

# TEST REPORT

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Classification: **LVD**  
Report Number: **S140603S**  
Date: **August 8, 2014**

Applicant : **VUE Audiotechnik LLC**

Address : **640 Alpine Way, Escondido, CA 92029, USA**

Product : **Amplifier**

Brand name/Trade mark : The logo for VUE audiotechnik, featuring the letters 'VUE' in a bold, sans-serif font with a stylized 'V' that has a triangular shape on its left side. Below 'VUE' is the word 'audiotechnik' in a smaller, lowercase, sans-serif font.

Model Number: **V4 / V6**

According to :

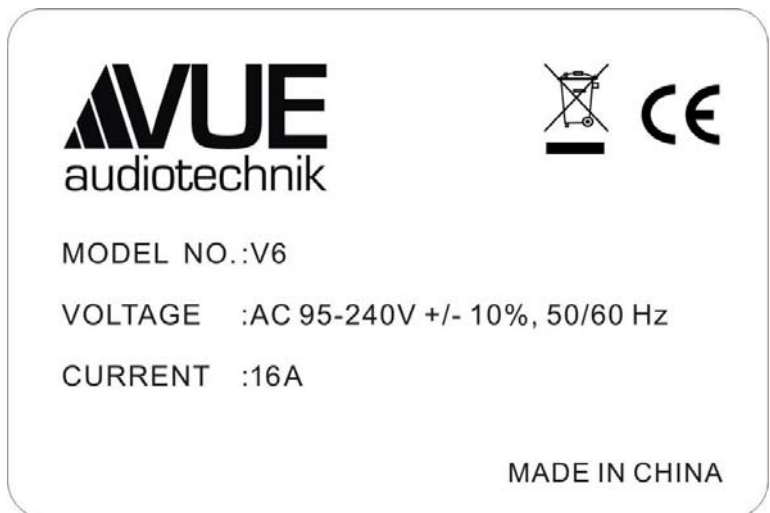
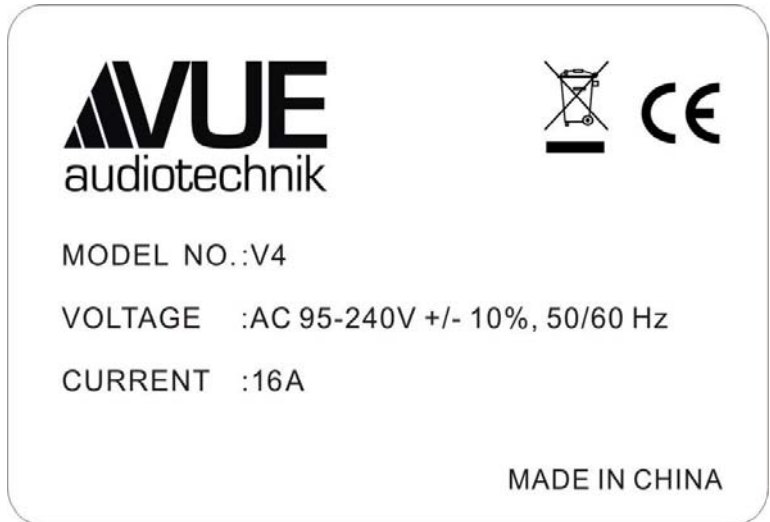
**EN 60065:2002 + A1:2006+A11:2008+ A2:2008+A12:2011**

**SIC INTERNATIONAL CERTIFICATION GROUP**



<b>TEST REPORT</b>	
<b>EN 60065:2002 + A1:2006+A11:2008+ A2:2008+A12:2011</b>	
<b>Audio, video and similar electronic apparatus – Safety requirements</b>	
<b>Report Number</b> .....	S140603S
<b>Tested by</b> (printed name and signature) .....	Angel Xie 
<b>Approved by</b> (printed name and signature) .....	Alonso Gao 
<b>Date of issue</b> .....	August 8, 2014
<b>Total number of pages</b> .....	27 pages include the front page
<b>Testing Laboratory</b> .....	SIC International Certification Group
<b>Address</b> .....	Room 1106 – 1107, 509 Wuning Road, Shanghai P.R. China
<b>Testing location</b> .....	SIC International Certification Group
<b>Address</b> .....	Room 1106 – 1107, 509 Wuning Road, Shanghai P.R. China
<b>Applicant's name</b> .....	VUE Audiotechnik LLC
<b>Address</b> .....	640 Alpine Way, Escondido, CA 92029, USA
<b>Manufacturer's name</b> .....	Speaker Electronic(Jia Shan) Co.,Ltd
<b>Address</b> .....	No.8 Development Zone Road, Huimin Economic Development Zone, Jiashan County, Zhejiang 314112, P.R.China
<b>Test specification:</b>	
<b>Standard</b> .....	EN 60065:2002 + A1:2006+A11:2008+ A2:2008+A12:2011
<b>Test procedure</b> .....	CE
<b>Non-standard test method</b> .....	N/A
<b>Test Report Form No</b> .....	IECEN60065G
<b>Test Report Form(s) Originator</b> .....	ASTABEAB
<b>Master TRF</b> .....	Dated 2006-03
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<b>Test item description</b> .....	Amplifier
<b>Trade Mark</b> .....	
<b>Model/Type reference</b> .....	V4, V6
<b>Ratings</b> .....	95-240Vac, 50/60Hz, 16A, Class I equipment

**Copy of marking plate**



**Summary of testing:**

The sample tested complied with all the requirements of EN 60065:2002 + A1:2006+A11:2008+ A2:2008+A12:2011.

