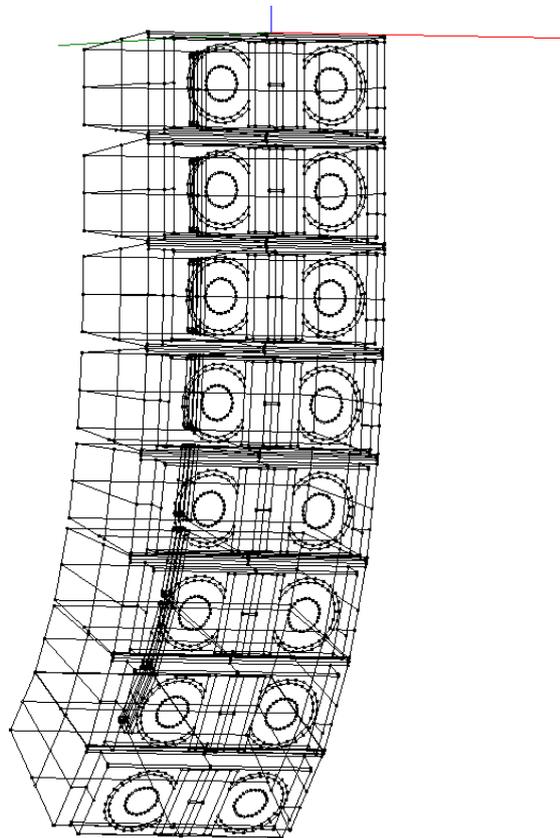




SLA 208M ND

Manual



Manufacturer: POL-AUDIO Leszek Polanowski

Manufacturer Address: Skłodowskiej 33, 05-420 Józefów, Polska

Model: SLA 208 M ND

Document version: 0.1-SLA208MND

Issue Date: 2016.03

Legend



WARNING



INFO



DANGER



TIPS



Keep this document and act according to keep the warranty and operate the system in a proper way.



Please check the package in presence of a forwarder and make sure it is not damaged during the transport. Notify the forwarder company and sender about any problems with the package.



SERVICE

To contact manufacturer service please use phone or email:

+48 22 789 30 02
serwis@polaudio.pl

We appreciate your purchase of POL-AUDIO product. Welcome to the users family! If you will have any ideas that you would like to share – please let us know! We are always interested in how the system perform and what is your experience.

+ 48 22 789 30 02
polaudio@polaudio.pl

All POL-AUDIO loudspeaker systems are being manufactured in Poland.

GENERAL USAGE AND SAFETY



PRODUCT DAMAGE

In case of a product damage, contact authorized service immediately. Do not use damaged product and do not try to repair it. You should not modify the product. Violating those conditions can exclude product from warranty.



OPERATING CONDITIONS

Do not operate the system next to source of water or other fluids. Product should be placed on stable and dry ground. Please avoid operating the system next to a heat source. Protect the system from strong wind to avoid possible collapse.

System can't be placed near fire source. During storm, system should be unplugged. Atmospheric discharge can lead to product damage. Cables should be placed in a way that protects it from being cut or damaged in any other way.



WARRANTY

POL-AUDIO products are secured with 36 months of warranty from the date of sale. It protects defects found in the materials or workmanship. The owner should inform about these defects the dealer or the distributor, providing receipt or invoice of date of purchase and defect detailed description. This warranty does not extend to damage resulting from improper installation, misuse, neglect or abuse. POL-AUDIO will verify damage on returned units, and when the unit has been properly used and warranty is still valid, then the unit will be replaced or repaired. POL-AUDIO is not responsible for any "direct damage" or "indirect damage" caused by product defectiveness.



WARRANTY CANCELLATION

Operating system with a preset different than the one provided by the manufacturer can lead to system damage and warranty cancellation. Presets provided with the system can only be modified within necessary scope on the input channels. Manufacturer is not responsible for damages caused by misuse of preset.

Technical data of the product can be changed by a manufacturer without previous notification.

All rights to this document and product described are restricted by POL-AUDIO Leszek Polanowski.

PRODUCT DESCRIPTION

SLA 208M ND is very small and compact concert line array system. Discreet look and high sound quality is what makes SLA 208M ND very powerful tool. Extreme potential with extremely small and light weight creates very good solution for events from conference up to a large scale open air concert. Horizontal dispersion can be adjusted by exchangeable parts at the front of the module. Both sides can be changed to 40 or 60 degrees. This way we can configure the horizontal dispersion from 80 to 120 degrees.

