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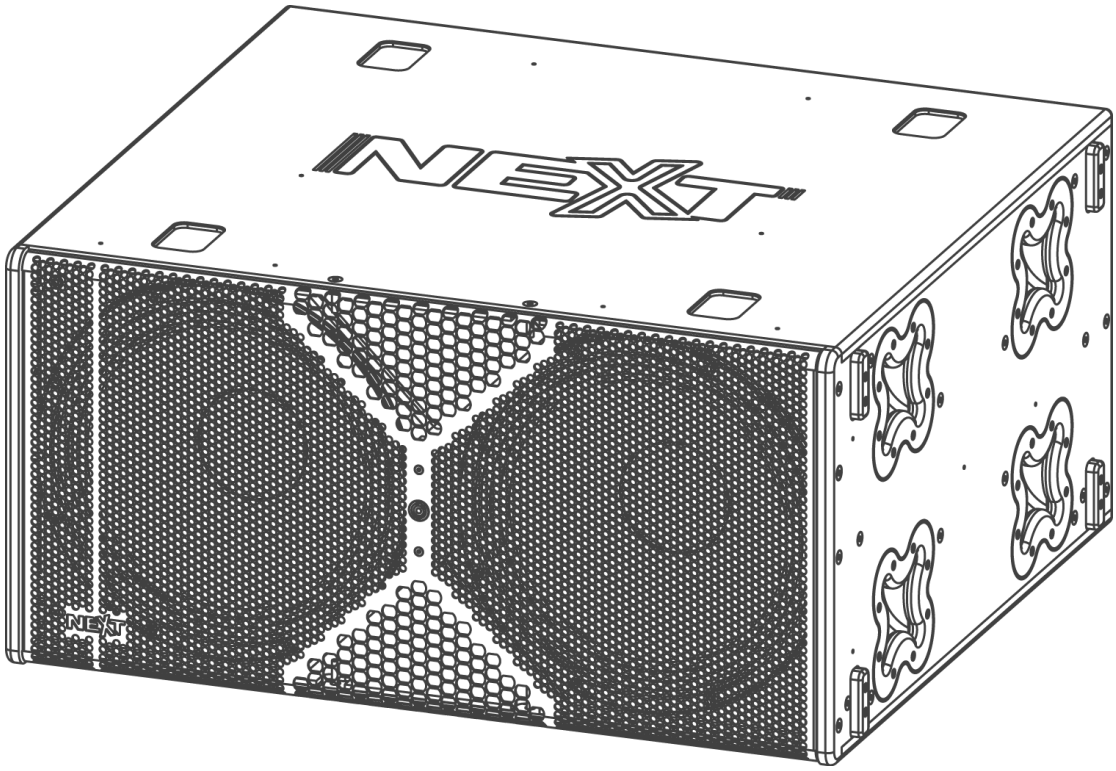


LAs418

Double Bass Reflex Subwoofer

USER MANUAL

V201511

CONTENTS

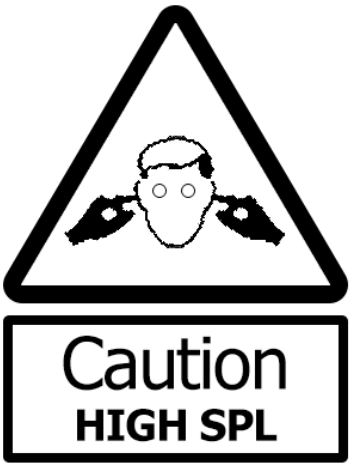
INTRODUCTION

Thank you for purchasing the NEXT-proaudio LAs418 Double Bass Reflex Subwoofer. This manual will provide you with useful and important information about your LAs418 dual subwoofer system. Please devote some time reading this manual, and keep it close for future reference. NEXT-proaudio is concerned with your safety and well-being, so please follow all instructions and heed all warnings. Also a better understanding of some specific features of the LAs418 dual subwoofer will help you to operate your system to its full potential.

SAFETY FIRST

It's important that loudspeaker systems are used in a safe manner. Please take some time to review the following points concerning safe use of the NEXT-proaudio LAs418 subwoofer.

