts:	
- test case does not apply to the test object .....:	N/A (Not Applicable)
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing:	
Date of receipt of test item .....:	April 21, 2014
Date (s) of performance of tests .....:	April 21, 2014 to May 08,2014
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 Issuing 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 ☐ comma / ☒ point is used as the decimal separator.**	
Manufacturer's Declaration per sub-clause 6.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided .....:	☐ **Yes** ☒ **Not applicable**
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies) .....:	Amcli International Corp. 2F, No.14, Lane 327, Sec. 2 Chung-San Rd., Chung-Ho Dist, New Taipei City.
General product information: - The equipment models X86 and X86i are 6ZONE 8 Local 1/6 Remote SOURCE DIGITAL H.O.M.E. SYSTEM for audio / video of equipment that is in the scope of this standard. - The model X86 is similar to model X86i except for size of front panel. Unless otherwise indicated, all tests are performed on model X86 to represent other similar models. - Maximum ambient temperature of the equipment is 35 °C. - This report contains all national deviation as the equipment itself is subject of this CB report. - Mass of equipment (kg): Approx. 10.6 kg for model X86i, 10.7 kg for model X86. - The test samples were pre-production samples without serial numbers.	

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
3	**General requirements**		**P**
	Safety class of the apparatus .....:	Class I apparatus.	P
4	**General test conditions**		**P**
4.1.4	Ventilation instructions require the use of the test box	use of the test box	P
5	**Marking and instructions**		**P**
	Comprehensible and easily discernible	Compliance checked.	P
	Permanent durability against water and petroleum spirit	The labels were subjected to the permanence of marking test. The labels were rubbed with cloth soaked with water for 15 s and then again for 15 s with the cloth soaked with petroleum spirit. After this test there was still easily discernible, indelible and legible.	P
5.1	a) Identification, maker .....:	Trade mark: AMC	P
	b) Model number or type reference.....:	X86, X86i	P
	c) Class II symbol if applicable .....:	Class I equipment.	N/A
	d) Nature of supply.....:	a.c. symbol is applied in according to IEC 60417-5032	P
	e) Rated supply voltage .....:	220-230 V~	P
	f) Mains frequency if safety dependant .....:	50 Hz	P
	g) Rated current or power consumption for apparatus supplied by supply apparatus for general use .....:		N/A
	Measured current or power consumption .....:		N/A
	Deviation % (max 10%) .....:		N/A
	h) Rated current or power consumption for apparat-us intended for connection to an a.c. mains supply.:	1A	P
	Measured current or power consumption .....:	(see appended table 7.1)	P
	Measured current or power consumption for Television set .....:		N/A
	Deviation % (max 10%) .....:	The measured power consumption did not exceed the marked value by more than 10% under Normal load.	P
5.2	a) Earth terminal		N/A
	b) Hazardous live terminals	No live terminals.	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	c) Markings on supply output terminals		N/A
5.3	a) Use of triangle with exclamation mark	The exclamation point within an equilateral triangle graphic symbol (ISO 7000-0434) is used in the service manual to indicate critical replacement components.	P
	b) marking on loudspeaker grille, IEC 60417-5036	No loudspeaker grille used.	N/A
5.4	Instructions for use	The manufacturer declares that the instruction will be provided in the language of the destination country.	P
5.4.1	a) Mains powered equipment not exposed to dripping or splashing. Warning concerning objects filled with liquid, etc.	The instructions supplied with the apparatus were marked, with the required warning.	P
	b) Hazardous live terminals, instructions for wiring	No hazardous live terminals provided.	N/A
	c) Instructions for replacing lithium battery	No lithium battery used.	N/A
	d) Class I earth connection warning	No mains socket outlet.	N/A
	e) Instructions for multimedia system connection	The Installation instruction is provide.	P
	f) Special stability warning for attachment of the apparatus to the floor/wall		N/A
	g) Warning: battery exposure to heat		N/A
	h) Warning: protective film on CRT face		N/A
5.4.2	a-b) Disconnect device: plug/coupler or all-pole mains switch location, accessibility and markings	Appliance coupler is used as disconnect device, the statement was provided in the instruction.	P
	c) Instructions for permanently connected equipment	The equipment is not a permanently connected apparatus.	N/A
	Marking, signal lamps or similar for completely disconnection from the mains		N/A

6	**Hazardous radiation**		**N/A**
6.1	Ionizing radiation < 36 pA/kg (0,5 mR/h)		N/A
	Ionizing radiation under fault condition		N/A
6.2	Laser radiation, emission limits to IEC 60825-1:2007 .....:		N/A
	Emission limits under fault conditions .....:		N/A

7	**Heating under normal operating conditions**	**P**

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
7.1	Temperature rises not exceeding specified values; fuse links and other protective devices defeated	(see appended table)	P
7.1.1	Temperature rise of accessible parts	(see appended table)	P
7.1.2	Temperature rise of parts providing electrical insulation	(see appended table)	P
7.1.3	Temperature rise of parts acting as a support or as a mechanical barrier	(see appended table)	P
7.1.4	Temperature rise of windings	(see appended table)	P
7.1.5	Parts not subject to a limit under 7.1.1 to 7.1.4	(see appended table)	P
7.2	Softening temperature of insulating material supporting parts conductively connected to the mains carrying a current > 0,2 A at least 150 °C		N/A
8	**Constructional requirements with regard to the protection against electric shock**		**P**
8.1	Conductive parts covered by lacquer, paper, untreated textile oxide films and beads etc. considered to be bare	Considered.	P
8.2	No shock hazard when changing voltage setting device, fuse-links or handling drawers etc.	No such part.	N/A
8.3	Insulation of hazardous live parts not provided by hygroscopic material	No hygroscopic material.	N/A
8.4	No risk of electric shock from accessible parts or from parts rendered accessible following the removal of a cover which can be removed by hand	No cover removable barely by hand.	N/A
8.5	Class I equipment	See below.	P
	Basic insulation between hazardous live parts and earthed accessible parts	Hazardous live parts to earthed parts are separated by basic insulation.	P
	Resistors bridging basic insulation complying with 14.1 a)	No such resistors.	N/A
	Capacitors bridging basic insulation complying with 14.2.1 a)		N/A
	Protective earthing terminal		N/A
8.6	Class II equipment and Class II constructions within Class I equipment	See below.	P
	Double or reinforced insulation between hazardous live parts and accessible parts	Hazardous live parts to unearthed accessible parts are separated by either reinforced or double insulation.	P
	Components bridging double or reinforced insulation complying with 14.1 a) or 14.3	The apparatus has isolated transformer complies with clause 14.3.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulation bridged by components complying with 14.3.4.3.		N/A
	Basic and supplementary insulation each being bridged by a capacitor complying with 14.1 a)		N/A
	Double or reinforced insulation being bridged with 2 capacitors in series complying with 14.2.1 a)		N/A
	Double or reinforced insulation being bridged with a single capacitor complying with 14.2.1 b)	No such component used.	N/A
8.7	This clause is void		—
8.8	Basic or supplementary insulation > 0,4 mm (mm) :	No used.	N/A
	Reinforced insulation > 0,4 mm (mm) .....:		N/A
	Thin sheet insulation (excluding non-separable thin sheet insulation. See 8.22)	Transformer insulation tapes provide.	P
	Basic or supplementary insulation, at least two layers, each meeting 10.3		N/A
	Basic or supplementary insulation, three layers any two of which meet 10.3		N/A
	Reinforced insulation, two layers each of which meet 10.3	AC 3000 V applied on each one layer of insulation tape.	P
	Reinforced insulation, three layers any two which meet 10.3		N/A
8.9	Adequate insulation between internal hazardous live conductors and accessible parts	Insulation of internal hazardous live conductors or cable is PVC having a minimum thickness of 0.4 mm. All internal wires are UL recognized wiring which is PVC insulated, rated VW-1, min. 105°C.	P
	Adequate insulation between internal hazardous live parts and conductors connected to accessible parts	All internal hazardous live part is separated by double or reinforced insulation from these conductors.	P
8.10	Double insulation between conductors connected to the mains and accessible parts.	Double or reinforced insulation is provided.	P
	Double insulation between internal hazardous live parts and conductors connected to accessible parts.	Double or reinforced insulation is provided.	P
8.11	Detaching of wires	Internal wires are secured by soldering. Additionally solder pins or glued were provided so that a loosening of the terminal connection is unlikely.	P
	No undue reduction of creepages or clearance distances if wires become detached		P
	Vibration test carried out .....:	See subclause 12.1.2.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
8.12	This clause is void	No mains socket-outlets provided.	N/A
8.13	Adequate fastening of windows, lenses, lamp covers etc. (pull test 20 N for 10 s)	No hazardous voltage of windows, lenses, lamp covers etc.	N/A
8.14	Adequate fastening of covers (push/pull test 50 N for 10 s)		N/A
8.15	No risk of damage to the insulation of internal wiring due to hot parts or sharp edges	There was no contact with sharp edges or hot parts while a 2 N force was applied to internal wiring.	P
8.16	Only special supply equipment can be used	The equipment is not special supply apparatus.	N/A
8.17	Insulated winding wire without additional interleaved insulation	Not used.	N/A
8.18	Endurance test as required by 8.17	Test not required.	N/A
8.19	Disconnection from the mains		P
8.19.1	Disconnect device	The appliance inlet is used as the disconnect device and information is provided in the instruction.	P
	All-pole switch or circuit breaker with >3mm contact separation		N/A
8.19.2	Mains switch ON indication		N/A
8.20	Switch not fitted in the mains cord		N/A
8.21	Bridging components comply with clause 14		N/A
8.22	Non-separable thin sheet material		N/A

9	**Electric shock hazard under normal operating conditions**		**P**
9.1	Testing on the outside		P
9.1.1	For voltages >1000 V ac or >1500 V dc complies with clause 13.3.1 for basic insulation	No parts with voltages exceeding 1000V AC or 1500V dc.	N/A
9.1.1.1	a) Open circuit voltages	(See appended table)	P
	b) Touch current measured from terminal devices using the network in annex D .....:	(See appended table)	P
	c) Discharge not exceeding 45 µC	The stores charges did not exceed 45 µC.	P
	d) Energy of discharge not exceeding 350 mJ	No voltage exceeding 15 kV.	N/A
9.1.1.2	Test with test finger and test probe		P
9.1.2	No hazardous live shafts of knobs, handles or levers		P
9.1.3	Ventilation holes and other holes tested by means of 4 mm x 100 mm test pin		P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
9.1.4	Terminal devices tested with 1 mm x 20 mm test pin (10 N); test probe D of IEC 61032		P
	Terminal devices tested with 1 mm x 100 mm straight wire (1 N); test probe D of IEC 61032		P
9.1.5	Pre-set controls tested with 2.5 mm x 100 mm test pin (10 N); test probe C of IEC 61032		N/A
9.1.6	No shock hazard due to stored charge on withdrawal of the mains plug; voltage (V) after 2 s .....:	The pins or contacts for the mains plug are not hazardous live after 2 seconds.	P
	If C is not greater than 0,1 µF no test needed		N/A
9.1.7	Resistance to external forces	No damage to the enclosure.	P
	a) Test probe 11 of IEC 61032 for 10 s (50 N)	The hazardous live part is not accessible.	P
	b) Test hook of fig. 4 for 10 s (20 N)	The hazardous live part is not accessible.	P
	c) 30 mm diameter test tool for 5 s (100 or 250 N)	100 N applied, no damage.	P
9.2	No hazard after removing a cover by hand		N

10	**Insulation requirements**		**P**
10.1	Insulation resistance (MΩ) at least 2 MΩ min. after surge test for basic and 4 MΩ min. for reinforced insulation .....:	The surge test performed between primary and output terminals, after the test, the tested insulation complied with the requirements of 10.3.	P
10.2	Humidity treatment 48 h or 120 h .....:	At 120 hrs, 40 °C, R.H. 95 %.	P
10.3	Insulation resistance and dielectric strength between mains terminals	(see appended table 10.3)	P
	Insulation Resistance and dielectric strength across BASIC or SUPPLEMENTARY insulation (Class I)	(see appended table 10.3)	P
	Insulation resistance and dielectric strength across REINFORCED insulation (Class II)	(see appended table 10.3)	P

11	**Fault conditions**		**P**
11.1	No shock hazard under fault condition	(see appended table 11.1)	P
11.2	Heating under fault condition	See appended table 11.2.	P
	Flames extinguish within 10 seconds	No flames.	P
	No hazard from softening solder	Solder did not become softened or fluid during fault condition testing.	P
	Soldered terminations not used as protective mechanism	No soldered terminations used.	P
11.2.1	Measurement of temperature rises	(see appended table 11.2)	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
11.2.2	Temperature rise of accessible parts		N/A
11.2.3	Temperature rise of parts, other than windings and printed boards, providing electrical insulation	(see appended table 11.2)	P
11.2.4	Temperature rise of parts acting as a support or mechanical barrier	(see appended table 11.2)	P
11.2.5	Temperature rise of windings	(see appended table 11.2)	P
11.2.6	Temperature rise of printed boards shall not exceed the limits of table 3 by max. 100 K for max. 5 min	(see appended table 11.2)	P
	Printed circuit boards (PCB) classified as V-0 according to 60695-11-10 or Clause G.1 may exceed the limit in table 3 in case a) and b):		N/A
	a) Temperature rise of printed circuit boards exceeding the limits of table 3 by not more than 100 K for an area not greater than 2 cm² .....:		N/A
	b) Temperature rise of printed circuit boards exceeding the limits of table 3 up to 300 K for an area not greater than 2 cm² for a maximum of 5 min		N/A
	Meets all the special conditions if conductors on printed circuit boards are interrupted		N/A
	Class I protective earthing maintained		N/A
11.2.7	Temperature rise of parts not subject to the limits of 11.2.1 to 11.2.6 shall not exceed the limits in table 3, item e), "Fault conditions".	(see appended table 11.2)	P