All of the tests were performed on model V6.

**Possible test case verdicts:**

- test case does not apply to the test object..... : N/A (or N)
- 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 29, 2014

Date(s) of performance of tests..... : May 18, 2014 to July 15, 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.

**General product information:**

The model V4 is identical to the model V6 with the exception of the audio amplifier module. The model V6 is used the X-PRO3 amplifier module and the V4 is used the X-PRO2.

The X-PRO2 and X-PRO3 is a family of audio amplifier modules.

X-PRO3: comprises the following components: SMPS1, CH1, CH2, CH3;

X-PRO2: comprises the following components: SMPS1, CH1, CH2.

X-PRO2 is equal to X-PRO3 apart from that CH3 has been removed.

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
<b>3</b>	<b>GENERAL REQUIREMENTS</b>		<b>P</b>
	Safety class of the apparatus .....	Class I equipment	P
<b>4</b>	<b>GENERAL CONDITIONS OF TESTS</b>		<b>P</b>
4.1.4	Ventilation instructions require the use of the test box	Test according the specified condition by manufacturer	P
<b>5</b>	<b>MARKING</b>		<b>P</b>
	Comprehensible and easily discernible	Compliance checked.	P
	Permanent durability against water and petroleum spirit	After rubbing test by water and petroleum spirit, the label still easily discernible, indelible and legible.	P
5.1	a),b) Identification, maker, model .....	See copies of making plate	P
	c) Class II symbol if applicable	Class I	N
	d),e) Rated supply voltage and symbol .....	95-240Vac	P
	f) Frequency if safety dependant	50/60Hz	P
	g),h),i) Rated current or power consumption .....	16A	P
5.2	a) Earth terminal		P
	b) Hazardous live terminals	Except mains terminals, no terminals are hazards live.	N
	c) Supply output terminals (other than mains)	No supply output terminals.	N
5.3	Use of triangle with exclamation mark	The mark is shown on the electrical diagram next to every safety critical component.	P
5.4	Instructions for use	Instruction for use provided in English.	P
5.4.1	a) Mains powered equipment not exposed to dripping or splashing. Warning concerning objects filled with liquid, etc.	The instruction statement complies the requirement.	P
	b) Hazardous live terminals, instructions for wiring	No terminals are hazardous live.	N
	c) Instructions for replacing lithium battery	No batteries used.	N
	Instructions for modem if fitted	No modem.	N
	d) Class I earth connection warning		P
	e) Instructions for multimedia system connection		P
	f) Special stability warning for fixed installation		N
	g) Warning: battery exposure to heat	No batteries	N
	h) Warning: protective film on CRT face	No CRT used	N

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.2	Disconnect device: plug/coupler or all-pole mains switch location, accessibility and markings	Power plug used as disconnect device and mentioned in user manual	P
	Instructions for permanently connected equipment	Not permanently connected equipment	N

6	HAZARDOUS RADIATION		N
6.1	Ionizing radiation < 36 pA/kg (0,5 mR/h)	No ionizing radiation	N
6.1	European Council Directive 96/29/Euratom of 13 May 1996 10cm from outer surface of apparatus <1μSv/h (0,1mR/h)		N
6.2	Laser radiation, emission limits to IEC 60825-1 .....	No laser radiation	N
	Emission limits under fault conditions .....		N

7	HEATING UNDER NORMAL OPERATING CONDITIONS		P
7.1	Temperature rises not exceeding specified values, no operation of fuse links	(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	(see appended table)	P

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.		N
8.3	Insulation of hazardous live parts not provided by hygroscopic material	No hygroscopic material used as insulation.	P
8.4	No risk of electric shock following the removal of a cover which can be removed by hand	Tools are required	N
8.5	Class I equipment		P

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Basic insulation between hazardous live parts and earthed accessible parts		P
	Resistors bridging basic insulation complying with 14.2.1a)		P
8.6	Class II equipment and Class II constructions within Class I equipment		P
	Reinforced or double insulation between hazardous live parts and accessible parts		P
	Components bridging reinforced or double insulation complying with 14.1 a) or 14.3		N
	Basic and supplementary insulation each being bridged by a capacitor complying with 14.2.1 a)		N
	Reinforced or double insulation being bridged with 2 capacitors in series complying with 14.2.1 a)		N
	Reinforced or double insulation being bridged with a single capacitor complying with 14.2.1 b)		P
	Basic insulation bridged by components complying with 14.3.4.3		N
8.7	This Clause is void		N
8.8	Basic or supplementary insulation > 0,4 mm (mm)	> 0,4mm	P
	Reinforced insulation > 0,4 mm (mm) .....	> 0,4mm	P
	Thin sheet insulation (excluding non-separable thin sheet insulation, see 8.22)		P
	Basic or supplementary insulation, at least two layers, each meeting 10.3		N
	Basic or supplementary insulation, three layers any two of which meet 10.3		N
	Reinforced insulation, two layers each of which meet 10.3		P
	Reinforced insulation, three layers any two which meet 10.3		N
8.9	Primary Wiring: Adequate insulation between internal hazardous live conductors and accessible parts	All internal wires with only basic isolation are routed so that they are not close any live bare components.	P
	Secondary Wiring: Adequate insulation between internal hazardous live parts and conductors connected to accessible parts	All internal hazardous live parts are separated by double or reinforce insulation from accessible parts.	P
8.10	Class II : Double insulation between conductors connected to the mains and accessible parts Double insulation between hazardous live parts and conductors connected to the accessible parts		P