DANGER – HEARING DAMAGE



NEXT LA Series systems are capable of producing extremely high sound pressure levels and should be used with care. Hearing loss is cumulative and can result from levels above 90dB if people are exposed for a long period. Never stand close to loudspeakers driven at high levels.

GROUND STACKING

- Always ensure that the floor or structure where the stack will take place is even and can withstand the weight of the complete stack.
- Do not stack speakers too high, especially outdoors where winds could topple the stack. Be aware that speakers working at very high power levels generate vibrations that can creep the systems. Take additional measures to prevent this if needed.
- Place cables in a way that they do not present a trip hazard.
- Don't place any objects on top of the stack, they can fall accidentally and cause injuries.
- Do not attempt to move the enclosures while connected.
- Try not to operate the LAs418 under heavy rain or moisture, it is weather-resistant but not completely "weather-proof".
- Do not expose the systems to extreme heat or cold conditions to prevent component damage.

RIGGING AND SUSPENSION SAFETY CONSIDERATIONS

- Before rigging or suspending NEXT LAs418 systems, inspect all components and all hardware for any signs of damage or missing parts. If you find any damaged, corroded or deformed parts, do not use them, replace them immediately.
- Do not use hardware that isn't load rated or that its' rating is not enough to handle the system's weight with a good safety factor. Don't forget that the hardware won't just hold the systems weight. It has to be sturdy enough to handle dynamic forces like winds without any part deformation.
- NEXT-proaudio advises customers to contact a licensed, professional engineer regarding equipment installation.
- NEXT LAs418 system installation should only be carried out by qualified personnel.
- Always use adequate protective clothing and equipment to prevent possible injuries.
- Only install the systems on solid, levelled ground and isolate the surrounding area during installation and operation, to prevent general public presence near the systems.
- Be sure you understand all local and national regulations regarding equipment installation.
- Negligence or failure to comply with these instructions may result on injury or death.

UNPACKING

Each NEXT LAs418 dual subwoofer is built in Europe (Portugal) by NEXT-proaudio, to the highest standard and thoroughly inspected before it leaves the factory. When unpacking the NEXT LAs418, examine it carefully for any signs of possible transit damage and inform your dealer immediately if any such damage is found.

It is suggested that you retain the original packaging so that the system can be repacked in the future if necessary. Please note that NEXT-proaudio and its authorized distributors cannot accept any responsibility for damage to any returned product through the use of non-approved packaging.

LAs418 OVERVIEW

The NEXT LAs418 is a front-loaded, bass-reflex dual subwoofer designed to be used with any of the NEXT-proaudio various Line-Array elements. Housing two very long excursion and very high power 18" drivers, delivers magnificent precision and "punch" in the very low frequency band at incredible pressure levels.

The enclosure is constructed from high quality 18mm Baltic Birch Plywood and is rigidly braced. The speakers are protected by a rigid metal grille and an acoustically invisible foam so LAs418 can be the "ground-shaker" it's supposed to be even longer. The connections are handled by three (two on the back plate and one on the front grille) Neutrik® SpeakON® NL4 connectors. Wheels of 100mm diameter can be mounted (available as accessories) on the back of the enclosure to make transportation easier as well as a specially designed "skate" that is fast to mount and versatile to use.

The LAs418 was also designed to be hung, up to a crazy quantity of 16 units, using a special flying kit developed specifically for this purpose (also available as accessories). LAs418 is also prepared to work on a cardioid setup featuring a NL4 connector on its' grille to avoid cabling to be seen by the audience.

