PROFESSIONAL AUDIO SYSTEM

HPS246

OPERATING MANUAL

Ver. HPS246-EN-1.1

LSS Advanced Speaker Systems
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NOTICE:

LSS products are manufactured for use according to proper procedures by a qualified operator and only for the purposes described in this manual.
The following conventions are used to indicate and classify precautions in this manual. Always heed the information provided with them. Failure to heed precautions can result in injury to people or damage to property.

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No patent liability is assumed with respect to the use of the information contained herein. Moreover, because LSS is constantly
striving to improve its high-quality products, the information contained in this manual is subject to change without notice. Every precaution has been taken in the preparation of this manual. Nevertheless, LSS assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained in this publication.

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INTRODUCTION

Congratulation on the purchase of your new LSS loudspeaker.
Quality innovation and versatility, this is a summary of the new system developed by LSS for professional sound users.
LSS produces professional audio products – the result of exceptional engineering and meticulous craftsmanship.
This manual is intended for use with LSS loudspeaker. This includes: safety precautions; installation, set-up and operating instruction.
Please read this manual plus any accompanying manual and follow all relevant precautions and instructions. This should allow you to obtain the maximum performance from your new loudspeaker.
Where there are conflicts or overlaps, the information in any accompanying manual supersedes the information in this manual.

SAFETY AND WARNING

IMPORTANT! SAFETY WARNING!

In the interest of their own and others' safety and to prevent voiding the warranty, we recommend a careful reading of this section before using the product.

- This product was designed and manufactured to be used as a speaker system in the context of a typical sound reinforcement system.

The use for any purpose other than these is not provided by the manufacturer and is therefore under the direct responsibility of the user / installer.

- This device complies with class I (must be connected to the outlet with a protective earthing connection).

TO AVOID THE RISK OF FIRE AND / OR ELECTRIC SHOCK*:

- Do not expose this system to rain or moisture. Do not expose the apparatus to dripping or splashing water. Do not place objects filled with liquids, such as drinks, on the apparatus.
- Before connecting the system, be sure the mains voltage corresponds to that stated on the product.
- Connect this appliance to a power outlet with earth contact, according to national security force, via a power cable of adequate section ends with a plug or connector that meets the applicable safety regulations.
- The unit is connected to the network even when the power switch is in position '0' (OFF). Before any maintenance, disconnect the power cable from the outlet.

*Risk of electric shock only for self-powered system.

IMPORTANT! SAFETY PRECAUTIONS!

Read This First.

Read and heed all warnings and safety instructions in this Manual before using the product.

Failure to follow all precautions can result in equipment damage and / or personal injury.

1. Read these instructions.
2. Keep these instructions
3. Heed all warnings and follow all instructions.
4. Use only attachments/accessories specified by the manufacturer.
5. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
6. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
7. LSS loudspeakers can produce sound levels capable of causing permanent hearing damage from prolonged exposure. The higher the sound level, the less exposure needed to cause such damage

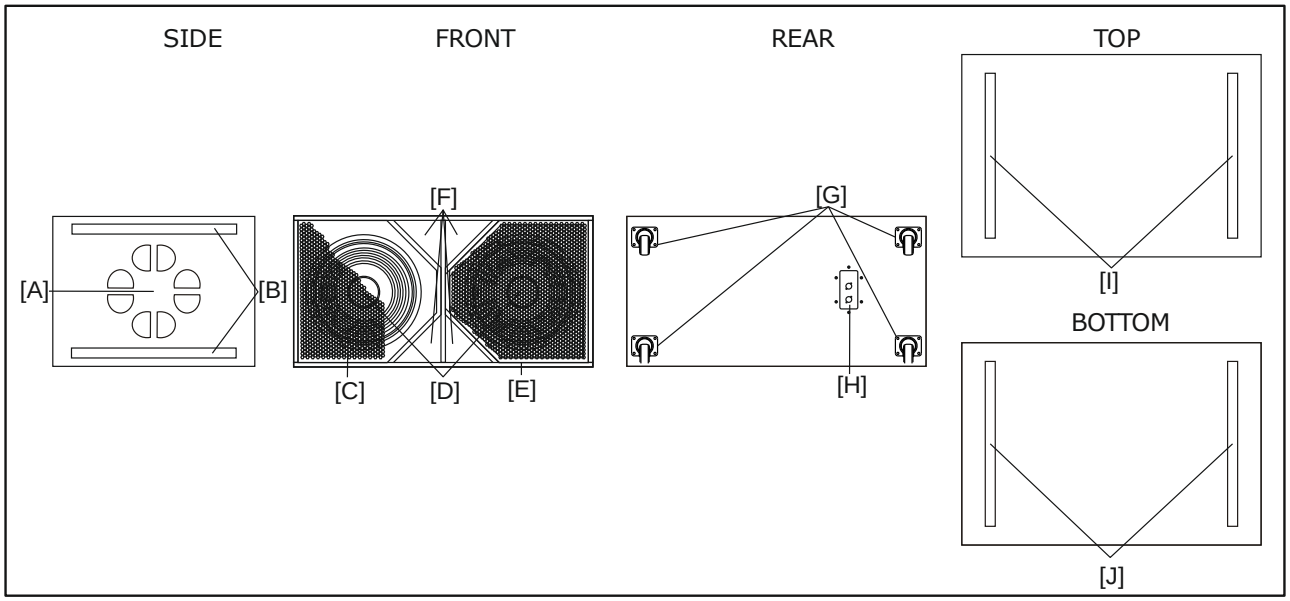
CAUTION: This product is energized as long as it is connected to the AC.