Planar drivers used in the system are dedicated to use in line array system. They reproduce nearly entirely coherent wave front at the exit of the waveguide.

8" speakers are equipped with very efficient and strong neodymium magnets. Despite very low weight they deal very well with heat exchange, protecting the speaker from overheating. Very high ration of power to weight makes it a good choice for live sound solutions.

SLA 208M ND utilize 3 point suspension system. Thanks to this the weight could be lowered even further. Each module has a possibility of splay angle adjustment from 0 to 12 degrees with 1 degree step.

Flying bar for SLA 208M ND allows to suspend up to 18 modules or ground stack up to 12 modules of system. Using additional frames, SLA 208M ND can be placed on a speaker stand or, with special adapter, on the top of SWL 118 subwoofer.

Operation



Before you connect the product to other elements of the system, make sure all of the parameters match and guaranty a safe operation.



After exposure to very low temperatures system should be left until the temperature is similar to the operating conditions during the event. If the system is exposed to the temperature shock it can be damaged.

Przed uruchomieniem systemu należy się upewnić, że wysyłany sygnał nie jest przesterowany.



How to minimize risk of system damage

Make sure the signal is not distorted and is within operating levels of the system. Avoid placing a microphone in front of the system to minimize the risk of a feedback. Before you turn on the system make sure the amplifier and loudspeaker system are properly matched with all of the technical data.



GLL libraries for EASE Focus 2 and ease focus 3

For acoustic prediction use EASE Focus 2 or EASE Focus 3 with libraries provided by manufacturer. Be sure to use correct model and correct version for simulations. To download system libraries, please visit manufacturer website or contact the manufacturer.



Venue simulations

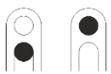
The more precise the model the accurate the simulation will be in EASE Focus. It is better to gather all of the information and create the simulation before the event. In most cases there will be an opportunity to adjust the configuration at the venue therefore remember to take the file with the project and a computer with application in case you need to modify something last minute.

General safety RULES

- During the system setup always place pins so the safety lock is engaged so it cannot be pulled out without releasing it.
- Always use pins provided by the manufacturer and no other objects.
- Before using a pin check if the safety lock is operating properly.
- When system is being ground stacked, make sure the base is stable and it is safe for system not to collapse.
- To increase the stability, attach the frame to the base.
- Always verify if the hoist and construction is prepared for the load you are about to fly.
- **Do not stand under the array. If the system collapses it can cause permanent health damage or even death.**

SUSPENSION SYSTEM

**POL
AUDIO**



During system installation always place pins according to markings on the rear rail Picture 2.

MAXIMUM ARRAY LENGTH

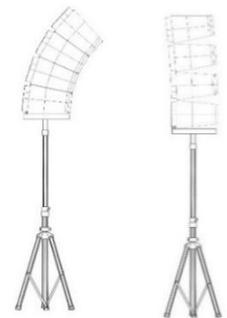
Depending on the configuration maximum array length is:

- Flying bar flown 18 pieces
- Flying bar ground stacked: 8 pieces
- Speaker stand bar: 4 pieces
- SWL118 adapter: 6 pieces

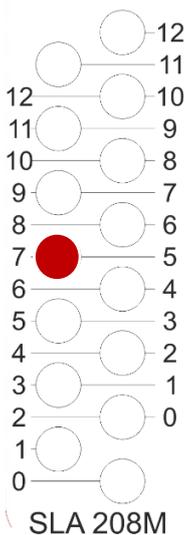
While placing the system on a speaker stand, always direct one of the tripod toward the direction in which center of mass is being displaced toward. This why you will limit the possibility of system collapse. All of the angles should be effect of EASE Focus simulation.

SYSTEM ON SPEAKER STAND

● Point marked as 5 degrees when place in a hole (●) should be treated as 0 degrees relative to bar. Other holes mean +/- 7 degrees (with 1 degree step).



Picture 1 System on speaker stand



Picture 2. Rear suspension rail markings

SYSTEM REAR PLATE

POL-AUDIO SLA 208M ND are equipped with back plates with basic parameters.