CABLE SELECTING

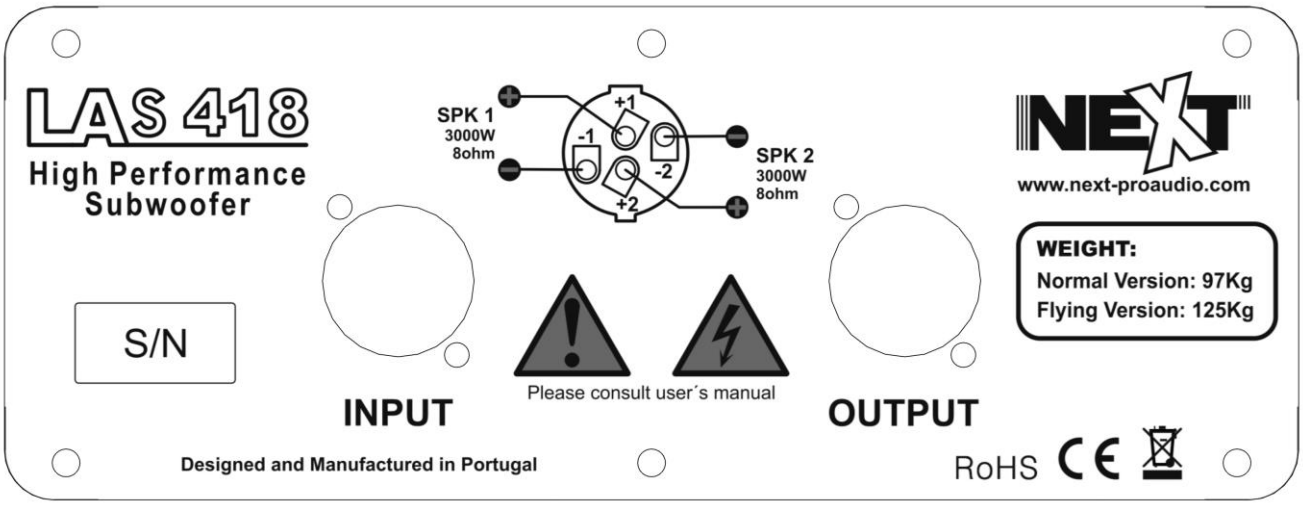
Selecting a cable consists of calculating the correct cable section (size) in relation to the load impedance and the required cable length. A small cable section will increase its serial resistance, which will induce power-loss and response variations (damping factor).

The following table indicates, for 3 common sizes, a cable length with a maximum serial resistance equal to 4% of the load impedance (damping factor = 25):

Cable section	Maximum Length related to load impedance	
	8Ω	4Ω
1.5 mm²	12 m [40 ft]	6 m [20 ft]
2.5 mm²	20 m [64 ft]	10 m [32 ft]
4 mm²	32 m [104 ft]	16 m [52 ft]

CONNECTIONS AND ELECTRIC DIAGRAM

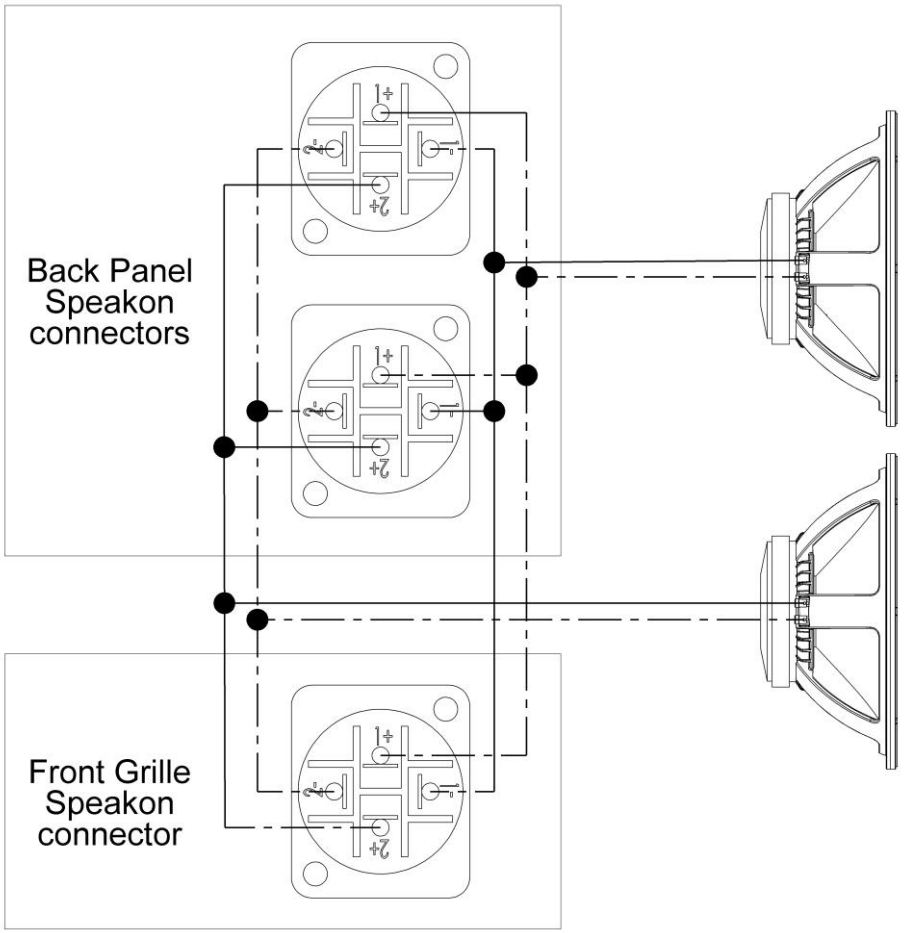
The LAs418 is connected through Neutrik® SpeakON® NL4FC plugs (not supplied). A wiring description is printed on the connections panel located on the back of the cabinet.



