




SUBWOOFER TUBA
USER MANUAL
English



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USER MANUAL AND SERVICE

English Version

This user manual is an integral part of the equipment and must be kept in an appropriate manner to maintain its integrity and allow it to be consulted during the life of the equipment.

Please read carefully this manual before proceed to any intervention on the equipment

The manufacturer has the right to make changes to the production and to the manual, without this implying the obligation to update the production and the previous manuals.

<p>TUBA EN 1.0</p>	<p>ESOTERIC PRO AUDIO di Mirko Marogna Via Cà dell'Aglio 3 int. 3 37036 San Martino B.A. (VR) - ITALY www.esotericproaudio.com e-mail: info@esotericproaudio.com</p>	<p>Pag. 2 of 17</p>
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SUBWOOFER TUBA & TOP FLAUTO

INTRO

Dear Customer,

In thanking you for the preference granted us in the choice of our equipment that will surely prove important above all in time, we invite you to scrupulously follow the instructions given in this manual, this will be a valid help for optimal use and to keep the characteristics of your equipment.

ESOTERIC PRO AUDIO

1. GENERAL INFO

This user manual is an integral part of the equipment and is the essential support for the implementation and correct use. Read it carefully and completely before proceeding with the installation and use of the equipment.

The manual must accompany the equipment in case of resale.

Partial reproduction of this document without the written permission of ESOTERIC PRO AUDIO is prohibited.

1.1 Symbols - pictograms

For a simpler and immediate reading of the manual we report below a series of symbols and pictograms used in the drafting of this manual.

Symbol.	Description
	Electrical maintenance engineer: qualified technician able to operate in the presence of voltage inside cabinets, junction boxes and electrical systems. to operate the equipment under normal operating conditions, proposed for all electrical adjustments, maintenance and repairs.
	Manufacturer's technician: qualified technician provided by the manufacturer to carry out operations of a complex nature in particular situations or, in any case, as agreed with the user. The skills are, depending on the case, mechanical and / or electrical and / or electronic and / or software.



NOTE

It shows the indications or important information contained in the manual to be read, with particular attention, for the best use of the equipment.



DANGER

Indicates a situation that can cause injuries, even lethal, or serious damage to health.



CAUTION


It indicates a situation that could cause, even indirectly, damage to people, things and the environment with consequences also of an economic nature.



WARNING

Indicates that it is necessary to follow the indications with particular attention. Failure to follow the warning may result in malfunction or danger or damage.

Warning signs		
	Dangerous Electrical Voltage	

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2. . Manufacturer identification

The plate attached to the back of the SUBWOOFER TUBA contains all the identification data of the SUBWOOFER itself.

Fig.3.1 Example of a label (the data shown are purely indicative, the real values are shown on the label of the product).



Model .

Trade name of the equipment.

Serial Number (S/N).

Serial number, numerical code identifying the type of equipment.

Voltage.

Voltage - supply frequency -

Nominal electrical power.



It is absolutely forbidden for anyone to remove or tamper with this plate. In the case in which accidentally this plate is damaged contact the manufacturer.

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2.1 Information on technical assistance and maintenance

To report faults contact the Service Center:

ESOTERIC PRO AUDIO di Mirko Marogna
Via Cà dell'Aglio 3 int. 3
37036 San Martino B.A. (VR) - ITALY
e-mail: info@esotericproaudio.com

For communications or requests for information or spare parts, send the module "SPARE PARTS ORDER, FAULT SIGNALS, INFORMATION" in Attached 1 to the service center.



For the maintenance of the duration of the warranty the customer must strictly follow the instructions indicated in this manual. Otherwise it is not liable for any inconvenience or malfunction of the appliance (in this regard, carefully read the warranty attached to the manual).



In order to adapt the equipment to technological progress and specific production needs, the manufacturer may decide, without any prior notice, to make changes to it without this implying the obligation to update production and previous manuals. Furthermore, if the illustrations shown in this manual differ slightly from the equipment in your possession, the safety and operating instructions are always guaranteed.