CAUTION: Allow at least six inches of free space all around the amplifier for sufficient ventilation.

APPLICATION

LSS's HPS246 loudspeaker is a high power subwoofer system that provides high output, low distortion sound reinforcement.
The cabinet is constructed of birch plywood of 18 mm reinforced with optimized reflex for low distortion. The woofer used is custom construction of 460 mm (18") diameter with 115 mm (4.5") split winding copper voice coil, 57 mm (2") peak-to-peak excursion before damage, Double silicone spider with optimized compliance, Ventilated voice coil gap for reduced power compression, Aluminum demodulating ring for very low distortion. HPS246 was designed for a wide range of professional applications. High performance and very high peak output for concert sound. The HPS246 powering mode is only passive amplified operation with external digital processor.
LSS's HPS246 is ideal product for bass frequency reinforcement for concert touring applications. LSS HPS246 is a subwoofer reflex of high peak low frequency response in the range 25-120Hz.

PHYSICAL DESCRIPTION



[A] Handles
[B] Plastic Skeeds
[C] Steel Protection Grid
[D] Woofers
[E] Enclosure Cabinet
[F] Reflex
[G] Wheels
[H] Connection Panel
[I] Recesses for Plastic Skeeds
[J] Plastic Skeeds

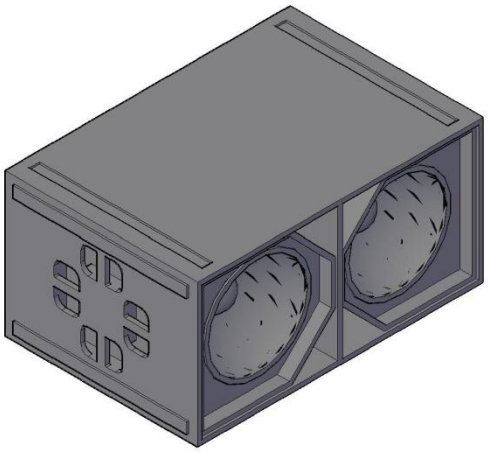
Materials and construction meet the highest professional standards to ensure maximum reliability