The 4 pins of the three NL4 SpeakON® sockets are wired in parallel within the enclosure. Either connector can be used to connect to the amplifier or another subwoofer. Please notice that each speaker is connected independently for greater versatility and better power handling. See the table and the diagram below:

NL4 PIN	Description
1+	Speaker 1 POS
1-	Speaker 1 GND
2+	Speaker 2 POS
2-	Speaker 2 GND

ELECTRIC DIAGRAM



AMPLIFICATION

The LAs418 subwoofers are designed to be driven by professional power amplifiers capable of producing 3000W to 3400W into 8 ohms (per speaker). Care should be taken to avoid amplifier clipping. It is important to understand that a low power amplifier driven into clipping is more likely to damage a loudspeaker than a higher power amplifier used within its ratings. This is because music signals have a high peak-to-average "crest" factor. When an amplifier is severely overdriven, its output waveform is “clipped” (its peaks are squared off) reducing the crest factor. In extreme cases, the waveform can approach that of a square wave. An amplifier is normally capable of producing far more power under these conditions than its undistorted rated power output. The use of very high power amplifiers with outputs much greater than those recommended is discouraged.

Care should also be taken to avoid switch-on surges, which can result in momentary power peaks in excess of specified ratings. When powering up a sound system it is important to switch on the amplifiers last, after the mixer and control electronics have stabilised. When powering down the system, reverse the sequence and switch off the amplifiers first.

TROUBLESHOOTING

Simple troubleshooting does not require sophisticated measurement equipment and can be easily undertaken by users. The technique should be to segment the system in order to identify the faulty system component: signal source, controller, amplifier, loudspeaker or cable? Most installations are multi-channel. It is often the case that one channel works and others do not. Trying different combinations of system elements can usually help to isolate and locate the fault.