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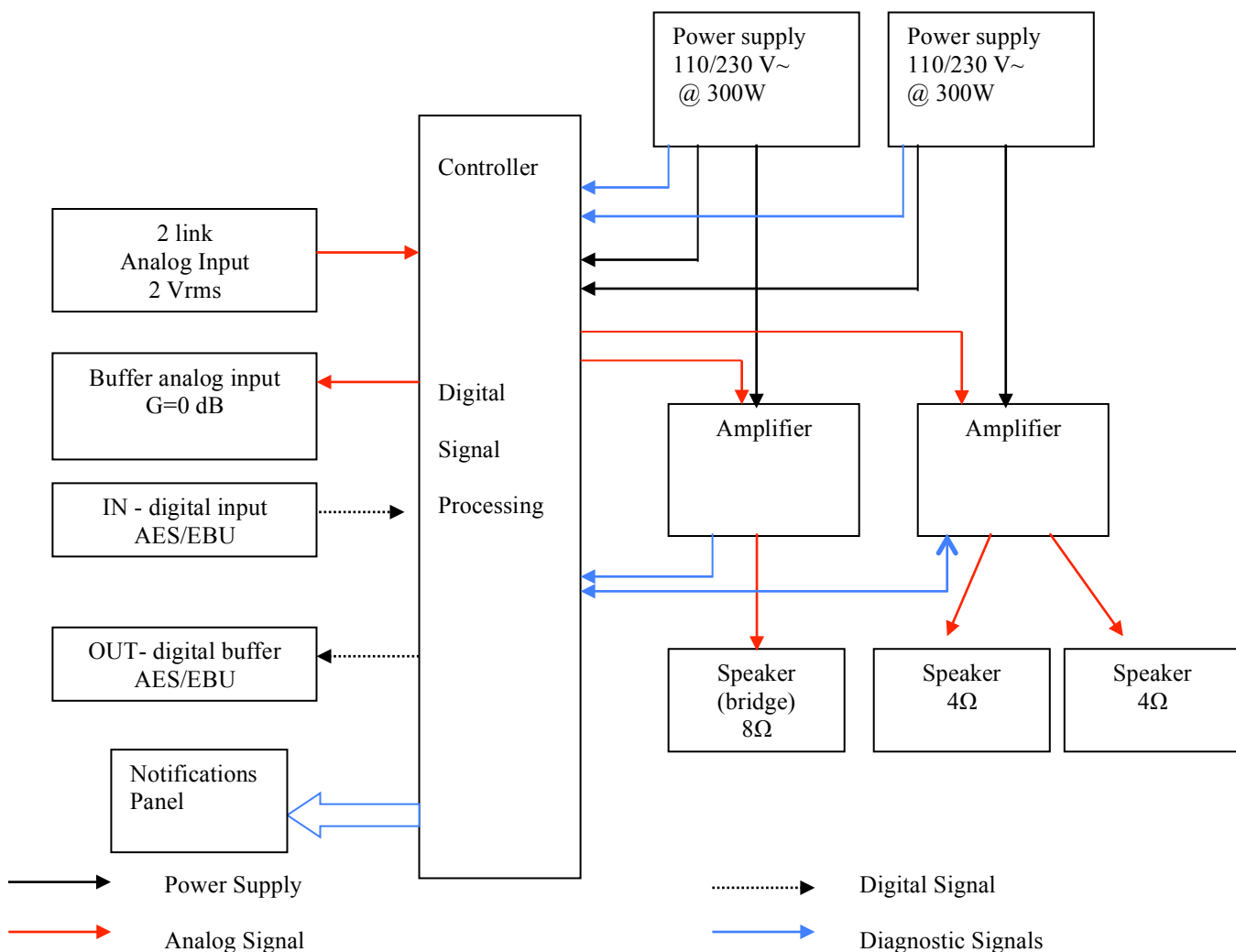
3. Description and tech specs

The EPA PLATE system offers an ideal solution for amplified reproduction of audio signals. The care taken in the design of the system, in design, in operation are the result of many years of experience and therefore places our product in the high end of audio reproduction systems in large rooms or outdoors.