12	**Mechanical strength**		**P**
12.1.1	Bump test where mass >7 kg		P
12.1.2	Vibration test	No damage to the apparatus after the vibration test.	P
12.1.3	Impact hammer test	No damage, the apparatus passed the dielectric strength test.	P
	Steel ball test	No hazard to the apparatus after steel ball fall test.	P
12.1.4	Drop test for portable apparatus where mass ≤ 7 kg		N/A
12.1.5	Thermoplastic enclosures stress relief test		N/A
12.2	Fixing of knobs, push buttons, keys and levers		N/A
12.3	Remote controls with hazardous live parts		N/A
12.4	Drawers (pull test 50 N, 10 s)		N/A
12.5	Antenna coaxial sockets providing isolation		N/A
12.6	Telescoping or rod antennas construction		N/A
12.6.1	Telescoping or rod antennas securement		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
13	**Clearances and creepage distances**		**P**
13.1	Clearances in accordance with 13.3	See sub clause 13.3.	P
	Creepage distances in accordance with 13.4	See sub clause 13.4.	P
13.2	Determination of working voltage	The test results see appended table 13.2.	P
13.3	Clearances	See below.	P
13.3.1	General	See below.	P
13.3.2	Circuits conductively connected to the mains comply with table 8 and, where applicable, table 9.....:	See appended table 13.	P
13.3.3	Circuits not conductively connected to the mains comply with table 10	See appended table 13.	P
13.3.4	Measurement of transient voltages	No measurement of transient voltages.	N/A
13.4	Creepage distances	See appended table 13.	P
	Creepage distances greater than table 11 minimum values		P
13.5	Printed boards		N/A
13.5.1	Clearances and creepage distances between conductors on printed circuit boards, one of which may be conductively connected to the mains, as in fig. 10	Printed board is not used for supplementary or reinforced insulation.	N/A
13.5.2	Type B coated printed circuit boards complying with IEC 60664-3 (basic insulation only)	No such components.	N/A
13.6	Conductive parts along uncemented joints clearances and creepage distances comply with 13.3 and 13.4	No such construction.	N/A
	Conductive parts along reliably cemented joints comply with 8.8	No such construction.	N/A
	Temperature cycle test and dielectric strength test	No such construction.	N/A
	500V test for transformers, magnetic coupler and similar devices, if insulation is relied upon for safety		N/A
13.7	Enclosed, enveloped or hermetically sealed parts not conductively connected to the mains, clearances and creepage distances as in table 12	No enclosed, enveloped or hermetically sealed parts.	N/A
13.8	Parts filled with insulating compound, meeting the requirements of 8.8		N/A

14	**Components**		**P**
14.1	Resistors		P
	a) Resistors between hazardous live parts and accessible metal parts	No such components	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	b) Resistors, other than between hazardous live parts and accessible parts		N/A
	Resistors separately approved .....:		N/A
14.2	Capacitors and RC units	Certified capacitor used. See appended table 14.	P
	Capacitors separately approved :	See below.	P
14.2.1	Y capacitors tested to IEC 60384-14:2005 .....:		P
14.2.2	X capacitors tested to IEC 60384-14:2005 .....:		N/A
14.2.3	Capacitors operating at mains frequency but not connected to the mains: tests for X2 .....:	No such capacitors used.	N/A
14.2.5	Capacitors with volume exceeding 1750 mm³, where short-circuit current exceeds 0,2 A: compliance with IEC 60384-1, 4.38 category B or better .....:	Except the capacitors covered by 14.2.1 to 14.2.4, the metal-cased capacitors used.	N/A
	Capacitors with volume exceeding 1750 mm³, mounted closer to a potential ignition source than table 5 permits: compliance with IEC 60384-1, 4.38 category B or better .....:		N/A
	Shielded by a barrier acc. to 20.1.4/ table 21 or metal .....:		N/A
14.3	Inductors and windings	See below.	P
	Comply with IEC 61558-1, IEC 61558-2 (as relevant) and clause 20.1.4		N/A
14.3.1	Transformers and inductors marked with manufacturer's name and type .....:	Main transformer marked manufacturer name and type number.	P
	Transformers and inductors separately approved .:	None.	N/A
14.3.2	General	See clause 14.3.3, 14.3.4 and 14.3.5.	P
	Insulation material complies with clause 20.1.4		P
14.3.3	Constructional requirements	See below.	P
14.3.3.1	Clearances and creepage distances comply with clause 13	See appended table 13.3 and 13.4.	P
14.3.3.2	Transformers meet the constructional requirements	Complied.	P
14.3.4	Separation between windings	See below.	P
14.3.4.1	Class II transformers have adequate separation between hazardous live parts and accessible parts (double or reinforced insulation).....:	Double insulation separated between primary windings and secondary windings.	P
	Coil formers and partition walls > 0,4 mm		N/A
14.3.4.2	Class I transformers, with basic insulation and protective screening only if all 7 conditions of 14.3.4.2 are met	Transformer is evaluated with class II construction.	N/A
14.3.4.3	Separating transformers with at least basic insulation		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14.3.5	Insulation between HAZARDOUS LIVE parts and ACCESSIBLE parts	Windings of Class II construction used.	P
14.3.5.1	Class II transformers have adequate insulation between hazardous live parts and accessible parts (double or reinforced insulation)	Double insulation separated between primary circuit and secondary circuit.	P
	Coil formers and partition walls > 0,4 mm		N/A
14.3.5.2	Class I transformers have adequate insulation between hazardous live parts and accessible conductive parts or those conductive parts or protective screens connected to a protective earth terminal	Class II transformer.	N/A
	Winding wires connected to protective earth have adequate current-carrying capacity	No such construction.	N/A
14.4	High voltage components	No high voltage component.	N/A
	High-voltage components and assemblies: U > 4 kV (peak) separately approved		N/A
	Component meets category V-1 of IEC 60695-11-10		N/A
14.4.1	High voltage transformers and multipliers tested as part of the submission		N/A
14.4.2	High voltage assemblies and other parts tested as part of the submission		N/A
14.5	Protective devices	See below.	P
	Protective devices used within their ratings	See appended table 14.	P
	External clearances and creepage distances meet requirement of clause 13 for the voltage across the device when opened	See appended table 13.	P
14.5.1.1	a) Thermal cut-outs separately approved	See appended table 14.	P
	b) Thermal cut-outs tested as part of the submission		N/A
14.5.1.2	a) Thermal links separately approved	No such components used.	N/A
	b) Thermal links tested as part of the submission		N/A
14.5.1.3	Thermal devices re-settable by soldering	No such components used.	N/A
14.5.2.1	Fuse-links in the mains circuit according to IEC 60127	Approved fuse-link used. See appended table 14 for detail.	P
14.5.2.2	Correct marking of fuse-links adjacent to holder ...:	Marking FUSE T2.5AL/E, 250V near fuse holder.	P
14.5.2.3	Not possible to connect fuses in parallel .....:	No such components.	N/A
14.5.2.4	Not possible to touch hazardous live parts when replacing fuse-links without the use of a tool .....:	See appended table 14.	P
14.5.3	PTC thermistors comply with IEC 60730-1:2007	No such components.	N/A
	PTC devices (15 W) category V-1 or better		N/A
14.5.4	Circuit protectors have adequate breaking capacity and their position is correctly marked	No such components.	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14.6	Switches	See appended table 14.	P
14.6.1 a)	Separate testing to IEC 61058-1 including: - 10 000 operations - Normal pollution suitability - Make and break speed independent of speed of actuation V-0 compliance with annex G, G.1.1		N/A
14.6.1 b)	Tested in the apparatus:		N/A
	Switch controlling > 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.3, 14.6.4 and V-0 in annex G, G.1.1		N/A
	Switch controlling > 0.2A with open contact voltage < 35 V (peak)/24 V dc complying with 14.6.3 and V-0 in annex G, G.1.1		N/A
	Switch controlling < 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.4 and V-0 in annex G, G.1.1		N/A
14.6.2	Switch tested to 14.6.1 b) constructed to IEC 61058-1 subclause 13.1 and has making/breaking action independent of speed of actuation		N/A
14.6.3	Switch tested to 14.6.1 b) compliant with IEC 61058-1 subclause 16.2.2 d) and m) not attaining excessive temperatures in use		N/A
14.6.4	Switch tested to 14.6.1 b) has adequate dielectric strength		N/A
14.6.5	Mains switch controlling mains socket outlets additional tests to IEC 61058-1	No mains socket outlet.	N/A
	Socket outlet current marking correct		N/A
14.7	Safety interlocks	No safety interlocks used	N/A
	Safety interlocks to 2.8 of IEC 60950-1		N/A
14.8	Voltage setting devices and the like		N/A
	Voltage setting device not likely to be changed accidentally	No voltage setting devices used.	N/A
14.9	Motors	Approved DC FAN used.	N/A
14.9.1	Endurance test on motors		N/A
	Motor start test		N/A
	Dielectric strength test		N/A
14.9.2	Not adversely affected by oil or grease etc.		N/A
14.9.3	Protection against moving parts		N/A
14.9.4	Motors with phase-shifting capacitors, three-phase motors and series motors meet clause. B.8, B.9 and B.10 of IEC 60950-1, Annex B		N/A
14.10	Batteries	No batteries used.	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14.10.1	Batteries mounted with no risk of accumulation of flammable gases		N/A
14.10.2	No possibility of recharging non-rechargeable batteries		N/A
14.10.3	Recharging currents and times within manufacturers limits		N/A
	Lithium batteries discharge and reverse currents within the manufacturers limits		N/A
14.10.4	Battery mould stress relief		N/A
14.10.5	Battery drop test		N/A
14.11	Optocouplers		N/A
	a) Comply with 13.6 (jointed insulation) and N.2.1		N/A
	b) Comply with IEC 60747-5-5:2007		N/A
	Alternative to a) and b) optocoupler comply with 13.8		N/A
	a) Comply with 13.6 (jointed insulation) and N.2.1		N/A
14.12	Surge suppression varistors		N/A
	Comply with IEC 61051-2		N/A
	Not connected between mains and accessible parts except for earthed parts of permanently connected apparatus		N/A
	Complies with the current pulse, fire hazard and thermal stress requirements of 14.12		N/A
15	**Terminals**		**P**
15.1.1	Mains plug, appliance inlet, interconnection couplers and mains socket-outlet meet the appropriate standard	See appended table, list of critical components.	P
	Overloading of plugs or appliance inlets prevented if the apparatus has mains socket outlets		N/A
	Overloading of internal wiring prevented if the apparatus has mains socket outlets		N/A
15.1.2	Connectors for antenna, earth, audio, video or data		P
	No risk of insertion in mains socket-outlets		N/A
	No risk of insertion into audio- or video- outlets marked with the symbol of 5.2		N/A
15.1.3	Output terminals of a.c. adaptors or similar devices not compatible with household mains socket-outlets	No such output terminals.	N/A
15.2	Provision for protective earthing		P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Accessible conductive parts of Class I equipment reliably connected to earth terminal, within equipment		N/A
	Protective earth conductors correctly coloured		N/A
	Equipment with non-detachable mains cord provided with separate protective earth terminal near mains input		N/A
	Protective earth terminal resistant to corrosion		N/A
	Earth resistance test: < 0,1 Ω at 25 A .....:		N/A
15.3	Terminals for external flexible cords and for permanent connection to the mains supply		N/A
15.3.1	Adequate terminals for connection of permanent wiring		N/A
15.3.2	Reliable connection of non-detachable cords		N/A
	Not soldered to conductors of a printed circuit board		N/A
	Adequate clearances and creepage distances between connections should a wire break away		N/A
	Wire secured by additional means to the conductor		N/A
15.3.3	Screws and nuts clamping conductors have adequate threads: ISO 261, ISO 262 or similar		N/A
15.3.4	Soldered conductors wrapped around terminal prior to soldering or held in place by additional means		N/A
	Clamping of conductor and insulation if not soldered or held by screws		N/A
15.3.5	Terminals allow connection of appropriate cross-sectional area of conductors, for the rated current of the equipment		N/A
15.3.6	Terminals to 15.3.3 have sizes required by table 16		N/A
15.3.7	Terminals clamp conductors between metal and have adequate pressure		N/A
	Terminals designed to avoid conductor slipping out when tightened or loosened		N/A
	Terminals adequately fixed to avoid loosening when the clamping is tightened or loosened and stress on internal wiring is avoided		N/A
15.3.8	Terminals carrying a current more than 0,2 A: contact pressure not transmitted by insulating material except ceramic		N/A
15.3.9	Termination of non-detachable cords: wires terminated near to each other		N/A
	Terminals located and shielded: test with 8 mm strand		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
15.4	Devices forming a part of the mains plug		N/A
15.4.1	No undue strain on mains socket-outlets		N/A
15.4.2	Device complies with standard for dimensions of mains plugs		N/A
15.4.3	Device has adequate mechanical strength (tests a,b,c)		N/A
16	**External flexible cords**		**N/A**
16.1	Mains cords sheathed type, complying with IEC 60227 for PVC or IEC 60245 for synthetic rubber cords .....:		N/A
	Non-detachable cords for Class I have green/yellow core for protective earth		N/A
16.2	Mains cords conductors have adequate cross-sectional area for rated current consumption of the equipment		N/A
16.3	a) Flexible cords not complying with 16.1, used for interconnections between separate units of equipment used in combination and carrying hazardous live voltages, have adequate dielectric strength		N/A
	b) Flexible cords not complying with 16.1, withstand bending and mechanical stress (3.2 of IEC 60227-2)		N/A
16.4	Flexible cords used for connection between equipment have adequate cross-sectional areas to avoid temperature rise under normal and fault conditions		N/A
16.5	Adequate strain relief on external flexible cords		N/A
	Not possible to push cord back into equipment		N/A
	Strain relief device unlikely to damage flexible cord		N/A
	For mains cords of Class I equipment, hazardous live conductors become taut before earth conductor		N/A
16.6	Apertures for external flexible cord: no risk of damage to the cord during assembly or movement in use		N/A
16.7	Transportable musical instruments and amplifiers fitted with detachable cord set with appliance inlet to IEC 60320-1		N/A
	Transportable musical instruments and amplifiers fitted with detachable cord sets or with means of stowage to protect the cord		N/A
17	**Electrical connections and mechanical fixings**		**P**

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
17.1	Torque test to table 20		P
	- screws into metal: 5 times	Torque 1.2 Nm applied to screw of dimension 3.84 mm. Torque 0.5 Nm applied to screw of dimension 2.8 mm.	P
	- screws into non-metallic material: 10 times		N/A
17.2	Correct introduction into female threads in non-metallic material		N/A
17.3	Cover fixing screws: captive	No reduction of clearance or creepage distance	P
	Non-captive fixing screws: no hazard when replaced by a screw whose length is 10 times its diameter	No hazard when replaced by a screw whose length is 10 times nominal diameter.	P
17.4	No loosening of conductive parts carrying a current > 0,2 A		N/A
17.5	Contact pressure not transmitted through plastic other than ceramic for connections carrying a current > 0,2 A		N/A
17.6	Stranded conductors of flexible supply cords carrying a current > 0,2 A with screw terminals not consolidated by solder		N/A
17.7	Cover fixing devices other than screws have adequate strength and their positioning is unambiguous	Only screw used to fix the cover	N/A
17.8	Fixing devices for detachable legs or stands provided		N/A
17.9	Internal pluggable connections, affecting safety, unlikely to become disconnected	Internal pluggable connections have mechanical securing.	P

18	**Mechanical strength of picture tubes and protection against the effects of implosion**		**N/A**
18.1	Picture tube separately approved to IEC 61965 ....:		N/A
	Picture tube separately approved to 18.2 .....:		N/A
18.2	Non-intrinsically protected tubes tested to 18.2		N/A