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
8.11	Detaching of wires		P
	No undue reduction of creepages or clearance distances if wires become detached	All wires were tightly fastened	P
	Vibration test carried out .....		N
8.12	This clause is void		N
8.13	Adequate fastening of windows, lenses, lamp covers etc. (pull test 20 N for 10 s)		P
8.14	Adequate fastening of covers (pull test 50 N for 10 s)	Covers adequately fastened with screws	P
8.15	No risk of damage to the insulation of internal wiring due to hot parts or sharp edges	No risk of damage	P
8.16	Only special supply equipment can be used		N
8.17	Insulated winding wire without additional interleaved insulation		N
8.18	Endurance test as required by 8.17		N
8.19	Disconnection from the mains	See below	P
8.19.1	Disconnect device	AC inlet provided	P
	All-pole switch or circuit breaker with >3mm contact separation	No such components.	N
8.19.2	Mains switch ON indication	The on-position of the switch has been indicated.	P
8.20	Switch not fitted in the mains cord	No switch fitted in mains cord.	P
8.21	Bridging components comply with clause 14	No such components	N
8.22	Non-separable thin sheet material		N
<b>9</b>	<b>ELECTRIC SHOCK HAZARD UNDER NORMAL OPERATING CONDITIONS</b>		<b>P</b>
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		P
9.1.1.1	a) Open circuit voltages		P
	b) Touch current measured from terminal devices using the network in annex D .....	U1= 4.31Vpeak U2= 190.6mVpeak 0.19mA to earth	P
	c) Discharge not exceeding 45 µC		N
	d) Energy of discharge not exceeding 350 mJ		N
9.1.1.2	Test with test finger and test probe	No access with test finger to any parts bearing hazardous voltage.	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	No shock hazard	P



<b>EN 60065</b>			
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	No shock hazard	P
	Terminal devices tested with 1 mm x 100 mm straight wire (1 N); test probe D of IEC 61032	No shock hazard	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	No Pre-set controls	N
9.1.6	No shock hazard due to stored charge on withdrawal of the mains plug; voltage (V) after 2 s :	0V.	P
	If C is not greater than 0,1 $\mu$ F no test needed		N
9.1.7	a) Enclosure sufficiently resistant to external force		P
	Test probe 11 of IEC 61032 for 10 s (50 N)	No damage and hazard	P
	b) Test hook of fig. 4 for 10 s (20 N)	No damage and hazard	P
	c) 30 mm diameter test tool for 5 s (100 or 250 N) :	100N	P
9.2	No hazard after removing a cover by hand	Tools are required	N
<b>10</b>	<b>INSULATION REQUIREMENTS</b>		<b>P</b>
10.1	Insulation resistance (M $\Omega$ ) at least 2 M $\Omega$ min. after surge test for basic and 4 M $\Omega$ min. for reinforced insulation .....		P
10.2	Humidity treatment 48 h or 120 h .....	30°C, 93% RH for 48h	P
10.3	Insulation resistance and dielectric strength between mains terminals	(See appended table)	P
	Insulation resistance and dielectric strength across BASIC or SUPPLEMENTARY insulation		P
	Insulation resistance and dielectric strength across REINFORCED insulation		P
<b>11</b>	<b>FAULT CONDITIONS</b>		<b>P</b>
11.1	No shock hazard under fault condition		P
11.2	Heating under fault condition	See appended table.	P
	No hazard from softening solder	No solder point become soft.	P
	Flames extinguish within 10 seconds	No flames extinguish within 10s	P
	Soldered terminations not used as protective mechanism		P
11.2.1	Measurement of temperature rises	(see appended table)	P
11.2.2	Temperature rise of accessible parts	(see appended table)	P
11.2.3	Temperature rise of parts, other than windings, providing electrical insulation	(see appended table)	P
	Temperature rise of printed circuit boards (PCB) exceeding the limits of table 3 by max. 100 K for max. 5 min		N