The peculiarity of the system consists essentially in:

- a controller based on the use of a microprocessor and active analog electronics comprising conditioning stages input-output signals, analog-to-digital converters, signal processing (DSP, FIR and IIR filters, compressors, limiter) and digital-analog converters for the piloting of power amplifiers;
- high efficiency switching power supplies with low harmonic content (PFC) and very high peak power (700 W),

n. 2 separate power amplifiers for the faithful reproduction of low and high frequency audio signals. The controller components, power supplies and amplifiers are protected against overload conditions and by means of automatic reset devices. The intervention of the protection is signaled with the lighting of a led placed on the interface panel. The figure below shows a simplified block diagram of the EPA PLATE system.



3.1 Tech specs

The audio system consists essentially of 2 cabinets: sub tuba and top flauto. The following paragraphs show in detail the contents of the cabinets and the technical description of the internal equipment.

Environmental operating conditions:

- Temperature: 10 °C – 50 °C
- Humidity: 10 - 85% non condensante
- Atmospheric pressure: 0,7 ÷ 1,04 atm

Environmental storage conditions:

- Temperature: -20 ÷ 50 °C
- Humidity: ≤95% non condensante.

3.1.1 Sub Corno Cabinet.

Wood casing with external finish with black polyurethane paint containing the subwoofer and the electronics of the audio system.

Dimensions	615 x 840 x 1070 mm (LxDxH) 24,41 x 33,07 x 42,12 inch (LxDxH)
Weight	79Kg / 179 lb

3.1.1.1 Audio system electronics

Single-phase power supply (L-N-PE) equipped with internal protection against overcurrent and overvoltage with automatic reset.

110-230 V~, 600W , 50/60Hz

Classification for the purposes of electrical risks

Class 1

Co Interface interface inputs / outputs connections¹

- Main in. POWERCON NAC3FCA Socket, blue color
- Main out. Plug POWERCON white color, maximum amp 12 A
- Analog input 1 F XLR 3 pin, impedance input 10 KΩ, $V_{max} = 2 V_{rms}$.
Pin out:
 - 1 = Signal GND
 - 2 = + IN1
 - 3 = - IN1
- Analog link 1. Inout signal buffer, gain 0dB, socket M XLR 3 pin.
Pin out:
 - 1 = Signal GND
 - 2 = + Out 1
 - 3 = - Out 2
- Digital input, standard AES/EBU², Balanced input 110 Ω. Socket F XLR- 3 pin.
- Digital output, standard AES/EBU, Balanced input buffer 110 Ω, Plug M XLR- 3 pin.

¹ The type of connector (male-female) refers to the one on the interface panel.

² AES/EBU (Audio Engineering Society/ European Broadcasting Union) is a standard format for digital audio, used to interface different devices with each other. It reflects part 4 of the international standard IEC 60958.



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- Top out 1-2. Socket SpeakCon 4 pole
 - 1 + = output +
 - 1 - = output -
 - 2 + = NOT IN USE
 - 2 - = NOT IN USE

Audio System

- Digital floating point processor for processing audio signals in real time.
- ADC: 32 bit, 768 KHz, dynamic range 123 dB;
- DAC: 32 bit, 768 KHz, dynamic range 120 dB;
- Class D power amplifier for piloting a woofer.
 - o Rms power 1400 W, THD MAX 1%.
 - o thermal protection with automatic reset against overload and output short circuit.
 - o Output frequency range 27 - 140 Hz
- n. 1 subwoofer TUBA:
 - o diameter 15"
 - o Impedance 8 Ohm
- Class D power amplifier piloting n. 2 speaker top Flauto.
 - o Each rms power 700W, THD MAX 1%.
 - o thermal protection with automatic reset against overload and output short circuit
 - o frequency range output 140Hz- 20KHz.
- Audio coverage width 180°