19	**Stability and mechanical hazards**		**P**
	Mass of the equipment exceeding 7 kg .....:		P
	Apparatus intended to be fastened in place – suitable instructions .....:		P
19.1	Test on a plane, inclined at 10° to the horizontal		P
19.2	100 N force applied vertically downwards		P
19.3	100 N force, or 13% of weight, applied horizontally to point of least stability		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
19.4	Edges or corners not hazardous	The edges and corners are rounded and smoothed.	P
19.5	Glass surfaces (exc.laminated) with an area exceeding 0,1 m² or maximum dimension > 450 mm, pass the test of 19.5.1		N/A
19.6	Wall or ceiling mountings adequate		N/A

20	**Resistance to fire**		**P**
20.1	Electrical components and mechanical parts		P
	a) Exemption for components contained in an enclosure of material V-0 to IEC 60695-11-10 with openings not exceeding 1 mm in width		N/A
	b) Exemption for small components as defined in 20.1	PCB is of flammability class V-0 and exception is made for small component.	P
20.1.1	Electrical components meet the requirements of Clause 14 or 20.1.4	See sub-clause 14 and 20.1.4.	P
20.1.2	Insulation of internal wiring working at voltages > 4 kV or leaving an internal fire enclosure, or located within the areas mentioned in Table 21, not contributing to the spread of fire	No wire working at voltages > 4kV.	N/A
20.1.3	Material of printed circuit boards on which the available power exceeds 15 W at a voltage between 50 V and 400 V (peak) a.c. or d.c. meets V-1 or better to IEC 60695-11-10, unless used in a fire enclosure		N/A
	Material of printed circuit boards on which the available power exceeds 15 W at a voltage >400 V (peak) a.c. or d.c. meets V-0 to IEC 60695-11-10.	PCB meet V-0 or better.	P
20.1.4	Components and parts not covered by 20.1.1, 20.1.2 and 20.1.3 (other than fire enclosures) mounted nearer to a potential ignition source than the distances in Table 21 comply with the relevant flammability category in Table 21	Metal enclosure used.	P
	Components and parts as above but shielded from a potential ignition source, with the barrier area in accordance with Table 21 and fig. 13		N/A
	Apparatus with voltages >4kV under normal operating conditions and distances to the enclosure exceed those specified Table 21, flammability classification HB40 or better is required for the enclosure		N/A
20.2	Fire enclosure	The equipment was not potential ignition sources with open circuit voltage > 4 kV (peak) a.c. or d.c.	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
20.2.1	Potential ignition sources with open circuit voltage > 4 kV (peak) a.c. or d.c. contained in a fire enclosure to V-1		N/A
20.2.2	Internal fire enclosures with openings not exceeding 1 mm in width and with openings for wires completely filled		N/A
20.2.3	Requirements of 20.2.1 and 20.2.2 met by an internal fire enclosure		N/A
A	**Annex A, Additional requirements for apparatus with protection against splashing water**		**N/A**
A.5	Marking and instructions		N/A
A.5.1	j) Marked with IPX4 (IEC 60529), 5.4.1 a) does not apply		N/A
A.10	Insulation requirements		N/A
A.10.2	Splash and humidity treatment		N/A
A.10.2.1	Enclosure provides protection against splashing water		N/A
A.10.2.2	Humidity treatment carried out for 7 days		N/A
B	**Annex B, Apparatus to be connected to the TELECOMMUNICATION NETWORKS**		**N/A**
	Complies with IEC 62151 clause 1		N/A
	Complies with IEC 62151 clause 2		N/A
	Complies with IEC 62151 clause 3 but with 3.5.4 modified to 2.4.10 of this standard		N/A
	Complies with IEC 62151 clause 4 but with 4.1.2, 4.1.3 and 4.2.1.2 modified in accordance with annex B of this standard		N/A
	Complies with IEC 62151 cause 5 but with 5.3.1 modified in accordance with annex B of this standard		N/A
	Complies with IEC 62151 clause 6		N/A
	Complies with IEC 62151 clause 7		N/A
	Complies with IEC 62151 annex A, B and C		N/A
L	**ANNEX L, Additional requirements for electronic flash apparatus for photographic purposes**		**N/A**
L. 5	Marking and instructions		N/A
L. 5.4	Instructions for battery chargers and Supply apparatus indicating type or model number of flash apparatus with which it is to be used		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Instructions for flash apparatus indicating type or model number of battery chargers or Supply apparatus with which it is to be used		N/A
L. 7	Heating under normal operating conditions		N/A
L7.1.5 & L11.2.7	Lithium batteries meet permissible temp rise in Table 3, unless comply with 6.2.2.1 or 6.2.2.2 of IEC 60086-4		N/A
L. 9	Electric shock hazard under normal operating conditions		N/A
L. 9.1.1	Terminals to connection to synchroniser not HAZARDOUS LIVE		N/A
L.10	Insulation requirements		N/A
L. 10.3.2	High frequency plus ignition		N/A
L. 12	Mechanical strength		N/A
L. 12.1.3	Windows for flash tubes are excluded from steel ball impact test		N/A
L. 14	Components		N/A
L14.6.6	Mains switch characteristics appropriate to its function under normal conditions		N/A
L. 20	Resistance to fire		N/A
L. 20.1 c)	Trigger coil for discharge purpose is not considered to be a POTENTIAL IGNITION SOURCE		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

7.1	**TABLE: temperature rise measurements:**		**P**
	Power consumption in the OFF/Stand-by mode of the functional switch (W) .....:	--	

Cond.	Un (V)	Hz	In (A)	Pn (W)	Uout (V)	Pout (W)	Operating Condition / Status
1KHz sine wave input, all channels driven 1/8 non-clipped output power, (8 ohm*12)							
1	198	50	0.75	104.3	--	--	Maximum normal load.
2	220	50	0.712	107.9	--	--	Maximum normal load.
3	230	50	0.699	109.5	--	--	Maximum normal load.
4	253	50	0.675	113.5	--	--	Maximum normal load.

	Loudspeaker impedance (Ω) .....:	See above.	—
	Several loudspeaker systems .....:	--	--
	Marking of loudspeaker terminals .....:	--	--

Temperature Rise dT of Part	dT (K)			Limit max dT (K)
Test Condition No.	No 1	No 4	No ___	--
01. Transformer coil	12.8	13	--	55
02. Transformer core	9.3	9.6	--	55
03. L5 coil (AMP board)	15.6	25.7	--	70
04. L7 coil (AMP board)	5.2	6.9	--	70
05. PWB near IC (AMP board)	11.5	16.7	--	70
06. PWB near BR1 (Main board)	11.9	10.7	--	70
07. PWB near U2 (Main board)	4.9	7.7	--	70
08. L1 coil (Main board)	7.9	16.7	--	70
09. Body of C1 (Main board)	6.7	6.6	--	50
10. Body of CS01 (Main board)	3.9	3.3	--	90
11. PWB near IC3 (Audio board)	13.1	13.8	--	70
12. PWB near U81 (Audio board)	3	3.1	--	70
13. Metal enclosure near Transformer	0.4	0.2	--	40
14. Inlet near L	2.5	2.8	--	35
15. Ambient(°C)	24.2	23.1	--	--

Comments:
The temperatures were measured under worst case normal mode defined in 4.2.1

With a maximum ambient temperature of 35°C the temperature-rise is calculated as follows:
Table 3 = permissible temperature.

Winding temperature rise measurements					
Ambient temperature t1 (°C) ..... :	--	--	--	--	—
Ambient temperature t2 (°C) ..... :	--	--	--	--	—

Temperature rise dT of winding: $dT = \frac{(R_2 - R_1)}{R_1} \times (234.5 + t1) - (t2 - t1)$	R_1 (Ω)	R_2 (Ω)	dT (K)	Limit max (K)	Insulation class
--	--	--	--	--	--

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

7.2	TABLE: softening temperature of thermoplastics			N/A
Temperature T of part		**T - normal conditions (°C)**	**T - fault conditions (°C)**	**Min T softening (°C)**
Supplementary information:				

10.3	TABLE: insulation resistance measurements		P
Insulation resistance R between:		**R (MΩ)**	**Required R (MΩ)**
Mains poles (primary fuse disconnected)		500	Min. 2
Between parts separated by double or reinforced insulation (Transformer: primary to secondary)		500	Min. 2
Between parts separated by double or reinforced insulation (Transformer: secondary to core)		500	Min. 4
Between parts separated by double or reinforced insulation (Unit: primary to Earth)		500	Min. 2
Between parts separated by double or reinforced insulation (Unit: primary to secondary)		500	Min. 4
Between parts separated by double or reinforced insulation (Unit: primary to metal enclosure)		500	Min. 4
Supplementary information:			

10.3	TABLE: electric strength measurements		P
Test voltage applied between:		**Test voltage (V)**	**Breakdown**
Mains poles (primary fuse disconnected)		2120 Vdc	No
Between parts separated by double or reinforced insulation (Transformer: primary to secondary)		4240 Vdc	No
Between parts separated by double or reinforced insulation (Transformer: secondary to core)		4240 Vdc	No
Between parts separated by double or reinforced insulation (Unit: primary to Earth)		4240 Vdc	No
Between parts separated by double or reinforced insulation (Unit: primary to secondary)		4240 Vdc	No
Between parts separated by double or reinforced insulation (Unit: primary to metal enclosure)		4240 Vdc	No
One layer insulation tape of transformer		3000 Vac	No
Supplementary information:			

11.2	TABLE: summary of fault condition tests		P
	Voltage (V) 0,9 or 1,1 times rated voltage .....:	253V	—
	Frequency (Hz) .....:	50Hz	—
	Ambient temperature (°C) .....:	See below.	—

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

No.	Component	Fault	dT (K) / Component	Other results (include description and test duration)
1	Transformer Pin AC2-AC1	Short	--	Fuse opened instantly, no hazards. Test duration: 1 sec Input current: 0.675 to 0 A
2	Transformer Pin AC3-AC1	Short	--	Fuse opened instantly, no hazards. Test duration: 1 sec Input current: 0.675 to 0 A
3	Transformer Pin AC4-AC6	Short	--	Fuse opened instantly, no hazards. Test duration: 1 sec Input current: 0.675 to 0 A
4	Transformer Pin AC5-AC6	Short	--	Fuse opened instantly, no hazards. Test duration: 1 sec Input current: 0.675 to 0 A
5	Transformer Pin AC3 to AC2	Overload	Maximum temp. as below: Transformer coil: 96 °K, Ambient : 25.0 °C	When overload to 8A, unit into cycle protection, no hazard, no damage. Test duration: 8hrs Input current: 1.58 to 0.032A
6	Transformer Pin AC4 to AC5	Overload	Maximum temp. as below: Transformer coil: 94.3 °K, Ambient : 23.6 °C	When overload to 8A, unit into cycle protection, no hazard, no damage. Test duration: 8hrs Input current: 1.87 to 0.032A
7	Speaker	MAXIMUM POWER	Maximum temp. as below: Transformer coil: 88.9 °K, PWB near BR1: 57.9 °K Ambient : 23.7 °C	FS1, FS2 damaged, no hazards.. Test duration: 7hr Input current: 0.675 to 0.18A
8	Speaker	Short	--	Unit operated normally, no damaged, no hazards. Test duration: 4hr Input current: 0.8 to 0.67A
9	Fan	Locked	Maximum temp. as below: Transformer coil: 21.2 °K, L5 coil: 37.0 °K Ambient : 23.1 °C	Unit operated normally, no damaged, no hazards. Test duration: 4hr Input current: 0.67A
10	Openings (Top)	Blocked	Maximum temp. as below: Transformer coil: 16.3 °K, L5 coil: 24.1 °K Ambient :23.9 °C	Unit operated normally, no damaged, no hazards. Test duration: 4hr Input current: 0.67A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

No.	Component	Fault	dT (K) / Component	Other results (include description and test duration)
11	Openings (Left side)	Blocked	Maximum temp. as below: Transformer coil: 12.8 °K, L5 coil: 20.1 °K Ambient :24.9 °C	Unit operated normally, no damaged, no hazards. Test duration: 4hr Input current: 0.67A
12	Openings (Right side)	Blocked	Maximum temp. as below: Transformer coil: 12.3 °K, L5 coil: 21.9 °K Ambient :25.4 °C	Unit operated normally, no damaged, no hazards. Test duration: 4hr Input current: 0.67A

Supplementary information:

1) For fuse opened condition, same results came out for each source, gets same results.

2) For component damaged and fuse not opened condition, repeat three times, gets same results.

	Winding temperature rise measurements		--
	Ambient temperature t1 (°C) .....:	--	—
	Ambient temperature t2 (°C) .....:	--	—

13	TABLES: clearances and creepage distances					P
Rated supply voltage:	220-230V	Pollution degree.. :	2	Material Group....:	IIIa+IIIb	
2 N force on internal parts applied:			--			--
30 N force on outside of conductive enclosure applied:			--			--

Location	Working Voltage		Clearance (mm)		Creepage (mm)	
	V rms	V peak	Min	Actual	Min	Actual
Primary trace to secondary trace	420	250	4.0	See below	5.0	See below
N to C26				7.2		7.2
Primary component (10N) to secondary component	420	250	4.0	See below	5.0	See below
L/N to metal chassis				7.0		7.0

Supplementary information:

1) Functional insulation shorted, see 5.3.4.

