



PROFESSIONAL AUDIO SYSTEM

# SP220



OPERATING MANUAL

Ver. SP220-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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## 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).



#### WARNING

RISK OF ELECTRIC SHOCK  
DO NOT OPEN

TO REDUCE THE RISK OF ELECTRIC SHOCK  
DO NOT REMOVE COVER (OR BACK)  
NO USER SERVICEABLE PARTS INSIDE  
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL  
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK  
DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE

### 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.

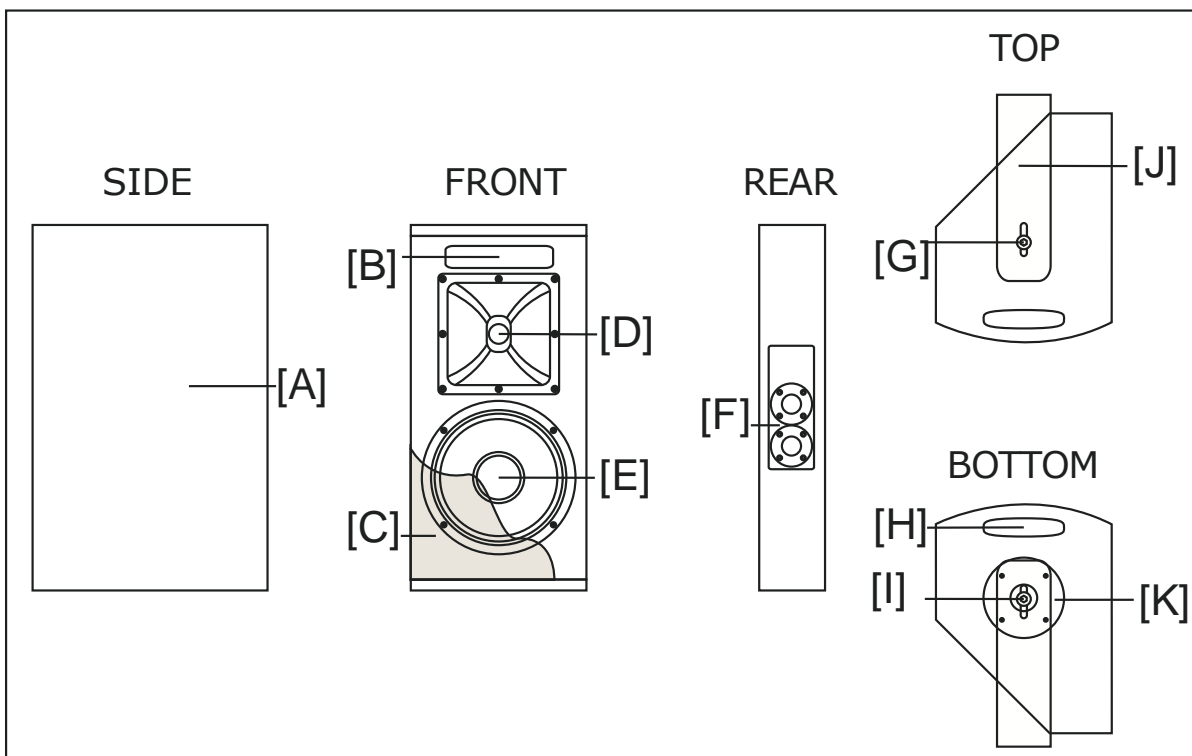
## APPLICATION

LSS's SP220 is a 2-Way loudspeaker system designed for use in portable or fixed installations, it can be used as a dedicated top-box or personal mini-monitor and should be supported by subwoofer below 100 Hz.

SP220 uses one 200 mm (8") mid-woofer in Ferrite with a high excursion voice coil of 51mm (2") and a driver from 25 mm (1") in Mylar on a rotatable horn. SP220 is built entirely of birch plywood of 15 mm. The passive crossover with a low tolerance 12/18dB slope for the woofer and low distortion ensure a sound and maximum reliability. SP220 works in Full-Range

The pole mount cup and balance-optimized handles allows for quick and easy load-in for portable use. His extreme linearity and low distortion allows use as the main system in smaller events or as a personal floor monitor. The points included in the coupling cabinet facilitate the suspension in fixed installations.

## PHYSICAL DESCRIPTION



- [A] Enclosure Cabinet
- [B] Reflex
- [C] Steel Protection Grid
- [D] HF Driver
- [E] Woofer
- [F] Connection Panel

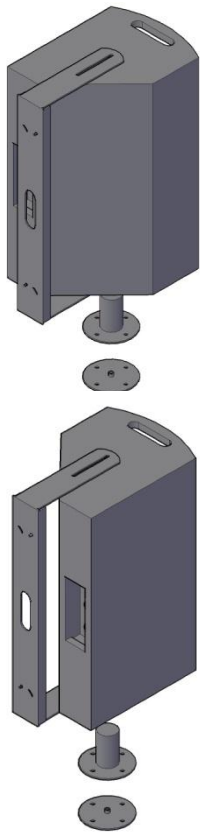
- [G] Mounting Nut
- [H] Handle
- [I] Mounting Nut
- [J] Mounting Bracket
- [K] Adapter for Pole or Bracket