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	a) Temperature rise of printed circuit boards (PCB) to 20.1.3, exceeding the limits of table 3 by not more than 100 K for an area not greater than 2 cm <sup>2</sup>		N
	b) Temperature rise of printed circuit boards (PCB) to 20.1.3 up to 300 K for an area not greater than 2 cm <sup>2</sup> for a maximum of 5 min		N
	Meets all the special conditions if conductors on printed circuit boards are interrupted		N
	Class I protective earthing maintained		P
11.2.4	Temperature rise of parts acting as a support or mechanical barrier		N
11.2.5	Temperature rise of windings	(see appended table)	P
11.2.6	Temperature rise of parts not subject to the limits of 11.2.1 to 11.2.5		N
<b>12</b>	<b>MECHANICAL STRENGTH</b>		<b>P</b>
12.1.1	Bump test where mass >7 kg	Compliance checked.	P
12.1.2	Vibration test		N
12.1.3	Impact hammer test		P
	Steel ball test		P
12.1.4	Drop test for portable apparatus where mass < 7 kg		N
12.1.5	Thermoplastic enclosures strain relief test	Metal enclosure	N
12.2	Fixing of knobs, push buttons, keys and levers		P
12.3	Remote controls with hazardous live parts	No such remote controls	N
12.4	Drawers (pull test 50 N, 10 s)	No drawers	N
12.5	Antenna coaxial sockets providing isolation	No such parts	N
12.6	Telescoping or rod antennas construction	No such parts	N
12.6.1	Telescoping or rod antennas securement	No such parts	N
<b>13</b>	<b>CLEARANCE AND CREEPAGE DISTANCES</b>		<b>P</b>
13.1	Clearances in accordance with 13.3		P
	Creepage distances in accordance with 13.4		P
13.2	Determination of operating voltage		P
13.3	Clearances		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		N
13.4	Creepage distances	See appended table 13	P

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Creepage distances greater than table 11 minima		P
13.5	Printed boards		P
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		P
13.5.2	Type B coated printed circuit boards complying with IEC 60664-3 (basic insulation only)	No such coated printed circuit boards	N
13.6	Conductive parts along uncemented joints clearances and creepage distances comply with 13.3 and 13.4		N
	Conductive parts along reliably cemented joints comply with 8.8		N
	Temperature cycle test and dielectric strength test		N
13.7	Enclosed, enveloped or hermetically sealed parts: not conductively connected to the mains: clearances and creepage distances as in table 12		N
13.8	Parts filled with insulating compound, meeting the requirements of 8.8		N
<b>14</b>	<b>COMPONENTS</b>		<b>P</b>
14.1	Resistors		N
	a) Resistors between hazardous live parts and accessible metal parts	No such resistors used.	N
	b) Resistors, other than between hazardous live parts and accessible parts	No such resistors used.	N
	b) Resistors separately approved .....	No such resistors used.	N
14.2	Capacitors and RC units	The equipment equipped with an approved SPS and the Amplifier Board.	P
	Capacitors separately approved	The equipment equipped with an approved SPS and the Amplifier Board.	P
14.2.1	Y capacitors tested to IEC 60384-14, 2 <sup>nd</sup> edition		P
14.2.2	X capacitors tested to IEC 60384-14, 2 <sup>nd</sup> edition		P
14.2.3	Capacitors operating at mains frequency but not connected to the mains: tests for X2: .....		N
14.2.5	Capacitors with volume exceeding 1750 mm <sup>3</sup> , where short-circuit current exceeds 0,2 A: compliance with IEC60384-1, 4.38 category B or better .....		N
	Capacitors with volume exceeding 1750 mm <sup>3</sup> , mounted closer to a potential ignition source than table 5 permits: compliance with IEC 60 384-1, 4.38 category B or better .....		N

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Shielded by a barrier acc, to 20,1,4/ table 21 or metal .....		N
14.3	Inductors and windings	The equipment equipped with an approved SPS and the Amplifier Board.	P
	Comply with IEC 61558-1, IEC 61558-2 (as relevant) and clause 20.1.4	The equipment equipped with an approved SPS and the Amplifier Board.	P
14.3.1	Transformers and inductors marked with manufacturer's name and type.....		P
	Transformers and inductors separately approved ..		P
14.3.2	General		P
	Insulation material complies with clause 20,1,4		P
14.3.3	Constructional requirements		P
14.3.3.1	Clearances and creepage distances comply with clause 13		P
14.3.3.2	Transformers meet the constructional requirements		P
14.3.4.1	Class II transformers have adequate separation between hazardous live parts and accessible parts (double or reinforced insulation)	The equipment equipped with an approved SPS and the Amplifier Board.	P
	Coil formers and partition walls > 0.4 mm		P
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		N
14.3.4.3	Separating transformers with at least basic insulation		N
14.3.5.1	Class II transformers have adequate insulation between hazardous live parts and accessible parts (double or reinforced insulation)	The equipment equipped with an approved SPS and the Amplifier Board.	P
	Coil formers and partition walls > 0,4 mm		P
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		N
	Winding wires connected to protective earth have adequate current-carrying capacity		N
14.4	High voltage components	No such components	N
	High-voltage components and assemblies: U > 4 kV (peak) separately approved		N
	Component meets category V-1 of IEC 60707		N
14.4.1	High voltage transformers and multipliers tested as part of the submission		N

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
14.4.2	High voltage assemblies and other parts tested as part of the submission		N
14.5	Protective devices		P
	Protective devices used within their ratings		P
	External clearances and creepage distances meet requirement of clause 13 for the voltage across the device when opened		P
14.5.1.1	a) Thermal cut-outs separately approved	No thermal cut-outs used.	N
	b) Thermal cut-outs tested as part of the submission	Ditto	N
14.5.1.2	a) Thermal links separately approved	No thermal links used	N
	b) Thermal links tested as part of the submission		N
14.5.1.3	Thermal devices re-settable by soldering	No such components.	N
14.5.2.1	Fuse-links in the mains circuit according to IEC 60127	Fuses are approved,	P
14.5.2.2	Correct marking of fuse-links adjacent to holder ... :		P
14.5.2.3	Not possible to connect fuses in parallel .....	Not used	P
14.5.2.4	Not possible to touch hazardous live parts when replacing fuse-links without the use of a tool .....	The fuse is not possible to be replaced without tool.	P
14.5.3	PTC-S thermistors comply with IEC 60730-1	No PTC-S thermistors	N
	PTC-S devices (15 W) category V-1 or better		N
14.5.4	Circuit protectors have adequate breaking capacity and their position is correctly marked		N
14.6	Switches		P
14.6.1 a)	Separate testing to IEC 61058 including: 10 000 operations Normal pollution suitability Resistance to heat and fire level 3 and Make and break speed independent of speed of actuation And V-0 compliance with annex G, G.1.1	Switch separately approved	P
14.6.1 b)	Tested in the apparatus:		N
	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
	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