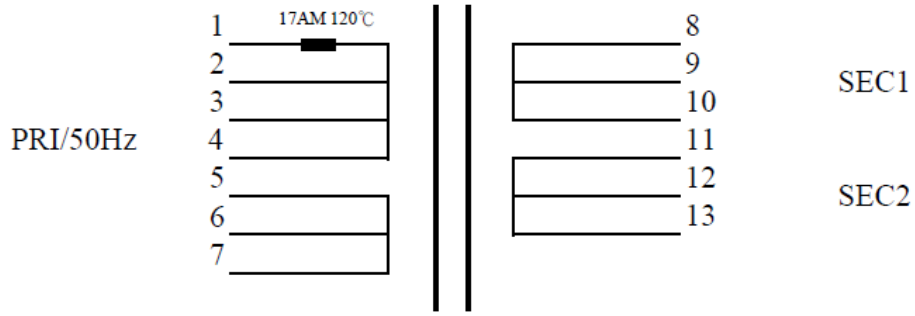
IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

	TABLE: transformers						P
Loc.	Tested insulation	Working voltage peak / V	Working voltage rms / V	Required electric strength	Required clearance / mm	Required creepage distance / mm	Required distance thr. insul.
Transformer	Primary / input winding and secondary / output winding (internal)	366	249	4240 Vdc	4.0	5.0	Min 2 layers,
Transformer	Secondary / output winding and core (internal)	366	249	4240 Vdc	4.0	5.0	Min 2 layers,
Transformer	Secondary / output part and core (external)	366	249	4240 Vdc	4.0	5.0	Min 2 layers,
Transformer	Primary / input part and Secondary / output winding (external)	366	249	4240 Vdc	4.0	5.0	Min 2 layers,
Transformer	Primary / input part and Secondary / output part (external)	366	249	4240 Vdc	4.0	5.0	Min 2 layers,
Loc.	Tested insulation			Test voltage/ V	Measured clearance / mm	Measured creepage dist./ mm	Measured distance thr. insul. / mm; number of layers
Transformer	Primary / input winding and secondary / output winding (internal)			4240 Vdc	7.0	7.0	Min 2 layers,
Transformer	Secondary / output winding and core (internal)			4240 Vdc	7.0	7.0	Min 2 layers,
Transformer	Secondary / output part and core (external)			4240 Vdc	16.0	16.0	Min 2 layers,
Transformer	Primary / input winding and Secondary / output part (external)			4240 Vdc	16.0	16.0	Min 2 layers,
Transformer	Primary / input part and Secondary / output part (external)			4240 Vdc	16.0	16.0	Min 2 layers,

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

Transformer:

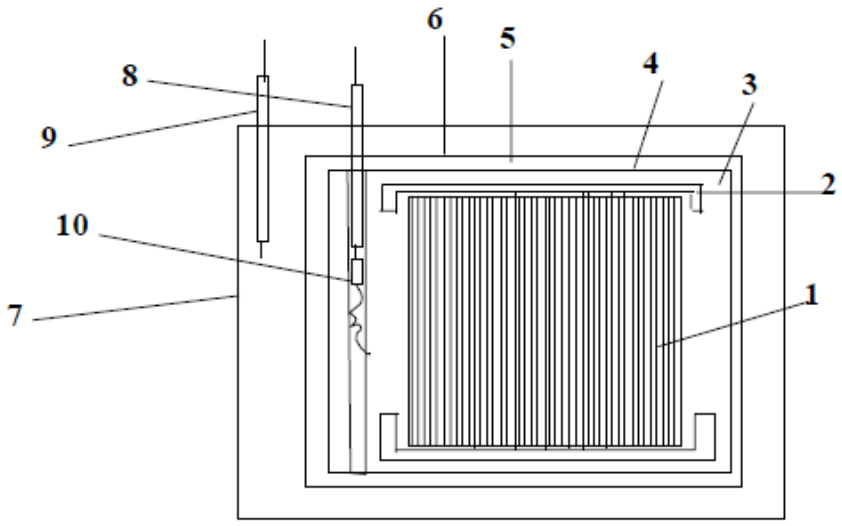
A. LINE DIAGRAM



B. VOLTAGE TABLE

PRIMARY	VOLTAGE	1 - 4 T.S-0-110V-120V φ0.75 358T+32T 5 - 7 0-110V-120V φ0.75 358T+32T	50Hz
	EXCITING CURRENT LESS THAN 50mA		
SECONDARY	NO LOAD VOLTAGE ± 2 %		FULL LOAD VOLTAGE ± 2 %
	1. 20.8V — 0 — 20.8V φ1.1 68T		19.7V — 0 — 19.7V AC:3.0A
	2. 12.9V — 0 — 12.9V φ1.2×2 42T		12.2V — 0 — 12.2V AC:7.9A

C. LEAD TABLE



IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

14	TABLE: list of critical components and materials				
Object / part No.	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Power switch	CHILY PRECISION INDUSTRIAL CO LTD	8212 series	250Vac/10A	IEC/EN 61058-1	UL, ENEC
	Teikoku Tsushin Kogyo Co. Ltd.	U1D1	250Vac/8A	IEC/EN 61058-1	UL, ENEC
PWB	Interchangeable	Interchangeable	V-0 or better, min. 105°C	UL 796	UL
Metal enclosure	Interchangeable	Interchangeable	Metallic, Min. thickness: 1.0 mm	--	--
EMI filter with fuse holder	YUNPEN ELECTRONIC CO LTD	YL10T1	Rated 10A, 250V (CX at 0.1uF, CY at 3300 pF x2)	IEC/EN 133200, UL 1283	UL, VDE
	HIGH & LOW CORP	10SS3-1BR-Q	Rated 10A, 250V (CX at 0.1uF, CY at 3300 pF x2, R at 1M ohm.)	IEC/EN 60939-2, UL 1283	UL, VDE
- Fuse	Conquer	UTE	T2.5AL, 250V	IEC/EN 60127-2, UL248-1	VDE, UL
	Conquer	UDL	T2.5AE, 250V	IEC/EN 60127-2, UL248-1	VDE, UL
Bleeder Resistor (R16)	--	--	1M ohm, 0.5W	--	--
Y-Capacitor (CS01) (Optional)	WALSIN	AC	Max. 4700pF, min. 250V, 125°C	IEC 60384-14:2005, UL 60384-14	VDE, UL
DC FAN	ADDA CORP	AD1212LB-A70GL	12 Vdc, 0.24 A, 71.806 CFM	UL 507, IEC/EN 60950-1:2006+A11+A1+A12	UL, TUV
Transformer	WEBB Electric Co.	29-2217*A-UN	Class (A)	--	--
- Thermostat	Sensata Technologies	17AM	Rated 10A, 250V, 120°C	IEC/EN 60730, UL 2353	VDE, UL
Fuse (FS1, FS2)	Conquer	UDL	T6.3AL, 250V	IEC/EN 60127-2, UL248-1	VDE, UL
	Conquer	UTE	T6.3AL, 250V	IEC/EN 60127-2, UL248-1	VDE, UL
Fuse (FS3, FS4)	Conquer	UTE	T8AL, 250V	IEC/EN 60127-2, UL248-1	VDE, UL

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity[1)]

Supplementary information:

[1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039.

Remarks

Supplementary test results for subclause 9.1.1 and 11.1

9.1.1	TABLE: Touch Current under normal condition					P
Accessible prat:	Polarity of supply	Uoc (V)	U1 (V)	Limit U1	U2 (V)	Limit U2
switch on						
SELV	Normal	190	0.74	35	0.048	0.35
	Reverse	188	0.78	35	0.046	0.35
Earth (metal enclosure)	Normal	186	0.54	35	0.294	0.35
	Reverse	186	0.61	35	0.3	0.35
switch off						
SELV	Normal	172	0.52	35	0.056	0.35
	Reverse	204	0.52	35	0.052	0.35
Earth (metal enclosure)	Normal	174	0.56	35	0.288	0.35
	Reverse	202	0.584	35	0.336	0.35

Supplementary information:

(1) the touch current is measured according to 9.1.1 b) with the test circuit of Annex D connected between the specified points. Input 253V/50Hz.

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

11.1	TABLE: Electric shock hazard under abnormal condition					P
Accessible prat:	Polarity of supply	Uoc (V)	U1 (V)	Limit U1	U2 (V)	Limit U2
switch on						
SELV - for component damaged condition, see Fault Conditions Test TABLE 11.2 test results.	Normal	182	1.16	70	0.092	1.4
	Reverse	178	1.17	70	0.102	1.4
Earth (metal enclosure)- for shutdown condition, see Fault Conditions Test TABLE 11.2 test results.	Normal	182	1.12	70	0.102	1.4
	Reverse	178	1.18	70	0.102	1.4
switch off						
SELV - for component damaged condition, see Fault Conditions Test TABLE 11.2 test results.	Normal	167	0.52	70	0.048	1.4
	Reverse	204	0.5	70	0.048	1.4
Earth (metal enclosure)- for component damaged condition, see Fault Conditions Test TABLE 11.2 test results.	Normal	174	0.54	70	0.268	1.4
	Reverse	204	0.56	70	0.324	1.4
Supplementary information: (1) the touch current is measured according to 9.1.1 b) with the test circuit of Annex D connected between the specified points. Input 253V/50Hz.						

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

11.1	TABLE: Electric shock hazard under abnormal condition					P
Accessible prat:	Polarity of supply	Uoc (V)	U1 (V)	Limit U1	U2 (V)	Limit U2
switch on						
SELV - for fuse opened condition, see Fault Conditions Test TABLE 11.2 test results.	Normal	7.12	0.72	70	0.056	1.4
	Reverse	358	0.48	70	0.052	1.4
Earth - for fuse opened condition, see Fault Conditions Test TABLE 11.2 test results.	Normal	6.44	1.21	70	0.548	1.4
	Reverse	358	0.22	70	0.064	1.4
switch off						
SELV - for fuse opened condition, see Fault Conditions Test TABLE 11.2 test results.	Normal	5.6	0.48	70	0.04	1.4
	Reverse	360	0.452	70	0.042	1.4
Earth - for fuse opened condition, see Fault Conditions Test TABLE 11.2 test results.	Normal	5.32	0.24	70	0.048	1.4
	Reverse	360	1.25	70	0.548	1.4
Supplementary information: (1) the touch current is measured according to 9.1.1 b) with the test circuit of Annex D connected between the specified points. Input 253V/50Hz.						

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

Remarks

Supplementary test results for subclause 13.2

13.2	Table: Operating voltage measurement		P
Location	RMS voltage (V)	Peak voltage (V)	Comments
Transformer Pin P1 to Pin AC1, AC6	229	338	
Transformer Pin P1 to Pin AC2	209	310	
Transformer Pin P1 to Pin AC3	249	366	
Transformer Pin P1 to Pin AC4	216	320	
Transformer Pin P1 to Pin AC5	242	356	
Transformer Pin P2 to Pin AC1, AC6	229	340	
Transformer Pin P2 to Pin AC2	209	312	
Transformer Pin P2 to Pin AC3	**249**	**366**	*
Transformer Pin P2 to Pin AC4	216	324	
Transformer Pin P2 to Pin AC5	242	354	
Transformer Pin P3 to Pin AC1, AC6	119	184	
Transformer Pin P3 to Pin AC2	99.2	156	
Transformer Pin P3 to Pin AC3	140	212	
Transformer Pin P3 to Pin AC4	107	166	
Transformer Pin P3 to Pin AC5	132	200	
Transformer Pin P4, P5 to Pin AC1, AC6	110	170	
Transformer Pin P4, P5 to Pin AC2	89.5	144	
Transformer Pin P4, P5 to Pin AC3	130	198	
Transformer Pin P4, P5 to Pin AC4	97.1	152	
Transformer Pin P4, P5 to Pin AC5	122	190	
Transformer Pin P6 to Pin AC1, AC6	0.24	0.97	
Transformer Pin P6 to Pin AC2	20.2	28.6	
Transformer Pin P6 to Pin AC3	55.9	85	
Transformer Pin P6 to Pin AC4	12.6	18.8	
Transformer Pin P6 to Pin AC5	12.7	18.8	
supplementary information: Test Voltage: 253Vac, 50Hz.			

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

Remarks

Supplementary test results for subclause 13.2

13.2	Table: Operating voltage measurement		P
Location	RMS voltage (V)	Peak voltage (V)	Comments
Transformer Pin P7 to Pin AC1, AC6	9.63	43.2	
Transformer Pin P7 to Pin AC2	30.0	43.2	
Transformer Pin P7 to Pin AC3	10.6	15.2	
Transformer Pin P7 to Pin AC4	22.3	32.2	
Transformer Pin P7 to Pin AC5	9.63	14.1	
supplementary information: Test Voltage: 253Vac, 50Hz.			

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60065
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

AUDIO, VIDEO AND SIMILAR ELECTRONIC APPARATUS – SAFETY REQUIREMENTS

Differences according to ..... :	EN 60065:2002 + A1:2006 + A11:2008 + A2:2010
Attachment Form No. ..... :	EU_GD_IEC60065K
Attachment Originator..... :	Intertek Semko AB
Master Attachment ..... :	Date (2011-09)

	IEC 60065, GROUP DIFFERENCES (CENELEC common modifications (EN))		**P**
Clause	Requirement + Test	Result - Remark	Verdict
Contents	**Add** the following annexes: **Annex ZA** (normative) Other international publications quoted in this standard with the references of the relevant European publications (See the CB Bulletin) **Annex ZB** (nominative) Special national conditions **Annex ZC** (informative) A-deviations		—
Definition 2.2.Z1 (A11:2008)	**Add** after the definition 2.2.12 the following new definition: **PORTABLE SOUND SYSTEM** small battery powered audio equipment: • whose prime purpose is to listen to recorded or broadcasted 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-disc or CD players, MP3 audio players or similar equipment.		—
3.1	**Add** the following indent at the end of the list - Exposure to excessive sound pressures from headphones or earphones NOTE A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment – Maximum sound pressure level measurement methodology and limit considerations – Part 1: General method for ”one package equipment”, and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment – Maximum sound pressure level measurement methodology and limit considerations – Part 2: Guidelines to associate sets with headphones coming from different manufacturers.		—

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
3.Z1 (A2:2010)	After 3.2 **add** a new clause 3.Z1: To protect against excessive current, short-circuits and earth faults in MAINS, 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 of 11 shall be included as parts of the equipment; b) for components in series or parallel 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 equipment supplied via an industrial mains plug or for PERMANENTLY CONNECTED APPARATUS, to rely on dedicated over current 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 not via an industrial mains plug or for PERMANENTLY CONNECTED APPARATUS the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		N/A
4.1.1	**Replace** the text of the note by: NOTE For ROUTINE TEST reference is made to EN 50333.		—
5.4.1 za) (A11:2008)	**Modify** indent za) as follows: za) For a PORTABLE SOUND SYSTEM, a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
6.1 (A11:2008)	**Replace** the entire subclause in EN 60065:2002 and EN 60065:2002/A1:2006 by: **Ionizing radiation** Apparatus including a potential source of ionizing radiation shall be so constructed that personal protection against ionizing radiation is provided under normal operating conditions and under fault conditions. *Compliance is checked by measurement under the following conditions*: *In addition to the normal operating conditions, all controls adjustable from the outside BY HAND, by any object such as a tool or a coin, and those internal adjustments or pre-sets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.* NOTE 1 Soldered joints and paint lockings are examples of adequate locking. *The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.* *Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.* *The dose-rate shall not exceed 1μSv/h (0,1 mR/h) taking account of the background level.* NOTE 2 These values appear in Directive 96/29/Euratom of 13th May 1996. *A picture is considered to be intelligible if the following conditions are met*: *- a scanning amplitude of at least 70 % of the usable screen width;* *- a minimum luminance of 50 cd/m² with locked blank raster provided by a test generator;* *- a horizontal resolution corresponding to at least 1,5 MHz in the centre, with a similar vertical degradation;* *- not more than one flashover per 5 min.*		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
Z1 (A11:2008)	**Add** the following new clause after Clause 20: **Z1 Resistance to candle flame ignition** A television set shall be so designed that the likelihood of ignition and the spread of fire caused by a candle flame is reduced. NOTE 1 An apparatus with a viewing screen is not regarded to be a television set if it is declared not to be so by the manufacturer. This requirement does not apply to the display screen of rear projection TV's. NOTE 2 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. NOTE 3 The frame around the screen is not exempted from the requirements. Wood and WOOD-BASED MATERIAL with a thickness of at least 6 mm is considered to fulfil the V-1 requirement when applying CLC/TS 62441. *Compliance is checked according to CLC/TS 62441.* NOTE 4 The term vertical, as used in the first dash of clause 5.2 of CLC/TS 62441, does not mean a perfectly vertical position. It should be interpreted as any surface that can be touched by the flame of a candle of 150 mm height and 20mm diameter while the candle is still touching the supporting surface. A typical candle used in the home is assumed to be 20 mm diameter. NOTE 5 It is expected that CLC/TS 62441 will in the future be replaced by a standard, at which time that standard will become applicable, subject to a vote by National Committees at the time.		N/A
General	13.3.1 **Delete** note 4. 14 **Delete** note 4 and note 5. 15.1.1 **Delete** notes 1 and 2. 15.2 **Delete** note 2. 16.1 **Delete** note 1. 16.2 **Delete** the note. 20 **Delete** note 2. Annex B **Replace** note 1 by: In the CENELEC countries listed in IEC 62151, special national conditions apply. Annex G **Delete** the note. Annex J.2 **Delete** the notes of Table J.1. Annex N **Add** after the introduction: For ROUTINE TEST reference is made to		—