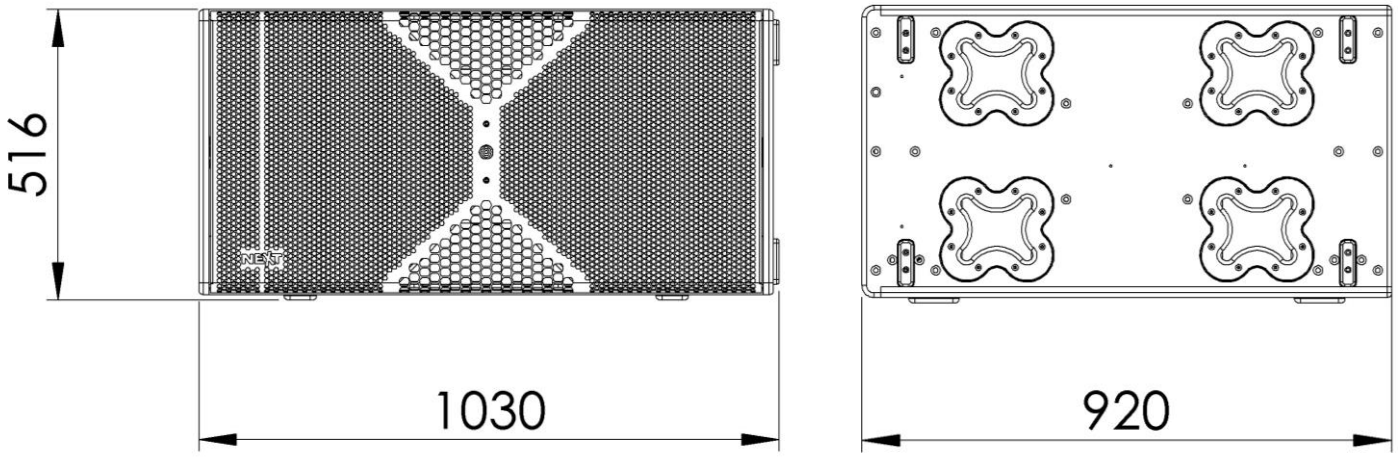
Some cabinet faults can be quite easily identified and corrected by the user. A simple sweep with a sine wave generator can be very helpful though it MUST be made at a fairly low level to prevent damage to the speakers. A sine wave sweep can help find:

- Vibrations due to loose screws.
- Air-leak noises: check that no screws are missing, particularly where the accessories attach to the cabinet.
- Vibrations due to a front grille badly positioned on the quick release fixings.
- Foreign object that has fallen into the cabinet after repair or through the ports.
- Internal connection wires or absorbing material touching the loudspeaker diaphragm: check by removing the bass loudspeaker.
- Loudspeaker not connected or phase reversed following a previous inspection, test or repair.

TECHNICAL SPECIFICATIONS

NEXT LAs418 TECHNICAL SPECIFICATIONS	
Speaker Type	Passive Very High Power Reflex Subwoofer
Frequency Response (-6dB)	28Hz – 250Hz
Low Frequency Extension (-10dB)	24Hz
Calculated Max. SPL (Cont/Peak)	143.8dB / 149.8dB (Half-Space)
Components	2 x 18” Very High Excursion / 4.5” Voice Coil Custom B&C Speaker
Program Power	6000W
Nominal Impedance	8Ω
Sensitivity (1W/1m)	109dB (Half-Space)
Recommended HPF	28Hz – 18dB/oct Butterworth
Recommended LPF	80Hz to 180Hz – 24dB/oct Linkwitz-Riley
Construction	18mm Multi-laminate Birch Plywood, Screwed and Glued
Finish	Black Textured Scratch Resistant Paint
Grille	Steel, Black Finish (also available in other colours)
Dimensions (W x H x D)	1030 x 516 x 920 mm
Net Weight	94 kg
Shipping Weight	98.8 kg

Dimensions



NOTES

WARRANTY

NEXT products are warranted, by NEXT-proaudio, against manufacturing defects in materials or craftsmanship over a period of 5 years for the loudspeakers, and 2 years for the other components, counting from the date of original purchase. The original receipt of purchase is mandatory for warranty validation purposes, and the product must have been bought from a NEXT-proaudio authorized dealer. During the warranty period NEXT-proaudio will, at its own discretion, either repair or replace a product which prove to be defective provided that the product is returned in its original packaging, shipping prepaid, to an authorized NEXT-proaudio service agent or distributor.

NEXT-proaudio cannot be held responsible for defects caused by unauthorized modifications, improper use, negligence, exposure to inclement weather conditions, act of God or accident, or any use of this product that is not in accordance with the instructions provided by this manual and/or NEXT-proaudio. NEXT-proaudio is not liable for consequential damages. This warranty is exclusive and no other warranty is expressed or implied. This warranty does not affect your statutory rights.

CONTACTS

In case of any doubts or any information just:

Write us:
NEXT-PROAUDIO
Rua da Venda Nova, 295
4435-469 Rio-Tinto
Portugal

Contact us:
Tel. +351 22 489 00 75
Fax. +351 22 480 50 97

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info@next-proaudio.com

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