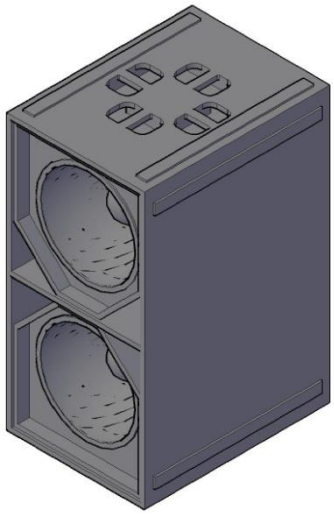
TECHNICAL SPECIFICATIONS

PHYSICAL	**Dimensions mm (±1 mm) [Inches]**	Height 600 [23.62"]
		Front Width 1200 [47.24"]
		Depth 810 [31.89"]
	Weight Kilograms	Net Weight 99
		Shipping Weight 105
SYSTEM PERFORMANCE	**Frequency Response**	±5 dB 25 Hz ~ 120 Hz
		-10 dB 20 Hz
	Sensitivity (1 Watt @ 1 m)	LF Range Passive 101 dB
	Max SPL Calculated (Power AES) [PEAK]	136 dB [143 dB]
	Nominal Input Impedance (Ω)	LF Range Passive 4 Ω
	Power Handling (Watt cont. AES)	LF Range Passive 3400
	Peak Power (W)	16000 W
	Nominal Dispersion (@ -6 dB)	360°, varies with number of units and configuration
MECHANYCAL	**Enclosure material**	Birch Plywood of 18 mm [0.71 inches]
	Finish	Texture poliuretanic black paint
	Grille	Powder coated perforated steel with anti-dust foam
	Connectors	2 Neutrik NL4 Speakon

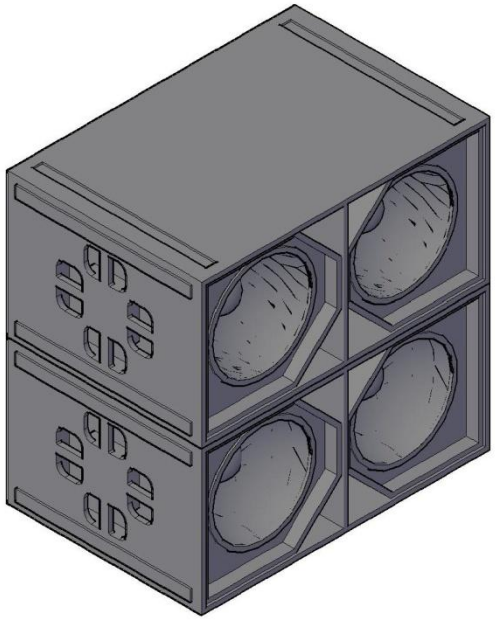
INSTALLATION AND WIRING

HPS246 can be installed stand alone or in stack configuration. It can be installed both in horizontal and vertical position.





In the bottom of the case there are two plastic skeeds used as feet to support the sub.
If installation is in stacking mode, plastic skeed fit on the recesses placed in the top of the case placed beneath.

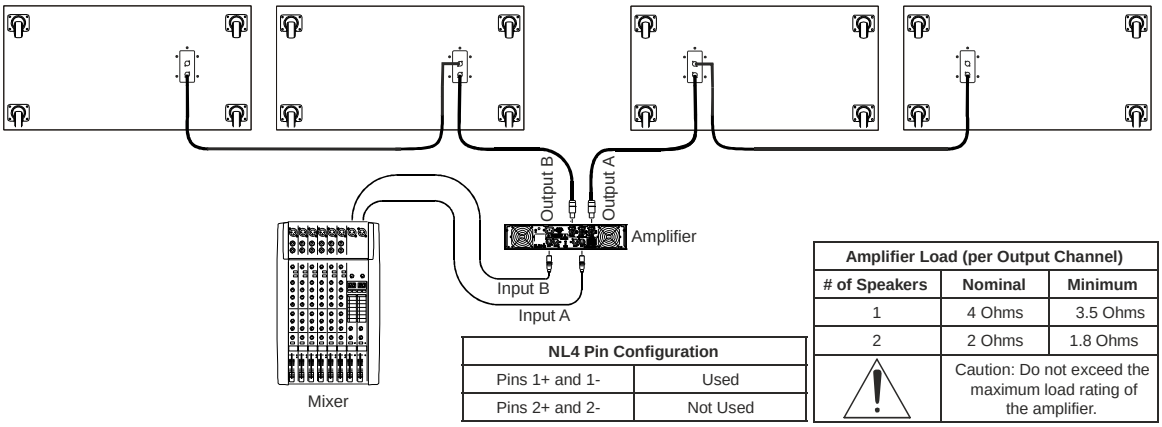


Choose a safe mounting location, so as to prevent the cables can be stepped on or create tripping hazards.

Before making connections between mixer and speakers, make sure the mixer volume is turned down.

In the connection panel there are two Speakon NL4 connectors referred as ‘IN’ and ‘OUT’.
IN is the input connector and must be connected to the amplifier, ‘OUT’ is a LINK OUT and can be connected to other systems.