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	EN 50333.		
General (A2:2010)	In IEC 60065:2001/A2 **Delete** all the “country” notes according to the following list: 5.3 Note 5.4.1 Note 20 Note For special national conditions, see Annex ZB.		—
Bibliography	Additional EN standards.		—

ZA	**Normative references to international publications with their corresponding European publications**	P

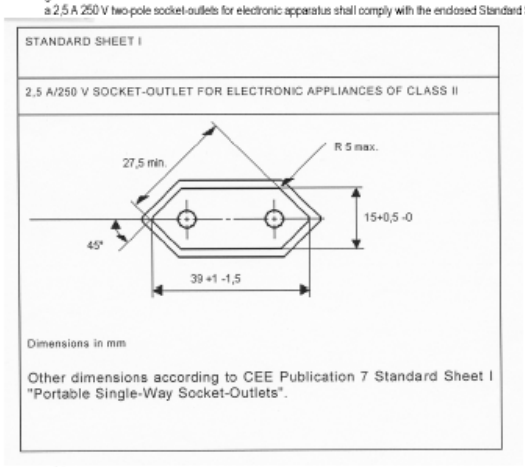
ZB	ANNEX ZB TO EN 60065, SPECIAL NATIONAL CONDITIONS (EN)		P
2.6.1	DK: The following is **added**: Certain types of CLASS I apparatus, see 15.1.1, may be provided with a plug not establishing earthing continuity when inserted in Danish socket-outlets J*ustification:* Heavy Current Regulations, Section 107.		N/A
3.Z1 (A2:2010)	**Denmark** **Add** to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. *Justification*: In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
5.3 (A2:2010)	**Finland, Norway and Sweden** To the end of the subclause the following is **added**: CLASS I apparatus which is intended for connection to the building installation wiring via a plug or an appliance coupler, or both and in addition is intended for connection to other apparatus 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 apparatus must be connected to an earthed MAINS socket-outlet. The marking text in the applicable countries shall be as follows: In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
5.4 (A11:2008)	**Finland, Norway and Sweden** To the end of 5.4 the following is **added**: CLASS I apparatus which is intended for connection to the building installation wiring via a plug or an appliance coupler, or both and in addition is intended for connection to other apparatus 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 apparatus must be connected to an MAINS socket-outlet with protective earth. The marking text in the applicable countries shall be as follows: In Finland: “Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan” In Norway: “Apparatet må tilkoples jordet stikkontakt” In Sweden: "Apparaten skall anslutas till jordat uttag"		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.1 (A11:2008)	**Norway and Sweden** To the end of 5.4.1 (after the compliance statement) the following is **added**: 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 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.” 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.”		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
13.3.1	NO: To the second paragraph the following is **added:** In Norway, due to the IT power distribution system used, the a.c. MAINS supply voltage is considered to be equal to the line-to-line voltage, and will remain 230 V in case of a single earth fault. J*ustification:* Based on a use in Norway of an IT power distribution system where the neutral is not provided.		N/A
15.1.1 (A11:2008)	**Denmark** The text of the Danish SNC in EN 60065:2002 has been **modified** as follows: To the first paragraph the following is added: In Denmark, supply cords of single-phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations Section 107-2-D1. Appliances of CLASS I 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 the Heavy Current Regulations, Section 107-2-D1 standard sheet DK 2-1a. To the second paragraph the following is added: Socket outlets intended for providing power to CLASS II apparatus with a rated current of 2,5 A shall be in accordance with the Heavy Current Regulation, Section 107-2-D1 standard sheet DKA 1-4a. Other current ratings socket outlets shall be in compliance with the Heavy Current Regulation, Section 107-2-D1 standard sheet DKA 1-3a or DKA 1-3b. To the third paragraph the following is added: Mains socket-outlets with earthing contact shall be in compliance with the Heavy Current Regulation, Section 107-2-D1 standard sheet DK 1-3a, DK 1-5a or DK 1-7a. Justification: Heavy Current Regulations, Section 107-2-D1		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
15.1.1	IE: Apparatus which is fitted with a flexible cable or cord shall be provided with a 13 A plug in accordance with Statutory Instrument 525:97, “13 A Plugs and Conversion Adapters for Domestic Use Regulations:1997. *Justification:* SI 525: 1997		N/A
15.1.1	NO: Mains socket-outlets mounted on CLASS II apparatus shall comply with the specifications given in CEE Publ. 7 as far as a applicable, with the following amendments: § 8 Dimensions a 2.5 A 250 V two-pole socket-outlets for electronic apparatus shall comply with the enclosed Standard Sheet I. Mains socket-outlets mounted on CLASS II apparatus shall comply with the specifications given in CEE Publ. 7 as fas as a Applicable, with the following amendments: § 8 Dimensions a 2,5 A 250 V two-pole socket-outlets for electronic apparatus shall comply with the enclosed Standard Sheet I.  § 24 Mechanical strength a 2,5 A, 250 V socket-outlets for CLASS II electronic apparatus are tested as specified in 12.1.3 of EN 60065. Also the protecting rim shall be tested. § 24 Mechanical strength A 2,5 A 250 V socket-outlets for CLASS II electronic apparatus are tested as specified in 12.1.3 of EN 60065. Also the protecting rim shall be tested *Justification:* Act of 24 May 1929 relating to supervision of electrical installation (TEA 1929/FEL 1998).		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
15.1.1	UK: 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 1768: 1994: The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those Regulations. NOTE ”Standard plug” is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug. *Justification*: SI 1768: 1994		N/A
J.2	NO: After Table J.1 the following is added: In Norway, due to the IT power distribution system used, the a.c. MAINS supply voltage is considered to be equal to the line-to-line voltage, and will remain 230 V in case of a single earth fault. *Justification*: Based on a use in Norway of an IT power distribution system where the neutral is not provided.	Consider	P

ZC	ANNEX ZC TO EN 60065, A-DEVIATIONS (EN)		P
5.1	IT: Additional markings on the outside of the TV receiver in Italian language		N/A
	IT:User instructions in Italian language including a conformity declaration		N/A
	IT: Certification number on the back cover		N/A
6.1	DE: The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking. *Justification*: German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM. NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int+49-531-592-6320, Internet: http://www.ptb.de		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14	SE: Switches containing mercury such as thermostats, relays and level controllers are not allowed. *Justification*: Ordinance (1990:944) on Prohibition in Connection with handling. Importation and exportation of Chemical Products (Certain Cases)		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60065 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES AUDIO, VIDEO AND SIMILAR ELECTRONIC APPARATUS – SAFETY REQUIREMENTS	
Differences according to ..... :	EN 60065:2002 + A1:2006 + A11:2008 + A2:2010 + A12:2011
Attachment Form No. ..... :	EU_GD_IEC60065K_II
Attachment Originator..... :	Intertek Semko AB
Master Attachment ..... :	Date (2011-09)

	IEC 60065, GROUP DIFFERENCES (CENELEC common modifications (EN))		**P**
Clause	Requirement + Test	Result - Remark	Verdict
Contents	**Add** the following annexes: **Annex ZA** (normative) Other international publications quoted in this standard with the references of the relevant European publications (See the CB Bulletin) **Annex ZB** (nominative) Special national conditions **Annex ZC** (informative) A-deviations		P
Definition 2.2.Z1 (A11:2008)	**Add** after the definition 2.2.12 the following new definition: **PORTABLE SOUND SYSTEM** small battery powered audio equipment: • whose prime purpose is to listen to recorded or broadcasted 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-disc or CD players, MP3 audio players or similar equipment.		N/A
2.2 (A12:2011)	In EN 60065:2002/A11:2008 Delete the definition 2.2.Z1		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
3.1	**Add** the following indent at the end of the list - Exposure to excessive sound pressures from headphones or earphones NOTE A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment – Maximum sound pressure level measurement methodology and limit considerations – Part 1: General method for ”one package equipment”, and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment – Maximum sound pressure level measurement methodology and limit considerations – Part 2: Guidelines to associate sets with headphones coming from different manufacturers.		N/A
3.1 (A12:2011)	In EN 60065:2002 Delete the addition of indent regarding sound pressure excessive		N/A
3.Z1 (A2:2010)	After 3.2 **add** a new clause 3.Z1: To protect against excessive current, short-circuits and earth faults in MAINS, 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 of 11 shall be included as parts of the equipment; b) for components in series or parallel 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 equipment supplied via an industrial mains plug or for PERMANENTLY CONNECTED APPARATUS, to rely on dedicated over current 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 not via an industrial mains plug or for PERMANENTLY CONNECTED APPARATUS the building installation shall be		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	regarded as providing protection in accordance with the rating of the wall socket outlet.		
4.1.1	**Replace** the text of the note by: NOTE For ROUTINE TEST reference is made to EN 50514.		N/A
5.4.1 za) (A11:2008)	**Modify** indent za) as follows: za) For a PORTABLE SOUND SYSTEM, a warning that excessive sound pressure from earphones and headphones can cause hearing loss.		N/A
5.4.1 (A12:2011)	In EN 60065:2002/A1:2006 and EN 60065;2002/A11:2008 Delete the modification in indent za) Add the following clause and annex to the excisting standard and amendments		N/A
	Zx Protection against excessive sound pressure from personal music players		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	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 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 71-1 apply.		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
Cont.	**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 $L_{Aeq,T}$ 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 $L_{Aeq,T}$ 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 ncreased 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 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.		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	For music where the average sound pressure (long term $L_{Aeq,T}$) 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 $L_{Aeq,T}$) 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.		N/A
	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 with a minimum height of 5 mm; and the following wording, or similar: "To prevent possible hearing damage, do not listen at high volume levels for long periods."  **Figure 1 – Warning label (IEC 60417-6044)** 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.		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
Cont.	**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 $L_{Aeq,T}$, 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 $L_{Aeq,T}$ 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

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
.	**Zx.4.3 Wireless listening devices** In wireless mode: 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 above-mentioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.		N/A
	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

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
6.1 (A11:2008)	**Replace** the entire subclause in EN 60065:2002 and EN 60065:2002/A1:2006 by: **Ionizing radiation** Apparatus including a potential source of ionizing radiation shall be so constructed that personal protection against ionizing radiation is provided under normal operating conditions and under fault conditions. *Compliance is checked by measurement under the following conditions*: *In addition to the normal operating conditions, all controls adjustable from the outside BY HAND, by any object such as a tool or a coin, and those internal adjustments or pre-sets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.* NOTE 1 Soldered joints and paint lockings are examples of adequate locking. *The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.* *Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.* *The dose-rate shall not exceed 1μSv/h (0,1 mR/h) taking account of the background level.* NOTE 2 These values appear in Directive 96/29/Euratom of 13th May 1996. *A picture is considered to be intelligible if the following conditions are met*: *- a scanning amplitude of at least 70 % of the usable screen width;* *- a minimum luminance of 50 cd/m² with locked blank raster provided by a test generator;* *- a horizontal resolution corresponding to at least 1,5 MHz in the centre, with a similar vertical degradation;* *- not more than one flashover per 5 min.*		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
Z1 (A11:2008)	**Add** the following new clause after Clause 20: **Z1 Resistance to candle flame ignition** A television set shall be so designed that the likelihood of ignition and the spread of fire caused by a candle flame is reduced. NOTE 1 An apparatus with a viewing screen is not regarded to be a television set if it is declared not to be so by the manufacturer. This requirement does not apply to the display screen of rear projection TV's. NOTE 2 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. NOTE 3 The frame around the screen is not exempted from the requirements. Wood and WOOD-BASED MATERIAL with a thickness of at least 6 mm is considered to fulfil the V-1 requirement when applying CLC/TS 62441. *Compliance is checked according to CLC/TS 62441.* NOTE 4 The term vertical, as used in the first dash of clause 5.2 of CLC/TS 62441, does not mean a perfectly vertical position. It should be interpreted as any surface that can be touched by the flame of a candle of 150 mm height and 20mm diameter while the candle is still touching the supporting surface. A typical candle used in the home is assumed to be 20 mm diameter. NOTE 5 It is expected that CLC/TS 62441 will in the future be replaced by a standard, at which time that standard will become applicable, subject to a vote by National Committees at the time.		N/A
General	13.3.1 **Delete** note 4. 14 **Delete** note 4 and note 5. 15.1.1 **Delete** notes 1 and 2. 15.2 **Delete** note 2. 16.1 **Delete** note 1. 16.2 **Delete** the note. 20 **Delete** note 2. Annex B **Replace** note 1 by: In the CENELEC countries listed in IEC 62151, special national conditions apply. Annex G **Delete** the note. Annex J.2 **Delete** the notes of Table J.1. Annex N **Add** after the introduction: For ROUTINE TEST reference is made to		**P**