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	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
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
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
14.6.4	Switch tested to 14.6.1 b) has adequate dielectric strength		N
14.6.5	Mains switch controlling mains socket outlets additional tests to IEC 60058-1	No socket outlets	N
	Socket outlet current marking correct		N
14.7	Safety interlocks	No safety interlocks	N
	Safety interlocks to 2.8 of IEC 60950		N
14.8	Voltage setting devices and the like	No voltage setting devices	N
	Voltage setting device not likely to be changed accidentally		N
14.9	Motors	Low voltage DC fan used	P
14.9.1	Endurance test on motors		P
	Motor start test		P
	Dielectric strength test		P
14.9.2	Not adversely affected by oil or grease etc.		P
14.9.3	Protection against moving parts		P
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, Annex B		N
14.10	Batteries	No such batteries	N
14.10.1	Batteries mounted with no risk of accumulation of flammable gases		N
14.10.2	No possibility of recharging non-rechargeable batteries		N
14.10.3	Recharging currents and times within manufacturers limits		N
	Lithium batteries discharge and reverse currents within the manufacturers limits		N
14.10.4	Battery mould stress relief		N
14.10.5	Battery drop test		N
14.11	Optocouplers	The equipment equipped with an approved SPS and the Amplifier Board.	P

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
	Optocouplers comply with Cl. 8		P
	Internal and external dimensions to 13.1. or alternatively 13.6 (jointed insulation)		P
14.12	Surge suppression varistors	The equipment equipped with an approved SPS and the Amplifier Board.	P
	Comply with IEC 61051-2		P
	Not connected between mains and accessible parts except for earthed parts of permanently connected apparatus		P
	Complies with the current pulse, fire hazard and thermal stress requirements of 14.12		P
<b>15</b>	<b>TERMINALS</b>		<b>P</b>
15.1.1	Mains plug, appliance inlet, interconnection couplers and mains socket-outlet meet the appropriate standard	The plug and cord comply with the appropriate component standard. No mains supply of this unit to other equipment.	P
	Overloading of plugs or appliance inlets prevented if the apparatus has mains socket outlets	No mains socket outlet provided	N
	Overloading of internal wiring prevented if the apparatus has mains socket outlets	No mains socket outlet provided	N
15.1.2	Connectors for antenna, earth, audio, video or data:		P
	No risk of insertion in mains socket-outlets		P
	No risk of insertion into audio or video: outlets marked with the symbol of 5.2		N
15.1.3	Output terminals of a.c. adaptors or similar devices not compatible with household mains socket-outlets	No such terminals	N
15.2	Provision for protective earthing		P
	Accessible conductive parts of Class I equipment reliably connected to earth terminal, within equipment		P
	Protective earth conductors correctly coloured		P
	Equipment with non-detachable mains cord provided with separate protective earth terminal near mains input		N
	Protective earth terminal resistant to corrosion		P
	Earth resistance test: < 0,1 $\Omega$ at 25 A .....	0.07 $\Omega$	P
15.3	Terminals for external flexible cords and for permanent connection to the mains supply		P
15.3.1	Adequate terminals for connection of permanent wiring	Not permanent connected apparatus.	N

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Clause	Requirement + Test	Result - Remark	Verdict
15.3.2	Reliable connection of non-detachable cords:		N
	Not soldered to conductors of a printed circuit board		N
	Adequate clearances and creepage distances between connections should a wire break away		N
	Wire secured by additional means to the conductor		N
15.3.3	Screws and nuts clamping conductors have adequate threads: ISO 261, ISO 262 or similar	No such terminal	N
15.3.4	Soldered conductors wrapped around terminal prior to soldering or held in place by additional means		P
	Clamping of conductor and insulation if not soldered or held by screws		N
15.3.5	Terminals allow connection of appropriate cross-sectional area of conductors, for the rated current of the equipment		N
15.3.6	Terminals to 15.3.3 have sizes required by table 16		N
15.3.7	Terminals clamp conductors between metal and have adequate pressure	No such terminal	N
	Terminals designed to avoid conductor slipping out when tightened or loosened		N
	Terminals adequately fixed to avoid loosening when the clamping is tightened or loosened and stress on internal wiring is avoided		N
15.3.8	Terminals carrying a current more than 0.2 A: contact pressure not transmitted by insulating material except ceramic		N
15.3.9	Termination of non-detachable cords: wires terminated near to each other	No such hazard	N
	Terminals located and shielded: test with 8 mm strand		N
15.4	Devices forming a part of the mains plug	Not direct plug-in equipment.	N
15.4.1	No undue strain on mains socket-outlets		N
15.4.2	Device complies with standard for dimensions of mains plugs		N
15.4.3	Device has adequate mechanical strength (tests a,b,c)		N
<b>16</b>	<b>EXTERNAL FLEXIBLE CORDS</b>		<b>P</b>
16.1	Mains cords sheathed type, complying with IEC 60227 for PVC or IEC 60245 for synthetic rubber cords .....	Power supply cord separately approved	P