Recommended configuration using multiple speakers is represented below:

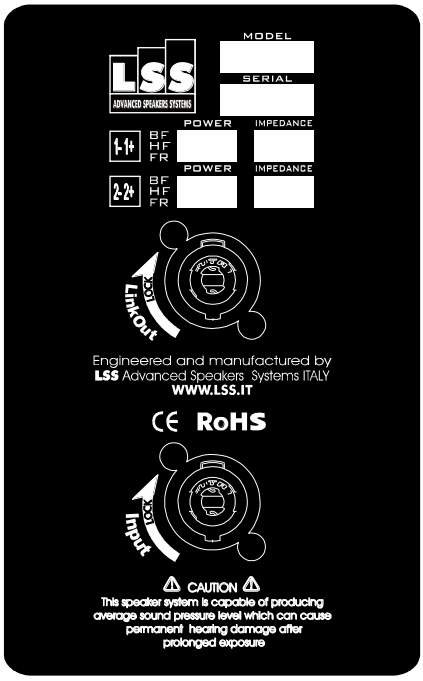


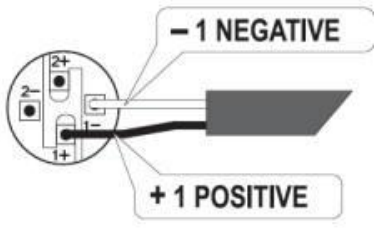
NL4 Pin Configuration	
Pins 1+ and 1-	Used
Pins 2+ and 2-	Not Used

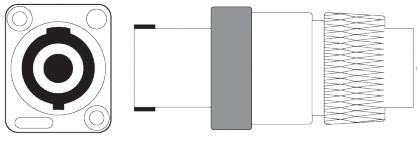
Amplifier Load (per Output Channel)		
# of Speakers	Nominal	Minimum
1	4 Ohms	3.5 Ohms
2	2 Ohms	1.8 Ohms
⚠	Caution: Do not exceed the maximum load rating of the amplifier.	

Channel 2 has been linked from In to the out.

You can now use the system







WEEE DIRECTIVE

WEEE Directive
Warning!
The product is marked with this symbol which indicates not to discard electrical and electronic equipment via the normal procedure for disposal of household waste. For these products there is a diverse collection system in accordance with legislation that requires proper treatment, recovery and recycling of used products. For more information please contact the appropriate local authority.
The black bar underneath indicates that the product was placed on the market after 13 August 2005.

INFORMATION FOR PROPER DISPOSAL
For home users
In the European Union
Warning: To dispose of this equipment, do not use the ordinary dust bin!
The electrical and electronic equipment must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of used products. Following the implementation by member states, private households within the EU can give free electrical and electronic equipment to designated collection facilities *.
In some countries (*), your local retailer may withdraw the old product for free if you purchase a new one of similar type.