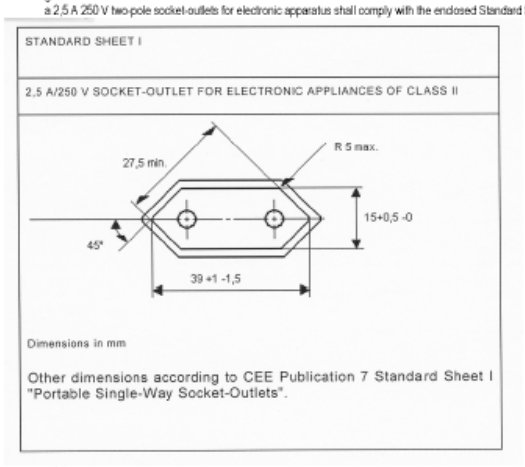
IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	EN 50333. (Replaced by EN 50514)		
General (A2:2010)	In IEC 60065:2001/A2 **Delete** all the "country" notes according to the following list: 5.3 Note 5.4.1 Note 20 Note For special national conditions, see Annex ZB.		**P**
Bibliography	Additional EN standards.		**p**
ZA	**Normative references to international publications with their corresponding European publications**		**P**
ZB	**ANNEX ZB TO EN 60065, SPECIAL NATIONAL CONDITIONS (EN)**		
2.6.1	DK: The following is **added**: Certain types of CLASS I apparatus, see 15.1.1, may be provided with a plug not establishing earthing continuity when inserted in Danish socket-outlets J*ustification:* Heavy Current Regulations, Section 107.	Considered.	P
3.Z1 (A2:2010)	**Denmark** **Add** to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. *Justification*: In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.	Considered.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
5.3 (A2:2010)	**Finland, Norway and Sweden** To the end of the subclause the following is **added**: CLASS I apparatus which is intended for connection to the building installation wiring via a plug or an appliance coupler, or both and in addition is intended for connection to other apparatus 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 apparatus must be connected to an earthed MAINS socket-outlet. The marking text in the applicable countries shall be as follows: In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
5.4 (A11:2008)	**Finland, Norway and Sweden** To the end of 5.4 the following is **added**: CLASS I apparatus which is intended for connection to the building installation wiring via a plug or an appliance coupler, or both and in addition is intended for connection to other apparatus 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 apparatus must be connected to an MAINS socket-outlet with protective earth. The marking text in the applicable countries shall be as follows: In Finland: “Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan” In Norway: “Apparatet må tilkoples jordet stikkontakt” In Sweden: "Apparaten skall anslutas till jordat uttag"		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.1 (A11:2008)	**Norway and Sweden** To the end of 5.4.1 (after the compliance statement) the following is **added**: 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 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.” 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.”		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
13.3.1	NO: To the second paragraph the following is **added:** In Norway, due to the IT power distribution system used, the a.c. MAINS supply voltage is considered to be equal to the line-to-line voltage, and will remain 230 V in case of a single earth fault. J*ustification:* Based on a use in Norway of an IT power distribution system where the neutral is not provided.	Considered.	P
15.1.1 (A11:2008)	**Denmark** The text of the Danish SNC in EN 60065:2002 has been **modified** as follows: To the first paragraph the following is added: In Denmark, supply cords of single-phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to the Heavy Current Regulations Section 107-2-D1. Appliances of CLASS I 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 the Heavy Current Regulations, Section 107-2-D1 standard sheet DK 2-1a. To the second paragraph the following is added: Socket outlets intended for providing power to CLASS II apparatus with a rated current of 2,5 A shall be in accordance with the Heavy Current Regulation, Section 107-2-D1 standard sheet DKA 1-4a. Other current ratings socket outlets shall be in compliance with the Heavy Current Regulation, Section 107-2-D1 standard sheet DKA 1-3a or DKA 1-3b. To the third paragraph the following is added: Mains socket-outlets with earthing contact shall be in compliance with the Heavy Current Regulation, Section 107-2-D1 standard sheet DK 1-3a, DK 1-5a or DK 1-7a. Justification: Heavy Current Regulations, Section 107-2-D1	Considered.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
15.1.1	IE: Apparatus which is fitted with a flexible cable or cord shall be provided with a 13 A plug in accordance with Statutory Instrument 525:97, “13 A Plugs and Conversion Adapters for Domestic Use Regulations:1997. *Justification:* SI 525: 1997		N/A
15.1.1	NO: Mains socket-outlets mounted on CLASS II apparatus shall comply with the specifications given in CEE Publ. 7 as far as a applicable, with the following amendments: § 8 Dimensions a 2.5 A 250 V two-pole socket-outlets for electronic apparatus shall comply with the enclosed Standard Sheet I. Mains socket-outlets mounted on CLASS II apparatus shall comply with the specifications given in CEE Publ. 7 as fas as a Applicable, with the following amendments: § 8 Dimensions a 2,5 A 250 V two-pole socket-outlets for electronic apparatus shall comply with the enclosed Standard Sheet I.  § 24 Mechanical strength a 2,5 A, 250 V socket-outlets for CLASS II electronic apparatus are tested as specified in 12.1.3 of EN 60065. Also the protecting rim shall be tested. § 24 Mechanical strength A 2,5 A 250 V socket-outlets for CLASS II electronic apparatus are tested as specified in 12.1.3 of EN 60065. Also the protecting rim shall be tested *Justification:* Act of 24 May 1929 relating to supervision of electrical installation (TEA 1929/FEL 1998).		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
15.1.1	UK: 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 1768: 1994: The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those Regulations. NOTE ”Standard plug” is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug. *Justification*: SI 1768: 1994	Considered.	P
J.2	NO: After Table J.1 the following is added: In Norway, due to the IT power distribution system used, the a.c. MAINS supply voltage is considered to be equal to the line-to-line voltage, and will remain 230 V in case of a single earth fault. *Justification*: Based on a use in Norway of an IT power distribution system where the neutral is not provided.	Considered.	P

ZC	ANNEX ZC TO EN 60065, A-DEVIATIONS (EN)		N/A
5.1	IT: Additional markings on the outside of the TV receiver in Italian language		N/A
	IT:User instructions in Italian language including a conformity declaration		N/A
	IT: Certification number on the back cover		N/A
6.1	DE: The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking. *Justification*: German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM. NOTE Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int+49-531-592-6320, Internet: http://www.ptb.de		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14	SE: Switches containing mercury such as thermostats, relays and level controllers are not allowed. *Justification*: Ordinance (1990:944) on Prohibition in Connection with handling. Importation and exportation of Chemical Products (Certain Cases)		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60065
SWEDEN NATIONAL DIFFERENCES
AUDIO, VIDEO AND SIMILAR ELECTRONIC APPARATUS – SAFETY REQUIREMENTS

Differences according ..... : SS-EN 60065, 3rd EDITION

Attachment Form No. ..... :
Attachment Form Originator ..... : TUV Rheinland Taiwan
Master Attachment Form ..... : IECEE CB Bulletin on 2011-04-19

Clause	Requirement + Test	Result - Remark	Verdict
Annex B	Replace NOTE 1 by In the CENELEC countries listed in IEC 62151, special national conditions apply. Add the following: All subclauses given below are subclauses of IEC 62151:2000 (ref. Corrigendum 1 and 2 to IEC 62151). Subclause 4.1.1 (Corrigendum 2): Add after the first paragraph: NOTE - In Sweden, CLASS I equipment which is intended for connection to the building installation via a non-industrial plug or a non-industrial appliance coupler, or both and in addition is 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 as follows: "Apparaten skall anslutas till jordat uttag” Subclause 5.3.1 (Corrigendum 1): Add after the first test specifications paragraph: NOTE 1 In Finland, Norway and Sweden, there are additional requirements for the insulation. Renumber the existing note as note 2. For additional requirements for the insulation in Sweden in the NOTE 1 the following text is added between the first and second paragraph (this text is identical to the text in EN 60950-1:2001):		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	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. If this insulation forms part of a semiconductor component (e.g. an optocoupler), 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 the accordance with the compliance clause below and in addition: - passes the test and inspection criteria of 13.6 with an electric strength test of 10.3 using the test voltage of 1,5 kV multiplied by 1,6, and - is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5 kV (for performance of the test see N.2.1). It is permitted to bridge this insulation with a capacitor complying with IEC 60384-14:1993, subclass Y2. A capacitor classified Y3 according to IEC 60384-14:1993, may bridge this insulation under the following conditions: - the insulation requirements are satisfied by having a capacitor classified Y3 as defined by IEC 60384-14, which in addition to the Y3 testing, is tested with an Impulse test of 2.5kV defined in IEC 62151, subclause 6.2.1; - the additional testing shall be performed on all the test specimens as described in IEC 60384-14; - the Impulse test of 2.5kV is to be performed before the Endurance Test in IEC 60384-14 in the sequence of tests as described in IEC 60384-14. Subclause 5.3.2 (Corrigendum 1): Add after the fourth dash: NOTE - In Sweden, exclusions are applicable for equipment which is intended for connection to the		

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	building installation wiring using screw terminals or other reliable means, and for equipment which is intended for connection to the building installation wiring via an industrial plug and socket -outlet or an appliance coupler, or both, complying with IEC 60309 or with a comparable national standard		

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 60065 DANISH NATIONAL DIFFERENCES AUDIO, VIDEO AND SIMILAR ELECTRONIC APPARATUS – SAFETY REQUIREMENTS	
Differences according to ..... :	National standard DS/EN 60065/A2: 2010
Attachment Form No. ..... :	DK_ND_IEC60065K
Attachment Originator..... :	UL International Demko A/S
Master Attachment ..... :	2011-03

	National Differences		P
General	The clause in this Attachment Form is an additional Danish difference which was introduced by EN 60065/A2: 2010. Please note that this Attachment Form does not cover the Common European Modifications (Group Differences) introduced by EN 60065/A2: 2010 why compliance with those modifications have to be documented elsewhere.		N/A

	Special national conditions (if any)		P
3.Z1	**Denmark** Add to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. Justification: In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse	Added. Should be evaluated during national approval.	N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	China - Differences to IEC 60065:2001 + Amd 1:2005 / EN 60065:2002		P
1.1.3	Amended the first paragraph: This standard applies to apparatus intended to be used basically at altitudes not exceeding 5000m, dry climate at warm temperate zone or tropical climates.	Considered.	P
	The fourth paragraph replaced by following: For apparatus intended to be used in vehicles, ships or aircraft, or at altitudes exceeding 5000m, additional requirements may be necessary.	Considered.	P
5	At the end of the first paragraph, added following: For apparatus intended to be used at altitude not exceeding 2000m, a warning label containing the following or a similar appropriate wording or a symbol as in annex R (see following) shall fixed to the equipment at readily visible place. "Only used at altitude not exceeding 2000m."  If only symbol used, the explanation of the symbol shall be contained in the instruction manual. For apparatus intended to be used in not-tropical climate regions, a warning label containing the following or a similar appropriate wording or a symbol as in annex R shall fixed to the equipment at readily visible place. "Only used in not-tropical climate regions."  If only symbol used, the explanation of the symbol shall be contained in the instruction manual. The statements above shall be given in a language acceptable to the regions where the apparatus is intended to be used.	Considered.	P
5.1 e)	After the last paragraph, added: …….For single rated voltage, “220V” or three-phase “380V” shall be marked only. For a rating range, 220V or three-phase 380V shall be covered. For multiple rated voltages, one of them shall be 220V or three-phase 380V and which default setting from manufacture shall be 220V or three-phase 380V as well.	Rated voltage 220-240V covered 220V.	P
5.1 f）	After the first sentence, Added: ……for Rated MAINS frequency or frequency range shall be 50Hz or covered 50Hz.	Rated frequency 50-60Hz covered 50Hz.	P

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
5.4	Replaced the second sentence of the first paragraph： This information shall be given in normative Chinese.	To be provided when national approve.	N/A
5.4.1i)	Added new paragraph i),after the h) paragraph: i) For apparatus incorporating antenna coaxial sockets witch is non-separated with CATV network, a warning wording or a similar shall be given in the instructions manual: “The CATV network connecting to this apparatus shall separate from protective earth, otherwise it may cause fire or other hazard.”		N/A
7, Table3	Note a) of table 3 replaced: This standard applies to apparatus intended to be used in tropical climates, permissible temperature rises are 10 K less than those specified in the table. For apparatus intended to be used in non-tropical climates the limits in Table 3 are satisfactory.	Considered.	P
7.1	Added Note 3: For apparatus intended to be operated at altitudes between 2000m and 5000m, temperature measuring conditions and maximum temperature limits are under consideration.	Considered.	P
9.1.1.1	Delete the note 3 and renumber the existing note 4 as 3.		N/A
9.1.1.1	After the paragraph of d), added a paragraph: For apparatus intended to be used in tropical climates, the limits should be halved than the values given in a) and b) above.	Considered.	P
10	Added a paragraph after the second paragraph: The Insulation resistance between CATV antenna coaxial sockets and protective earth of apparatus shall comply with BASIC INSULATION. If it’s possible that CLASS II apparatus with CATV antenna coaxial sockets connect with protective earth of another CLASS I apparatus by other terminals, the insulation resistance between them shall comply with BASIC INSULATION as well. Added Note: if antenna cable separated from the protective earth before connection to the apparatus, there is no requirements of Insulation resistance between them but 5.4.1i) requirements shall be meet.		N/A
10.1	Delete “on CLASS II apparatus” in the first paragraph.		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
10.2	Replaced the fifth to seventh paragraphs by the following: The humidity treatment is carried out in a chamber containing air with a relative humidity of 93%±3 %. For apparatus, temperature of 40℃±2℃ and a relative humidity of 93%±3% shall be subjected. Apparatus intended to be used in non-tropical climates are subjected to a relative humidity of 93%±3%. The temperature in the chamber, at all places where samples located, shall be maintained within 2℃of any convenient value between 20℃ and 30℃, as long as no condensation occur.	Considered.	P
	Added Note 4: For apparatus intended to be operated at altitudes between 2000m and 5000m, the requirements for treatment of the insulating material are under consideration.	Considered.	P
11.1	Delete note 2.		N/A
11.1	After the ninth paragraph added a paragraph: For apparatus intended to be used in tropical climates, halve the values given above.	Considered.	P
12.5	Amended the first paragraph: Antenna coaxial sockets to be mounted on the apparatus shall subject to mechanical stress caused in use, and the sockets incorporate with parts or components which isolated HAZARDOUS LIVE parts from ACCESSIBLE parts or protective earth from other terminals.		N/A
13.3.2 Table 8、Table 9、Table1 0	After the first paragraph, added a paragraph: The requirements apply to apparatus intended to be used at altitude not exceeding 2000m. For apparatus intended to be operated at altitudes between 2000m and 5000m, Minimum CLEARANCE limits shall multiply with multiplication factor 1.48 in table A.2 of GB/T 16935.1. For apparatus intended to be operated at altitude more than 5000m, Minimum CLEARANCES limit shall multiply with relevant multiplication factor in table A.2 of GB/T 16935.1.		N/A
	Bellow the headings of Table 8 Table 9 and Table 10, added: “（Applicable for altitude up to 2000m）”.	Considered.	P
	Amended Table 9 Note 2: For operating voltage values exceeding of table 8, extrapolation is permitted.		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
13.3.3	After the first paragraph, added a paragraph: The requirements in table 10 apply to apparatus intended to be used at altitude not exceeding 2000 m. For apparatus intended to be operated at altitudes between 2000m and 5000m, Minimum CLEARANCE limits shall multiply with multiplication factor 1.48 in table A.2 of GB/T 16935.1. For apparatus intended to be operated at altitude more than 5 000m, Minimum CLEARANCES limit shall multiply with corresponding multiplication factor in table A.2 of GB/T 16935.1.		N/A
15.1.1	After the first paragraph, added a paragraph: Plugs connected to the MAINS in apparatus shall comply with GB 1002 or GB 1003.	Considered.	N/A
18	Delete the first paragraph except the first sentence.		N/A
18.1	Replaced contents of two dashes in the fourth paragraph: ——for intrinsically protected tubes, including those having integral protective screens, compliance is checked according to GB27701. ——for tubes non-intrinsically protected checked by 18.2.		N/A
18.2	Delete clause 18.2 and renumber the existing clause 18.3 as 18.2.		N/A
Annex J.6	After the first paragraph, added a paragraph: For apparatus intended to be operated at altitudes between 2000m and 5000m, the Minimum CLEARANCES in table J.2 shall multiply with multiplication factor 1.48 in table A.2 of GB/T 16935.1. For apparatus intended to be operated at altitude more than 5000m, Minimum CLEARANCES shall multiply with corresponding multiplication factor in table A.2 of GB/T 16935.1.		N/A
	Delete note 3 of table J.6.		N/A