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Clause	Requirement + Test	Result - Remark	Verdict
	Non-detachable cords for Class I have green/yellow core for protective earth		N
16.2	Mains cords conductors have adequate cross-sectional area for rated current consumption of the equipment		P
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	No such flexible cords	N
	b) Flexible cords not complying with 16.1, withstand bending and mechanical stress (3.2 of IEC 60227-2)		N
16.4	Flexible cords used for connection between equipment have adequate cross-sectional areas to avoid temperature rise under normal and fault conditions	No such flexible cord	N
16.5	Adequate strain relief on external flexible cords	No hazard	P
	Not possible to push cord back into equipment		P
	Strain relief device unlikely to damage flexible cord		P
	For mains cords of Class I equipment, hazardous live conductors become taut before earth conductor		N
16.6	Apertures for external flexible cord: no risk of damage to the cord during assembly or movement in use		N
16.7	Transportable musical instruments and amplifiers fitted with detachable cord set with appliance inlet to IEC 60320-1		N
	Transportable musical instruments and amplifiers fitted with detachable cord sets or with means of stowage to protect the cord		N
<b>17</b>	<b>ELECTRICAL CONNECTIONS AND MECHANICAL FIXINGS</b>		<b>P</b>
17.1	Torque test to table 20:		P
	- screws into metal: 5 times		P
	- screws into non-metallic material: 10 times		N
17.2	Correct introduction into female threads in non-metallic material		N
17.3	Cover fixing screws: captive	Non-captive screws used.	N
	Non-captive fixing screws: no hazard when replaced by a screw whose length is 10 times its diameter	No hazard	P

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Clause	Requirement + Test	Result - Remark	Verdict
17.4	No loosening of conductive parts carrying a current > 0,2 A	Considered	P
17.5	Contact pressure not transmitted through plastic other than ceramic for connections carrying a current > 0,2 A		P
17.6	Stranded conductors of flexible supply cords carrying a current > 0,2 A with screw terminals not consolidated by solder	No Stranded conductors connected to screw terminals	N
17.7	Cover fixing devices other than screws have adequate strength and their positioning is unambiguous		N
17.8	Fixing devices for detachable legs or stands provided		N
17.9	Internal pluggable connections, affecting safety, unlikely to become disconnected		P

<b>18</b>	<b>MECHANICAL STRENGTH OF PICTURE TUBES AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION</b>		<b>N</b>
	Picture tube separately approved to IEC 61965:	No picture tube	N
	Picture tube separately approved to 18.1 .....		N
18.1	Picture tubes > 16 cm intrinsically protected		N
	Non-intrinsically protected tubes > 16 cm used with protective screen		N
	Protective film as part of implosion protection: edges covered by enclosure		
18.2	Intrinsically protected tubes: tests on 12 samples		N
18.2.1	Samples subject to ageing: 6		N
18.2.2	Samples subject to implosion test: 6		N
18.2.3	Samples subject to mechanical strength test (steel ball): 6		N
18.3	Non-intrinsically protected tubes tested to 18.3		N
<b>19</b>	<b>STABILITY AND MECHANICAL HAZARDS</b>		<b>P</b>
	Mass of the equipment exceeding 7kg .....	>7kg.	P
	Apparatus intended to be fastened in place – suitable instructions		N
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,		P
19.4	Edges or corners not hazardous	Edges and corners are smooth	P

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Clause	Requirement + Test	Result - Remark	Verdict
19.5	Glass surfaces with an area exceeding 0,1 m <sup>2</sup> or maximum dimension > 450 mm, pass the test of 19.5.1		N
19.6	Wall or ceiling mountings adequate		N

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 60707 with openings not exceeding 1 mm in width		N
	b) Exemption for small components as defined in 20.1		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, not contributing to the spread of fire	Internal PVC wiring working at voltage <4 kV.	N
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 IEC60707, unless used in a fire enclosure	The equipment equipped with an approved SPS and the Amplifier Board.	P
	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 60707	The equipment equipped with an approved SPS and the Amplifier Board.	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		N
	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
20.2	Fire enclosure		N
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	<4kV	N
20.2.2	Internal fire enclosures with openings not exceeding 1 mm in width and with openings for wires completely filled		N
20.2.3	Requirements of 20.2.1 and 20.2.2 met by an internal fire enclosure		N