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

## TECHNICAL SPECIFICATIONS

<b>PHYSICAL</b>	<b>Dimensions mm (±1 mm) [Inches]</b>	Height 500 [19.68"]
		Front Width 240 [9.45"]
		Rear Width 85 [3.35"]
		Depth 315 [12.40"]
<b>Weight Kilograms</b>	<b>Weight Kilograms</b>	Net Weight 10
		Shipping Weight 12
<b>SYSTEM PERFORMANCE</b>	<b>Frequency Response</b>	±5 dB 60 Hz ~ 20 KHz
		-10 dB 40Hz
	<b>Sensitivity (1 Watt @ 1 m)</b>	Full Range Passive 94 dB
		LF 94 dB
		HF 94 dB
	<b>Max SPL Calculated (Power AES) [PEAK]</b>	119 dB [123 dB]
	<b>Nominal Input Impedance (Ω)</b>	Full Range Passive 8 Ω
		LF 8 Ω
		HF 8 Ω
	<b>Power Handling (Watt cont. AES) [PEAK]</b>	Full Range Passive 310 W [875 W]
LF 280 W [800 W]		
HF 30 W [75 W]		
<b>Nominal Dispersion (@ -6 dB)</b>	Horizontal 90°	
	Vertical 40 °	
<b>MECHANICAL</b>	<b>Enclosure material</b>	Birch Plywood of 15 mm [0.59 inches]
	<b>Finish</b>	Texture polyurethanic black paint
	<b>Suspension</b>	4 point mounting suspension, U Bracket
	<b>Grille</b>	Powder coated perforated steel with anti-dust foam
	<b>Connectors</b>	Neutrik Speakon NL4
	<b>Optional Accessories</b>	Speaker Soft Bag

## INSTALLATION AND WIRING



SP220 speaker can be mounted to the wall using its own bracket or on the floor as monitor.

There are two plates provided with the speaker: one of them must be installed when using a mount pole, the other one must be used when using the mounting bracket to fix it.

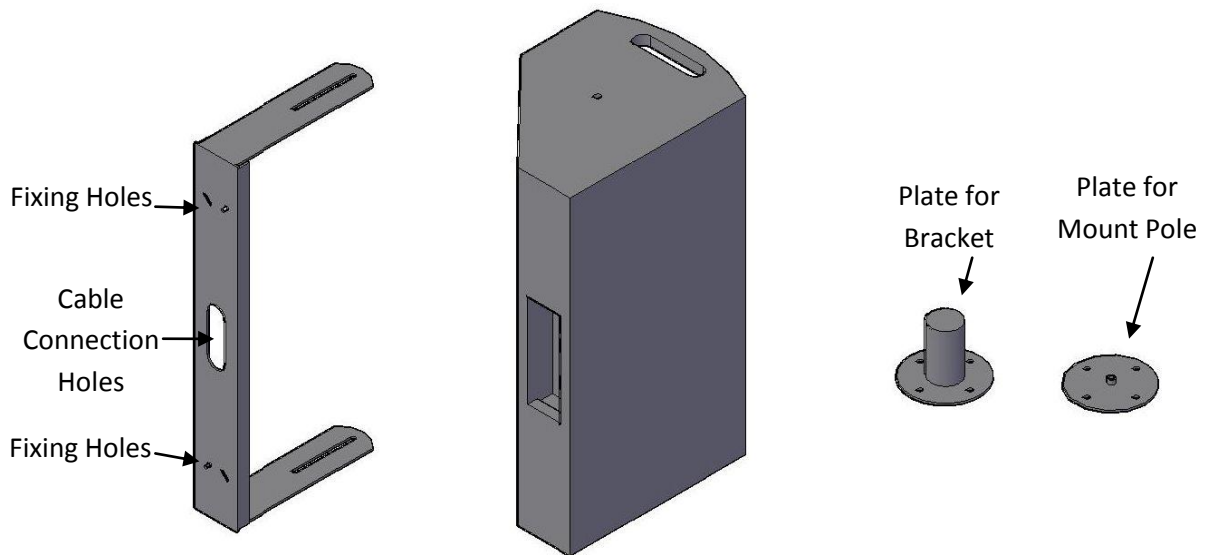
The bracket must be fixed to the wall through the fixing holes using plugs suitable to support the weight of the entire apparatus.

Bracket must be secured to the speaker with the screws on top and bottom of the case.

Installation can be done either in vertical or horizontal position.

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

Make sure that the shape and extent of the supporting surfaces are such as to ensure a safe support.