IEC 60065			
Clause	Requirement + Test	Result - Remark	Verdict
Annex R (normative)	Added annex R: Instructions for the new safety warning labels. R.1 Altitude warning label  Meaning of the label: Evaluation for apparatus only based on altitude not exceeding 2000m, therefor it's the only operating condition applied for the equipment. There may be some potential safety hazard if the equipment is used at altitude above 2000m . R.2 Climate warning label  Meaning of the label: Evaluation for apparatus only based on temperate climate condition, therefor it's the only operating condition applied for the equipment. There may be some potential safety hazard if the equipment is used in tropical climate region.		N/A
Annex S (informative)	Added annex S: Illustration relative to safety explanation in normative Chinese、Tibetan、Mongolian、Zhuang Language and Uighur.		N/A

APPENDIX No.1 Overall view (model : X86)

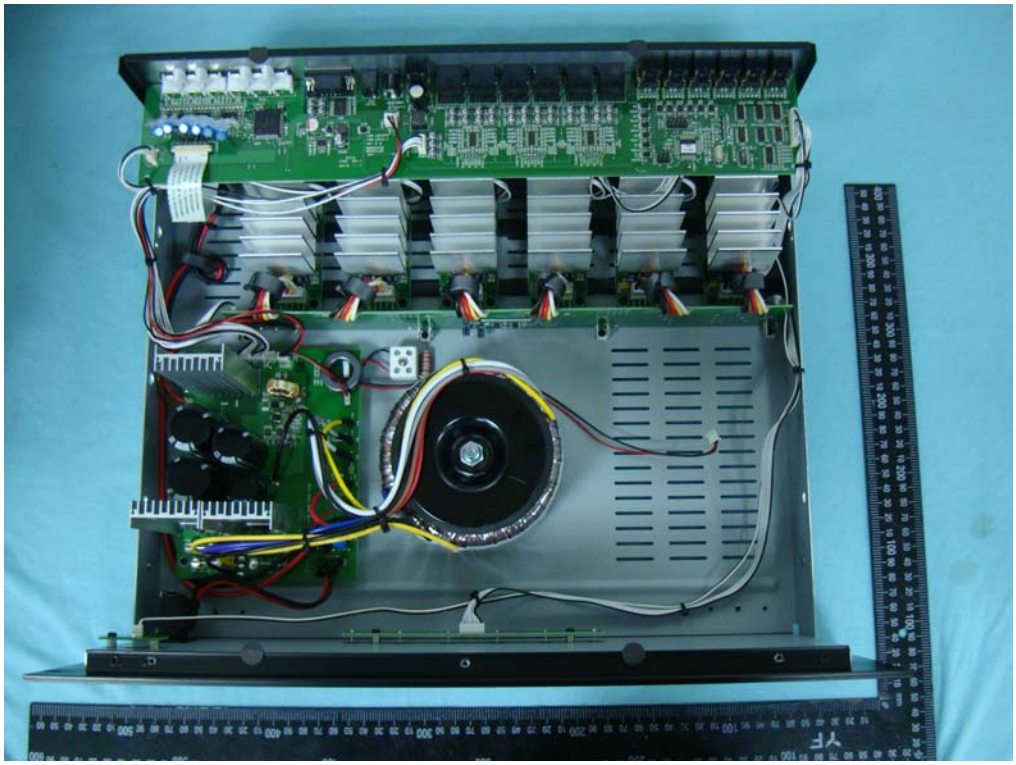
APPENDIX No.1 Overall view (model : X86i)

APPENDIX No.1 Overall view (model : X86)

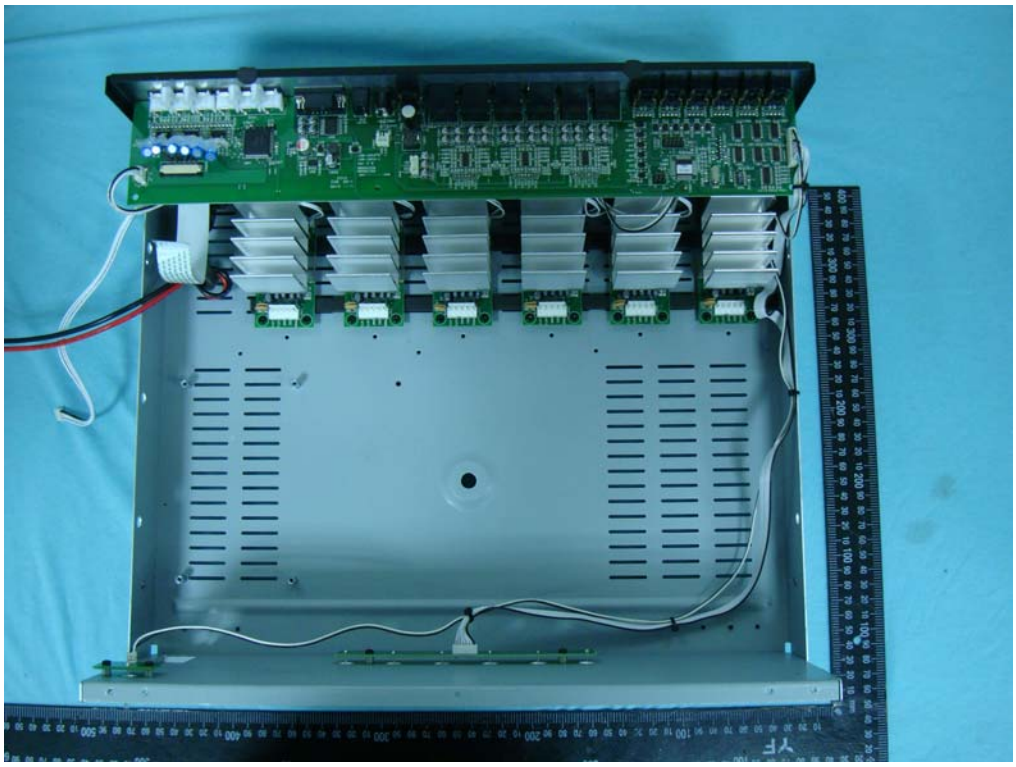
APPENDIX No.1 Overall view (model : X86i)