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict
<b>A</b>	<b>APPENDIX A, ADDITIONAL REQUIREMENTS FOR APPARATUS WITH PROTECTION AGAINST SPLASHING WATER</b>		<b>N</b>
A.5.1	j) Marked with IPX4 (IEC 60529), 5.4.1 a) does not apply		N
A.10.2.1	Enclosure provides protection against splashing water		N
A.10.2.2	Humidity treatment carried out for 7 days		N
<b>B</b>	<b>APPENDIX B, APPARATUS TO BE CONNECTED TO THE TELECOMMUNICATION NETWORKS</b>		<b>N</b>
	Complies with IEC 62151 clause 1		N
	Complies with IEC 62151 clause 2		N
	Complies with IEC 62151 clause 3 but with 3.5.4 modified to 2.4.10 of this standard		N
	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
	Complies with IEC 62151 clause 5 but with 5.3.1 modified in accordance with annex B of this standard		N
	Complies with IEC 62151 clause 6		N
	Complies with IEC 62151 clause 7		N
	Complies with IEC 62151 annex A, B and C		N
<b>L</b>	<b>APPENDIX L, ADDITIONAL REQUIREMENTS FOR ELECTRONIC FLASH APPARATUS FOR PHOTOGRAPHIC PURPOSES</b>		<b>N</b>
L5,4	Marking and Instructions		N
L9,1,1	Terminals to connection to synchroniser not HAZARDOUS LIVE		N
L7,1,5 & L11,2,6	Lithium batteries meet permissible temp rise in Table 3, unless comply with 6,3,2 of IEC 60086-4		N
L14,6,6	Mains switch characteristics appropriate to its function under normal conditions		N

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict

7.1	TABLE: temperature rise measurements		P
	Power consumption in the OFF/Stand-by	0W	--
	Position of the functional switch (W) .....	N.A	—

Operating conditions: one-eighth of the non-clipped output power to the loudspeaker impedance.

Un (V)	In (A)	Pn (W)	Pout (W)
85.5 (50Hz)	2.207	216.8	--
85.5 (60Hz)	2.214	217.6	--
95 (50Hz)	1.980	216.3	--
95 (60Hz)	1.985	216.6	--
240 (50Hz)	0.894	210.3	--
240 (60Hz)	0.899	210.1	--
264 (50Hz)	0.822	210.0	--
264 (60Hz)	0.828	210.2	--

	Loudspeaker impedance (Ω):	8	--
	Several loudspeaker systems	/	N
	Marking of loudspeaker terminals	/	N

monitored point:	dT (K)		required dT (K)
	85.5V(60Hz)	264 (60Hz)	
Switch	11	10	50
Power terminal	9	9	45
Main transformer (X-PRO3 )	60	59	85
L300(X-PRO3 )	58	58	85
PCB (X-PRO3)	52	51	85
C927 (X-PRO3 )	60	57	--
T1 (EPS-15-7.5 )	57	53	85
PCB (EPS-15-7.5 )	35	32	85
Enclosure	15	15	40
Ambient temperature(°C)	26	26	--

	Winding temperature rise measurements		N
	Ambient temperature t1 (°C) .....	/	—
	Ambient temperature t2 (°C) .....	/	—

temperature rise dT of winding:	R <sub>1</sub> (Ω)	R <sub>2</sub> (Ω)	dT (K)	required dT (K)	insulation class
/	/	/	/	/	/

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Clause	Requirement + Test	Result - Remark	Verdict

Remark: The temperature of winding measured by the thermocouple method, temperature rises limit of this table based on 50°C

7.2	TABLE: softening temperature of thermoplastics			N
Temperature T of part	T - normal conditions (°C)	T - fault conditions (°C)	T softening (°C)	

10.3	TABLE: insulation resistance measurements		P
Insulation resistance R between:	R (MΩ)	Required R (MΩ)	
Between mains poles	>100	≥2	
Between two-pole and Plastic enclosure	>100	≥4	
Two layers of Transformer Tape	>100	≥4	

10.3	TABLE: electric strength measurements		P
Test voltage applied between:	Test voltage (V)	Breakdown	
Between mains poles	2120	No	
Between parts separated by basic or supplementary insulation	2120	No	
Between parts separated by double or reinforced insulation	4240	No	

11.2	TABLE: summary of fault condition tests		P
	Voltage (V) 0,9 or 1,1 times rated voltage .....	See below	—
	Ambient temperature (°C) .....	22-27	—
fault condition, state component short- or open circuited and components whose temperature rises are measured	supply voltage	result, state effect of fault condition and the duration of the test	
Opening blocked	85.5/264	Duration: 4h/4h; No hazard .	

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict

	Winding temperature rise measurements		N
	Ambient temperature t1 (°C) .....	/	—
	Ambient temperature t2 (°C) .....	/	—

13	TABLE : CREEPAGE DISTANCES AND CLEARANCES	P
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Locations	Insulation required	Clearance (mm)	Creepage (mm)	Required limit	
				Clear./	Creep. (mm)
L-N	B	5	6	2	2.5

DP = different polarity    B = basic insulation    S = supplementary insulation    R = reinforced insulation