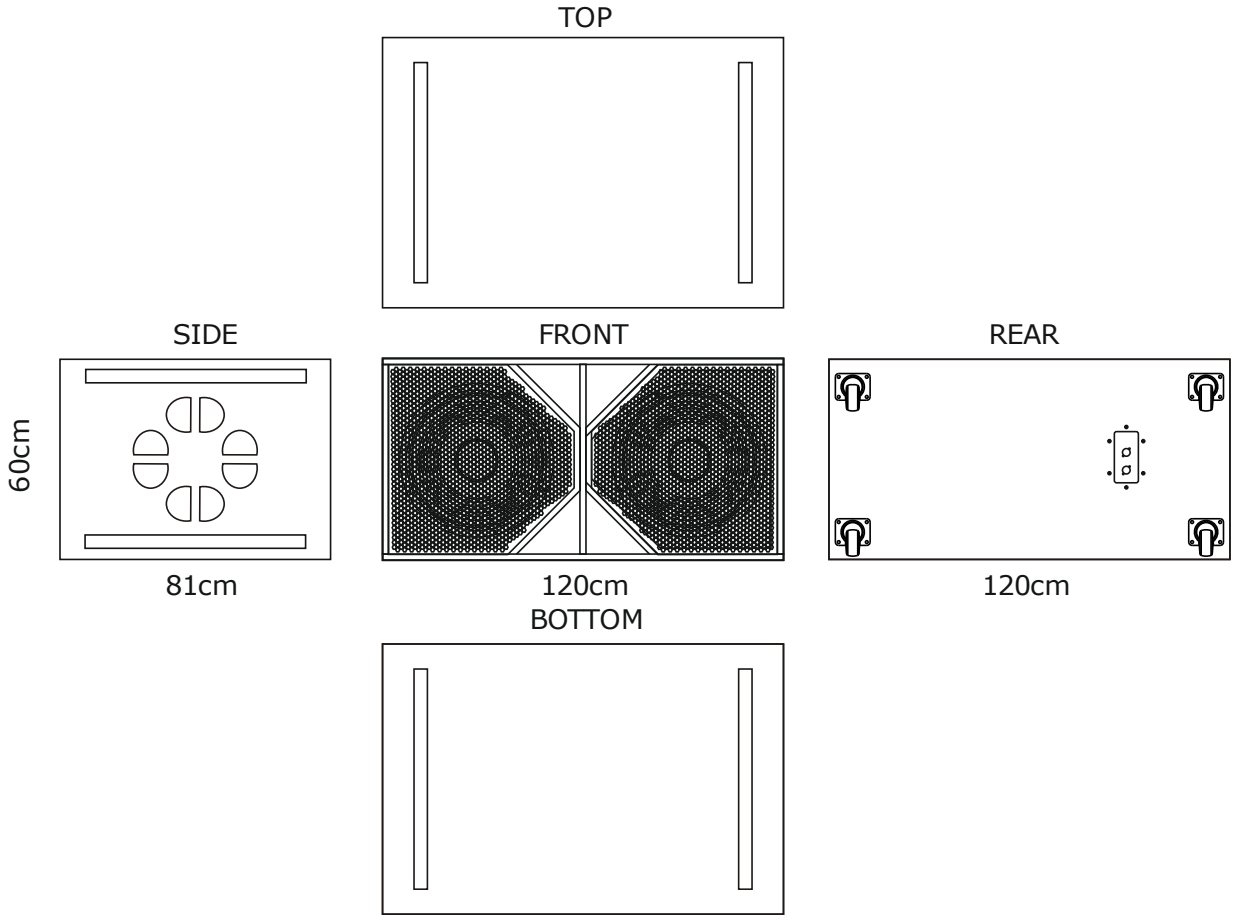
* For more information please contact the appropriate local authority.

In countries outside the EU: please contact your local authorities and ask for the correct method of disposal.
In Switzerland: Used electrical or electronic equipment can be returned free of charge to the dealer, even if you do not purchase a new product.
Further collection facilities are listed on the homepage or www.swico.ch. www.sens.ch.
For professional users
In the European Union
Warning: If the product is used for business purposes, the following steps to delete it:
contact your LSS dealer for information about the product recall.
Might be charged for the costs of collection and recycling. Small products (and amounts) might be taken back by your local collection facilities.
In Spain: contact the established collection system or the local authority for collection of used products.
In countries outside the EU: please contact your local authorities and ask for the correct method of disposal.

TROUBLESHOOTING

Problem	Possible cause (s)	Action
1. No Sound	Amplifier	Connect a known working test speaker to the amplifier outputs. If there is no sound, check that all the electronics are on, the signal routing is correct, the source is active, the volume is turned up, and so on. Correct/repair/replace as necessary. If there is sound, the problem is in the wiring.
	Wiring	Verify that you have connected the correct wire pairs to the amplifier. Play something at low level through the amplifier (for example, from a CD player or tuner). Connect the test speaker in parallel with the malfunctioning line. If the sound level has gone or is very weak, the line has a short in it (possibly a severe scrape, pinch, or staple puncture). If the sound level is normal, the wire is open (possibly a cut wire or a missed connection). Using the test speaker, move down the line and test each connection/junction until you find the problem and correct it. Observe proper polarity.
2. Poor Low Frequency Response	Speakers wired out-of-polarity	When two speakers are connected out of polarity, the low frequencies will cancel each other acoustically. Carefully observe the wire markings or tracers on your speaker wires. Verify that the amplifier (+) terminal is connected to pin 1+ of the NL4 connector and the amplifier (-) terminal is connected to pin 1- of the NL4 connector.
3. Intermittent output such as crackling or distortion	Faulty Connection	Check all connections at amplifier and speakers to ensure they are all clean and tight. If the problem persists, it may be in the amplifier or wiring. See Problem 1 above.
4. Constant noise such as buzzing, hissing, humming	Defective amplifier or other electronic Devices	If the noise is present but no program material is playing, the likely cause is the signal chain in the electronics. Evaluate each component as necessary to isolate the problem.
	Poor system grounding or ground loop	Check and correct the system grounding, as required.
If these suggestions do not solve your problem, contact your nearest LSS dealer or LSS distributor.		

DIMENSIONS



NOTES

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