Luminous signals

ERROR			ON	Fault reporting. The system is in a protected state	System ready
SIGN IN2			SIGN IN1	Digital input signal presence.	Presence of digital or analogue input signal
CLIP IN2			CLIP IN1	Signal level greater than 70% of the maximum value (-3dB)	Signal level greater than 70% of the maximum value (-3dB)
CLIP OUT 1			CLIP OUT2	Subwoofer amplifier output level greater than 70% of the maximum value (-3dB)	Subwoofer amplifier output level greater than 70% of the maximum value (-3dB)
CLIP OUT4			CLIP OUT 3	Top flute amplifier output level greater than 70% of the maximum value (-3dB)	Top flute amplifier output level greater than 70% of the maximum value (-3dB)
CLIP OUT6			CLIP OUT5	Not in use	Not in use

3.1.1.2 Cabinet top Flauto

Wood casing with external finish with black polyurethane paint.

Tech specs:

N. 8 Full range speakers	3"
Impedance	4 Ohm
Nominal Power	350 W
Dimensions	145 x 120 x 675 mm (LxPxH) 5,70 x 4,72 x 26,57 inch
Weight	10,4 Kg / 22,92 lbs
Speakon	4 poli nero.
	1 + = output +
Input type	1 - = output -
	2 + = NOT IN USE
	2 - = NOT IN USE
Coverage angle	Horizontal: 95° , Vertical: 5°

for fixing the top flauto cabinet, we recommend using only the original accessories.

Mounting description	Code
Stand	ST1
Wall mount bracket	WM1
Truss mount bracket	TM1
Line array mount bracket	LA1

3.2 Law References

The legislative references applied are:

- 2014/30/UE Directive EMC
- 2014/35/UE Directive LVD
- 2011/65/CE Directive RoHS2

The national technical standards applied for compliance with the legislative references referred to above are:

- EN 60065 (2016-05 / A11_2017)
- EN 55032 (2008_07)
- EN 55103-2 (2009_07), Elettromagnetic environment E2/E3
- EN 61000-3-3 (2013-08)
- EN61000-3-2 (2014-08)
- EN 50581 (2013-05)

4. INSTALLATION AND STORAGE

4.1 Checks upon arrival of the equipment



Pic.5.1.1.

Carefully remove the packaging and check the integrity of the contained parts.



In the event of damage or missing items or if defects or damage are noted, do not attempt to repair the equipment but contact the service center, indicating the model, the code and the serial number of the appliance (see Pic.2.2.1. of plate)

4.2 Storage



If the appliance is not used for long periods, keep the equipment in a sheltered place, dry, clean and dust-free.

5. SETUP INSTRUCTIONS

5.1 Electrical connection.



Electric maintenance technician: qualified technician able to operate in presence of voltage inside cabinets, junction boxes and electrical systems. To operate the equipment in normal operating conditions, proposed for all electrical adjustments, maintenance and repairs.



The good functioning of the equipment and compliance with the safety requirements are only guaranteed if connected to an efficient electrical system built according to the laws in force (in Italy Legislative Decree 37/2008). The manufacturer assumes no responsibility for any damage to the equipment or to third parties caused by the use of a system that does not comply with current regulations.



It is recommended to use cables of connection and quality connectors certificates for the type of use.