**The equipment equipped with an approved SPS and the Amplifier Board.**

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict

14	TABLE: list of critical components and materials					P
Component	Manufacturer/ trademark	Type/model	Value / rating	Standard	Approval/ Reference	
Switching power supply	Mean Well Enterprises Co., Ltd.	EPS-15-7.5	Input: AC 100-240V, 0.4A Output: DC 7.5V, 2A	IEC 60950	JPTUV-049105	
Audio Amplifier	BB Electronics Suzhou Co., Ltd	X-PRO3	AC 100-120V/200-240V 50/60Hz 2400W	IEC 60065	TUV CB REPORT(2114 2862_001)	
power socket	NEUTRIK	NAC3MPA	AC250V/20A	UL94 UL1694	E135070	
Mains switch PA0480000010	Canal Electronic Co.,LTD	R210-1C5L	250VAC/16A UL 94 V-0	ANSI/UL 61058-1 UL 1054	UL. E81103	
Cable AC in (power board)	TAIZHOU EVER LUCKY WIRE CO LTD	Cable:1015,	VW-1,18AWG,105° C	UL 758	E236685	
	ZHEJIANG HONGXING ELECTRICAL CO LTD	Connector:HX39 600-3Y	PA66,UL94V-0	UL 1977	E228500	
Cable AC in (功放板)	TAIZHOU EVER LUCKY WIRE CO LTD	1015	VW-1, 12AWG,105°C	UL 758	E236685	
	XINGDA ELECTRONICS WIRE & CABLE CO LTD	1015	VW-1, 12AWG,105°C	UL 758	E187208	
	CHINA LONSID ELECTRIC CO LTD	1015	VW-1, 12AWG,105°C	UL 758	E205056	
	YUEQING BOYUAN ELECTRONIC WIRE & CABLE CO LTD	1015	VW-1, 12AWG,105°C	UL 758	E203561	
	XINGDA ELECTRONICS WIRE & CABLE CO LTD	1015	VW-1, 12AWG,105°C	UL 758	E187208	



EN 60065					
Clause	Requirement + Test			Result - Remark	Verdict
	ZHEJIANG HONGXING ELECTRICAL CO LTD	Connector: HX63080	--	ANSI/UL 486E	E344515
All pcbs	KINGBOARD LAMINATES HOLDINGS LTD	KB-6160/6150(FR-4)	FR-4 UL 94 V-0 Max 130°C	UL94 UL 746B	E123995
Connector	NEUTRIK	NAC3FCA	AC250V/16A	IEC 61984	CB :DE1-52145 VDE 40014741
Power cord	NINGBO XUANHUA ELECTRICAL CO LTD	XH03-F	16A/250VAC	VDE 0620-1	VDE 40017189
Fan	Shenzhen Speedy Science Technology.Co., Ltd	SD07025C5ML	5V, 0.24A	--	--
Gathers the imide thin film	SHANGHAI JINSHAN QIANFENG INSULATION MATERIAL CO LTD	QF6051	v-0, 130°C	UL94	E249751.
Terminal Block	Cixi Kefa Electronics CO.,Ltd.	2-142	30A/250V	EN 60998-1:2004	EC.12820W130 923.CKE2496
<sup>1)</sup> an asterisk indicates a mark which assures the agreed level of surveillance					

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict

**Attachment 1: EUT photo**

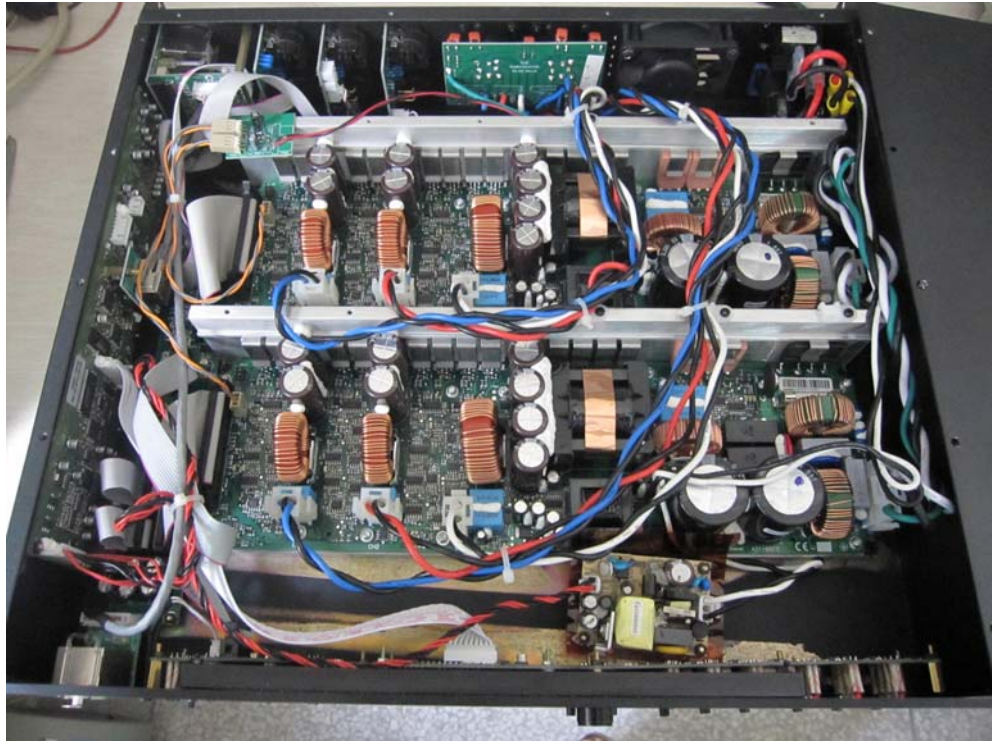


**Over View -1**



**Over View -2**

EN 60065			
Clause	Requirement + Test	Result - Remark	Verdict



Inside View 1