APPENDIX No.1 Connector view

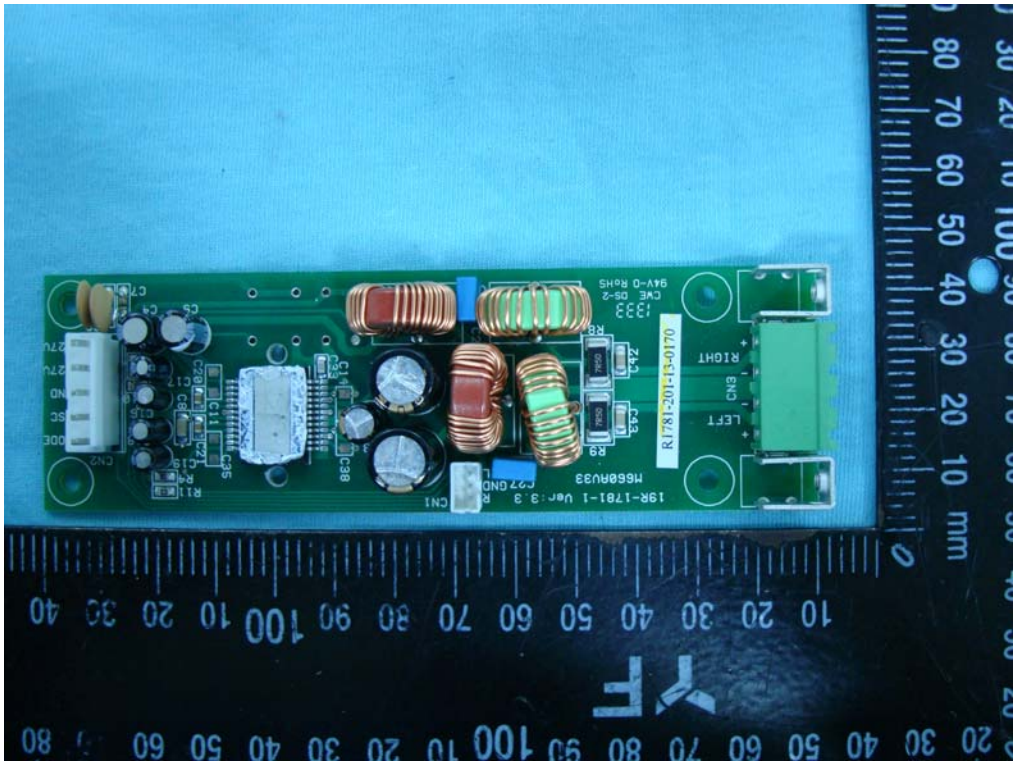
APPENDIX No.1 Internal view



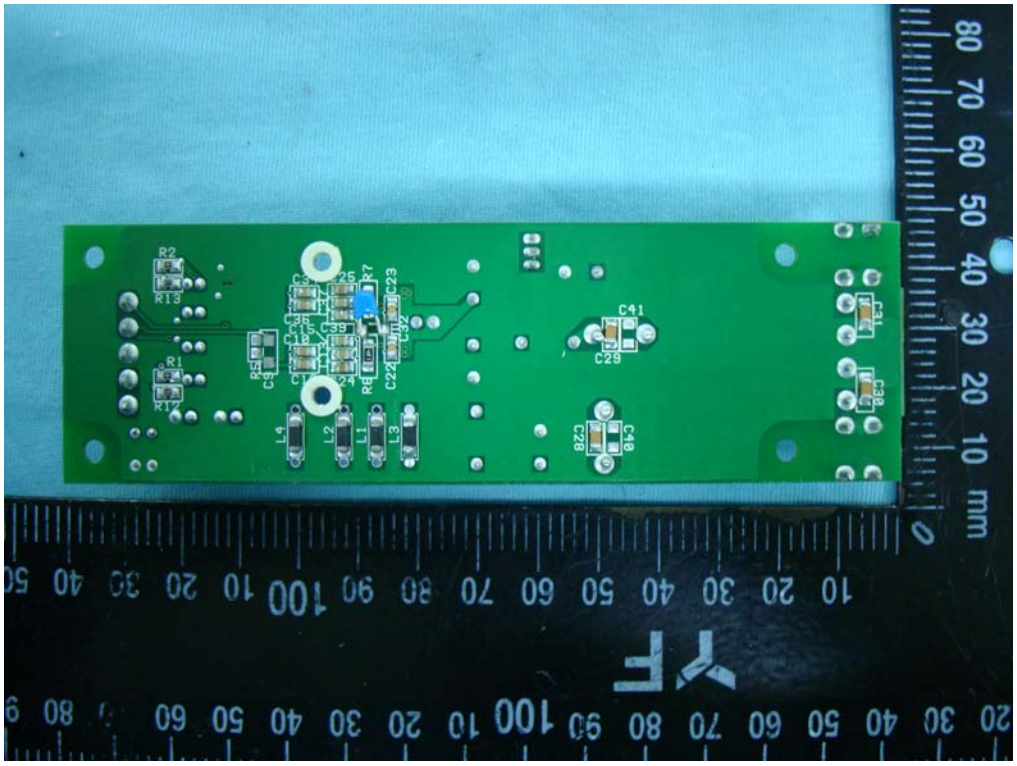
APPENDIX No.1 Internal view



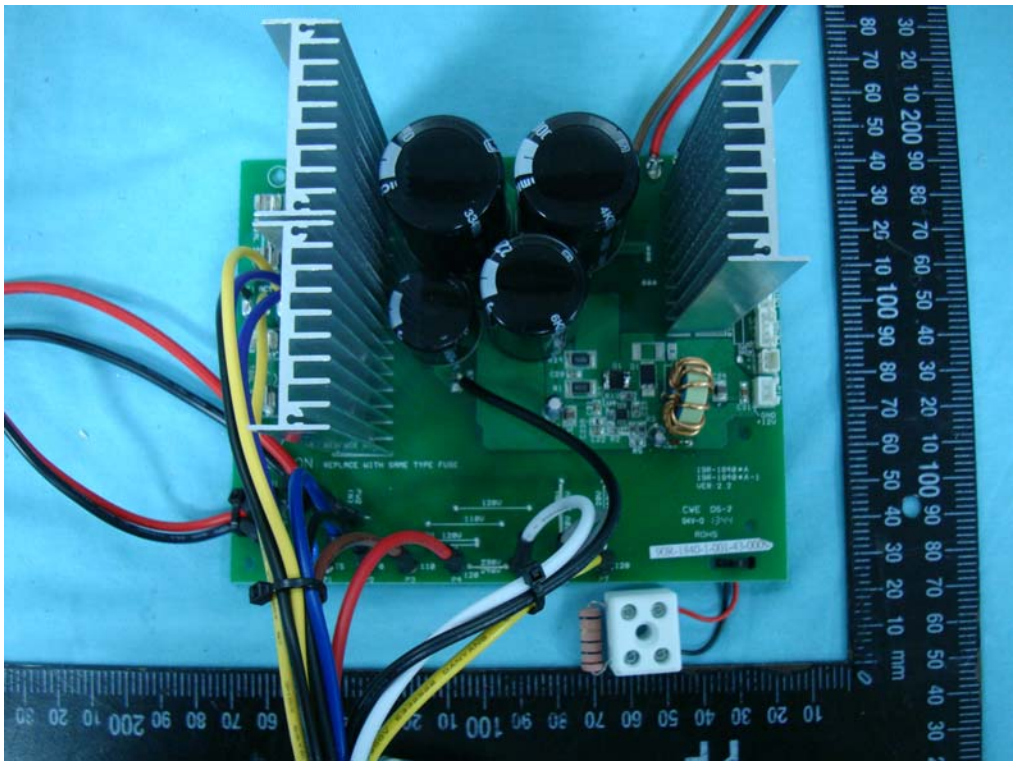
APPENDIX No.1 Photograph



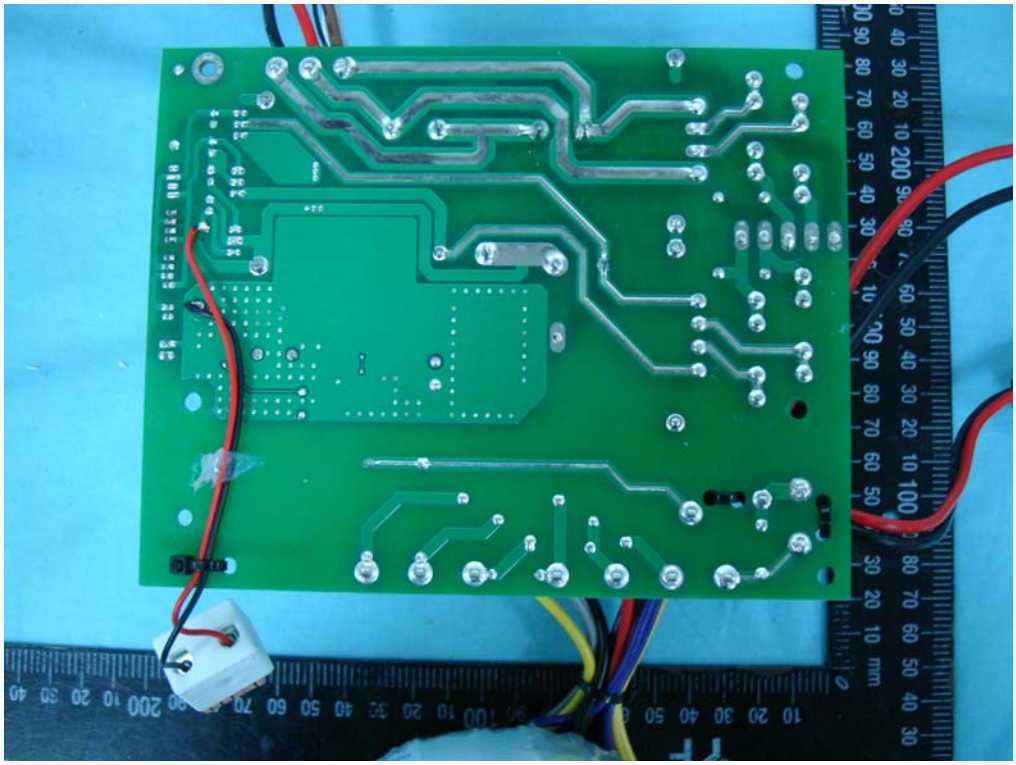
APPENDIX No.1 Photograph



APPENDIX No.1 Photograph



APPENDIX No.1 Photograph



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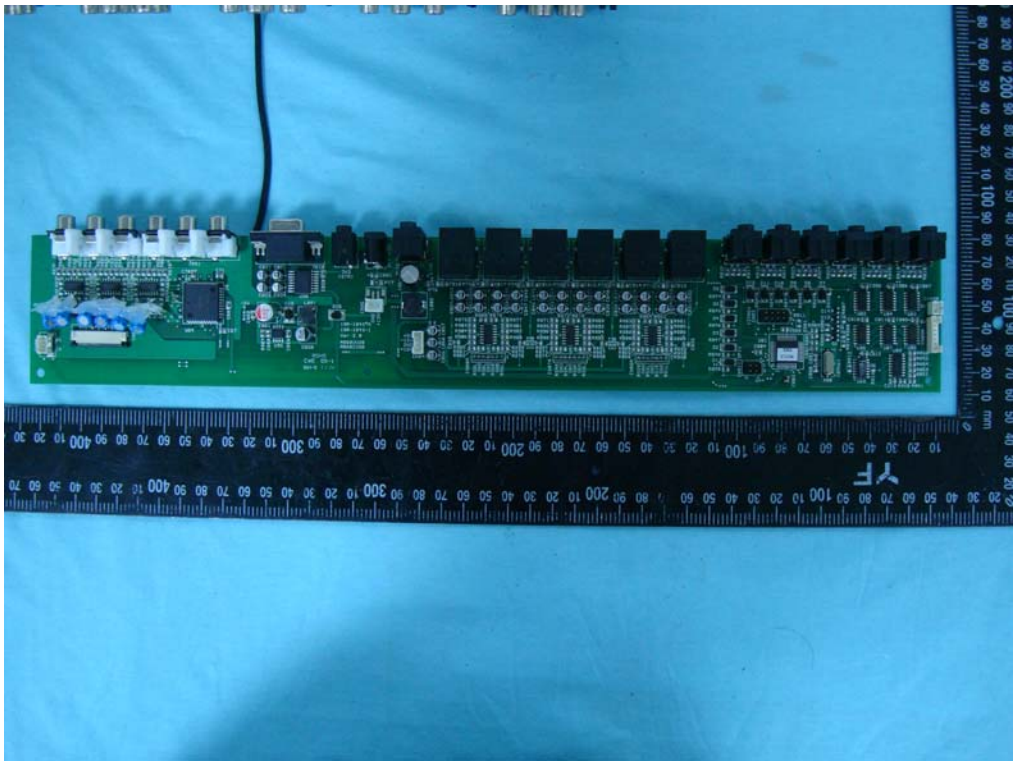

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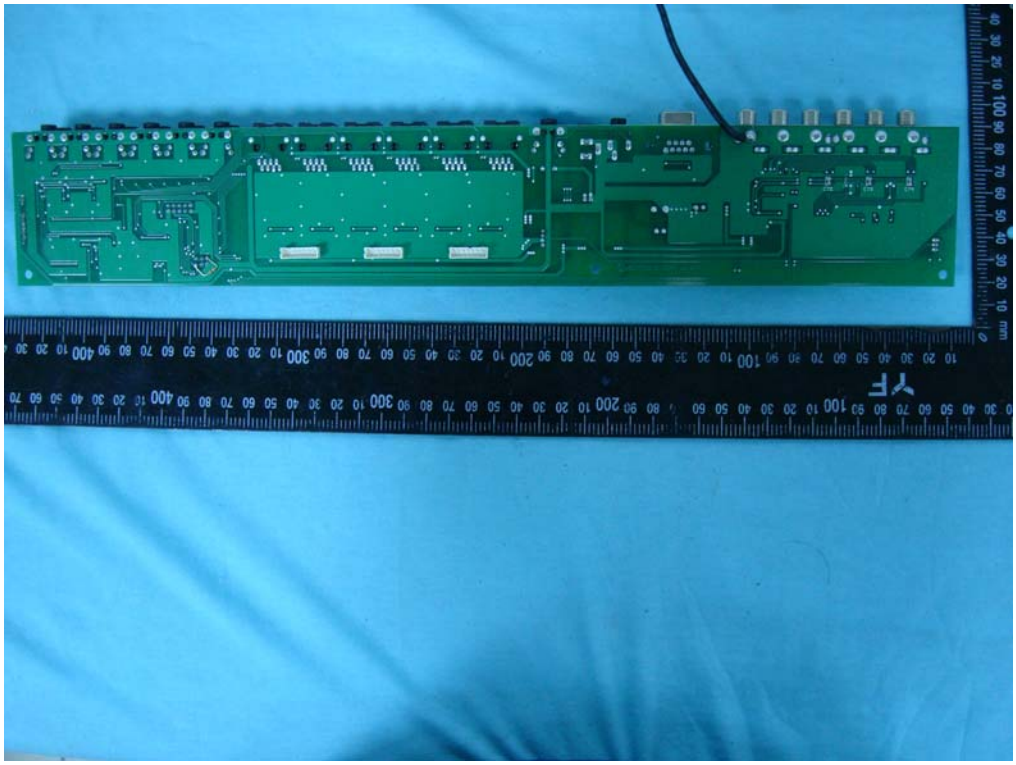

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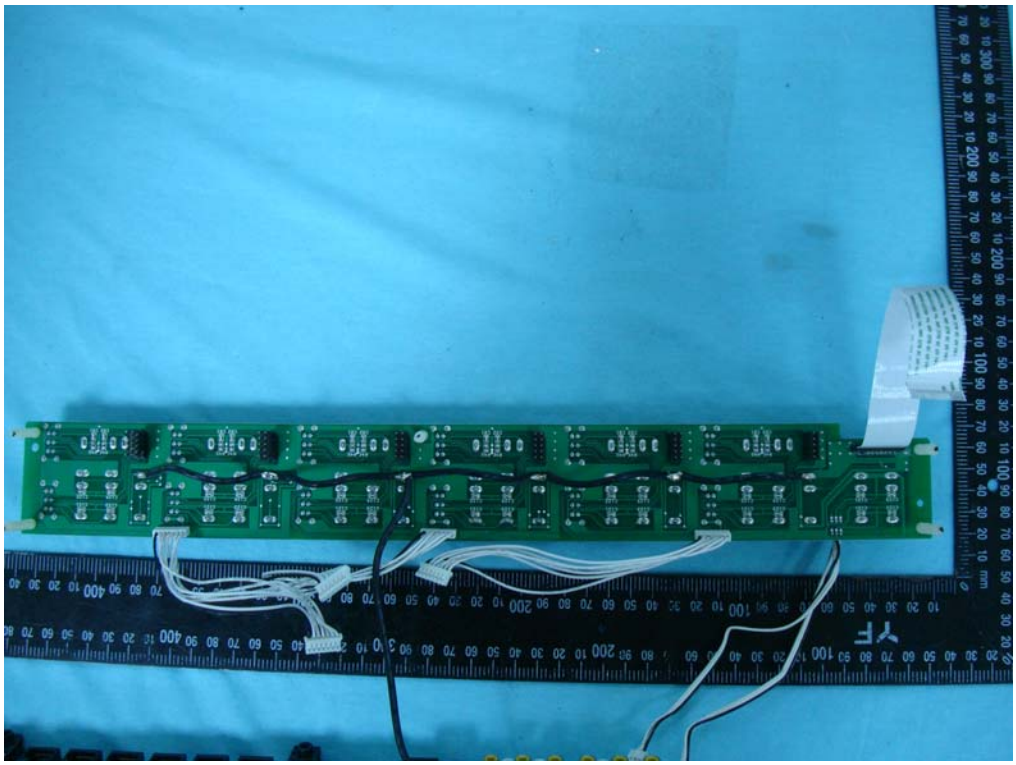

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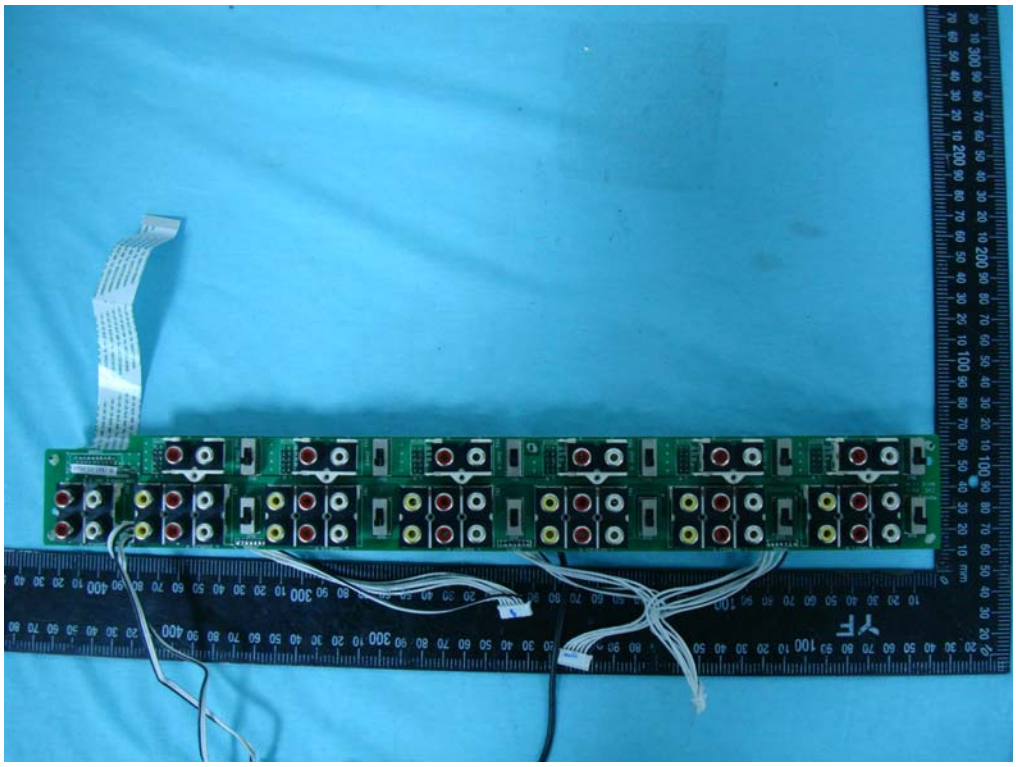

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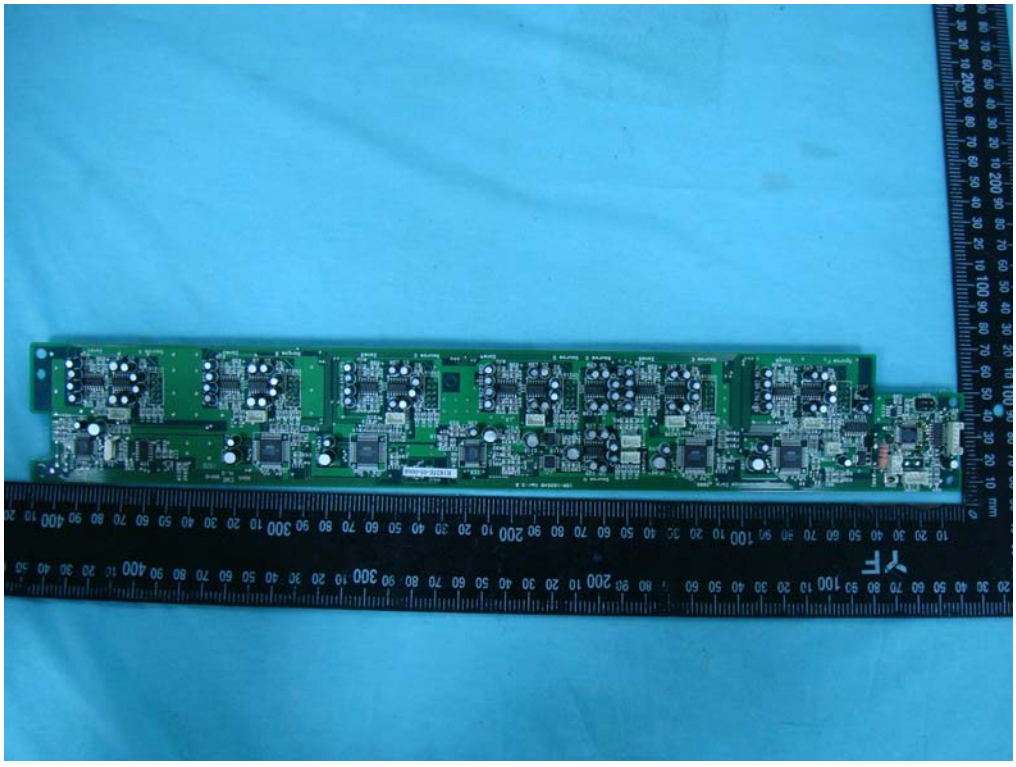

APPENDIX No.1 Photograph