- Main in. PowerCon connector 3-pin blue. Cable 3 x 1.5 mm² flexible type, flame retardant.
- Main out. 3-pole PowerCon connector White. Maximum current 12 A.
- Top Out 1-2. 4-pin Speakon connector black. Cable 2 x 2.5 mm² (2 x 1 0 AVG), pure copper (OFC), flame retardant, Soft Touch flexible PVC insulation. Connections: 1+ (positive), 1- (negative), 2+ (not used), 2- (not used).
- Analog IN 1. 3-pin XLR connector socket. 2-pole cable plus screen. Maximum length 100m.
- Analog 2 / buffer link. 3pin XLR connector plug. 2-pole cable plus screen. Maximum length 100m.
- Digital input, AES / EBU standard. Connector connector XLR - 3-pin - male. 110 Ω impedance balanced cable, maximum length 100 m.
- Digital buffer output, AES / EBU standard. Connector XLR - 3 pin. 110 Ω impedance balanced cable, maximum length 100 m.
- EPA Interface, Serial port technical dignostic.


Interface Panel



The connection of the digital input signals deactivates the analogue input signals. The AES / EBU slide selector selects the operation of the system as either the right (R position) or left (L position) audio channel.



In case of operation with analogue audio input, to avoid anomalous loudspeaker excursions, it is advisable to turn on the control panel first and then the audio system.

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5.2 . Periodic maintenance



Periodically clean the casing of the appliance using a soft cloth moistened with neutral and non-aggressive detergents and dry with a dry cloth.

6. FAULTS AND ANOMALIES.

For any malfunction or failure contact the authorized service center.



Never open the casing of the equipment unless expressly authorized in writing by our service center. Failure to comply with this rule will result in immediate forfeiture of the warranty and the consequent responsibilities for the aspects concerning the safety and operation of the equipment.

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7. DISPOSAL



INFORMATION TO USERS

Pursuant to art. 13 of Legislative Decree 25 July 2005, n. 151 "Implementation of Directives 2002/95 / EC, 2002/96 / EC and 2003/108 / EC, concerning the reduction of the use of hazardous substances in electrical and electronic equipment, as well as the disposal of waste" The crossed bin symbol on the appliance indicates that the product at the end of its useful life must be collected separately from other waste. Therefore, the user must provide the equipment with the essential components at the end of its life to the appropriate collection centers for electronic and electrotechnical waste, or return it to the retailer when new equipment of an equivalent type is purchased, in order to one by one. The adequate separate collection for the subsequent start of the equipment discharged to recycling, treatment and compatible environmental disposal helps to avoid possible negative effects on the environment and on health and favors the recycling of the materials that make up the equipment. The illegal disposal of the product by the user involves the application of administrative penalties provided for by current legislation.

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8. WARRANTY

TERMS AND CONDITIONS:

The Esoteric Pro Audio company guarantees the equipment for a period of 12 months.

The warranty begins on the date of purchase indicated on the fiscal document at the time of delivery of the equipment.

The company undertakes to repair or replace for free those parts that have manufacturing defects within the warranty period, the warranty does not include any form of compensation arising from direct or indirect damage to persons or property.

During the warranty period, if the Customer wants the repair to be carried out at the place of installation by the technicians of the company, it is necessary to send a written request.

In this case the relative travel, board and lodging costs will be fully charged. For repairs or interventions caused by defects or faults not clearly attributable to the material or manufacturing, all expenses for travel, repair and / or replacement of all parts will be charged to the customer.

The warranty extension is excluded following a repair operation on the equipment. In case of return of parts of the equipment, the customer will be able to make the shipment only after receiving written authorization from the company.

The costs of packing and shipping are charged to the customer (unless otherwise agreed between the parties).

The warranty does not cover accidental damage due to transport, negligence, inadequate treatment, use that does not comply with the warnings given in this manual or for all phenomena not related to normal operation or use of the equipment.

The warranty is void if the equipment is repaired by unauthorized third parties or if equipment or accessories not supplied, recommended or approved by the company are used or in the case of removal or alteration of the serial number during the warranty period.

The guarantee immediately ceases its effects in case of delay or non-payment, even partial, of the Customer.

The company declines all responsibility for any damage to persons or property, caused by improper use or imperfect use of the equipment.

For any controversy the Judicial Court of VERONA (ITALY) is competent.

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