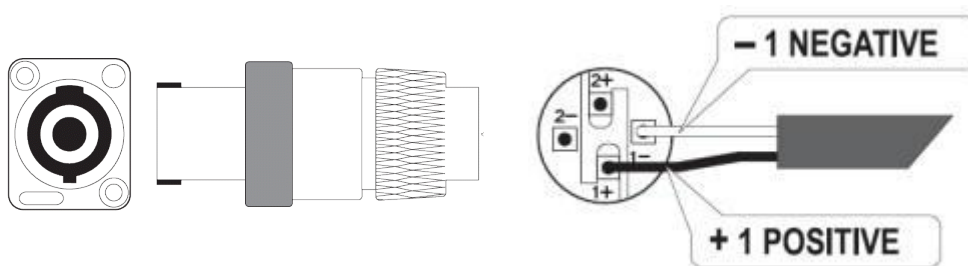
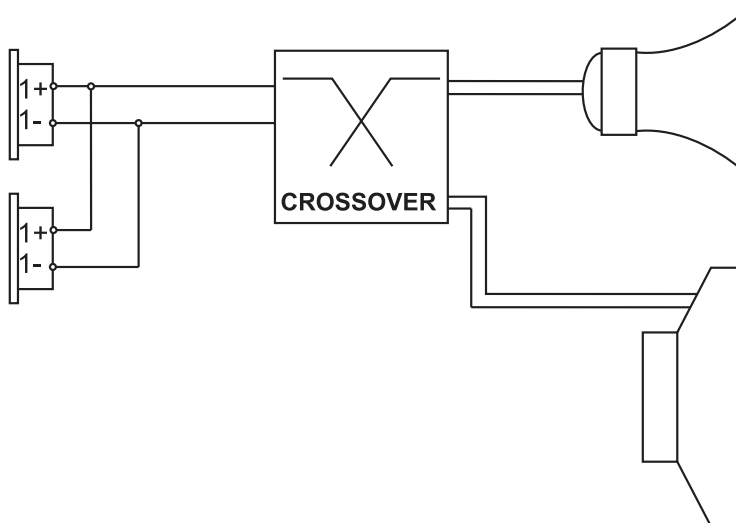
Before making connections between mixer and speakers, make sure the mixer volume is turned down.

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.

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](http://www.swico.ch).  
[www.sens.ch](http://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.

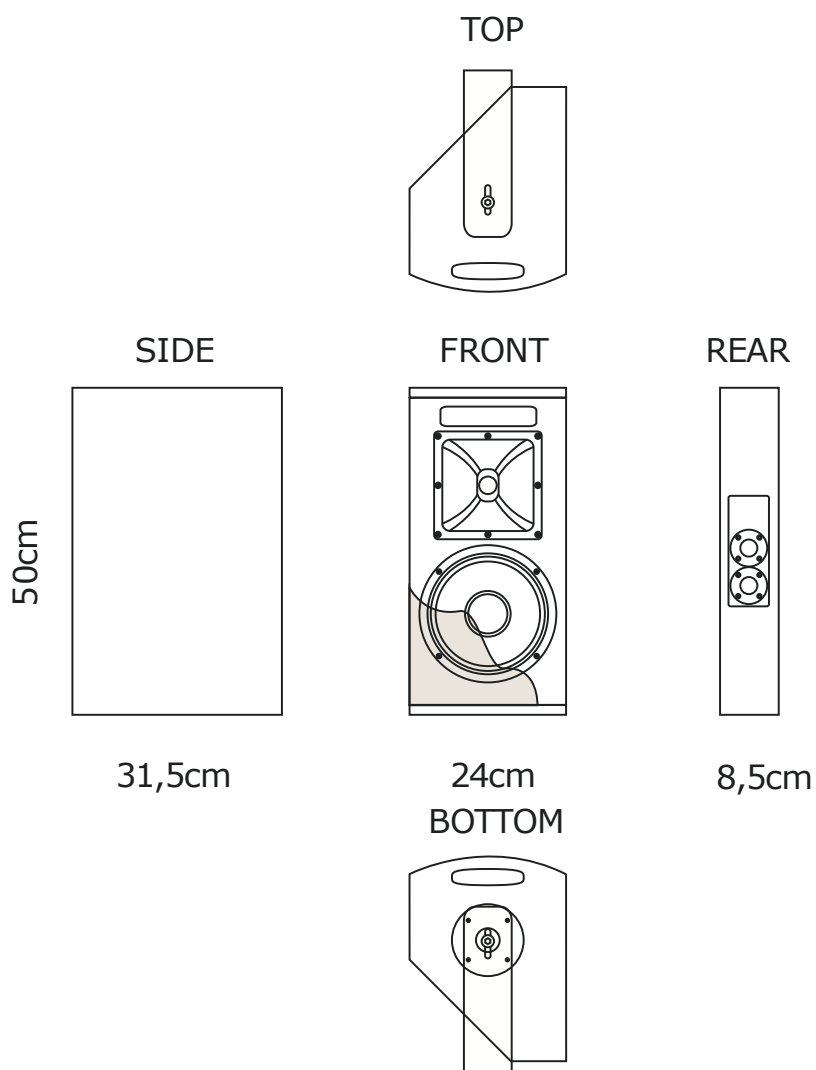
Might be charged for the costs of collection and recycling. Small products (and amounts) might be taken back by your local collection facilities.

**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.



## DIMENSIONS



## **NOTES**



**CONTACT INFORMATION:**

**LSS Advanced Speaker Systems**

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