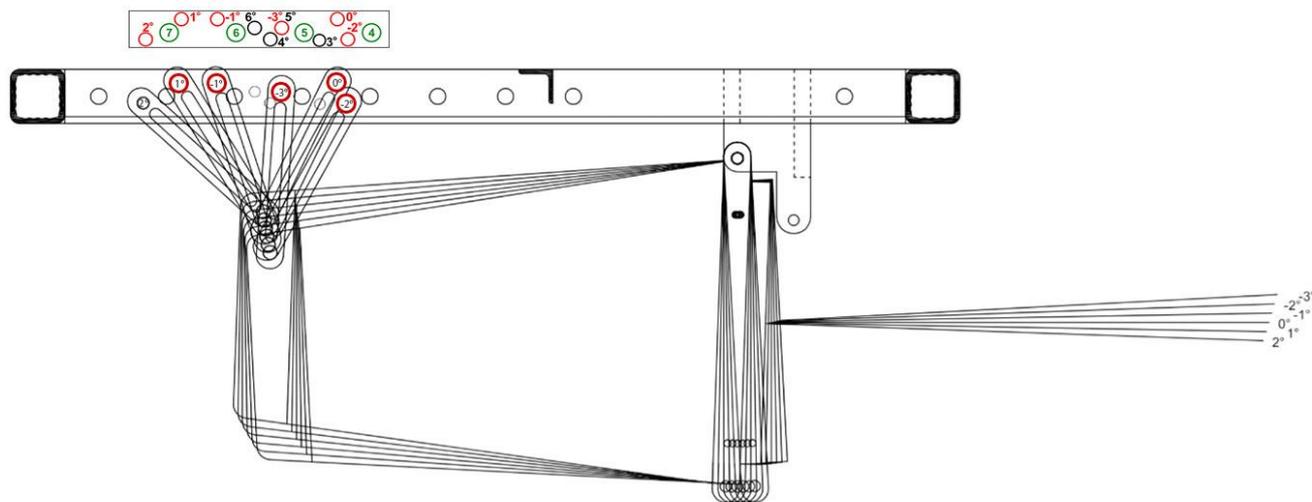


Picture 3 Back plate of SLA 208M ND

FLYING BAR MARKINGS

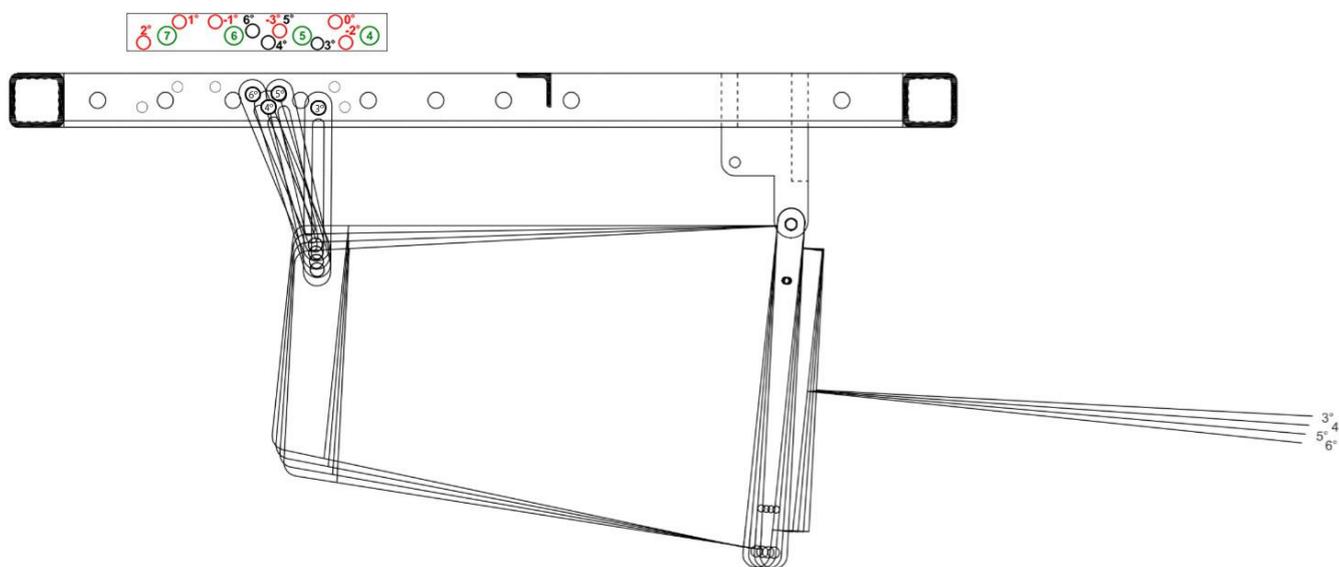
POL-AUDIO SLA 208M ND system can be flown only with flying bar provided by manufacturer. Below description of flying bar holes can be found.

MOCOWANIE PIERWSZEGO GŁOŚNIKA DLA KĄTÓW -3° do 2°



Picture 4 Angle between frame and first module.

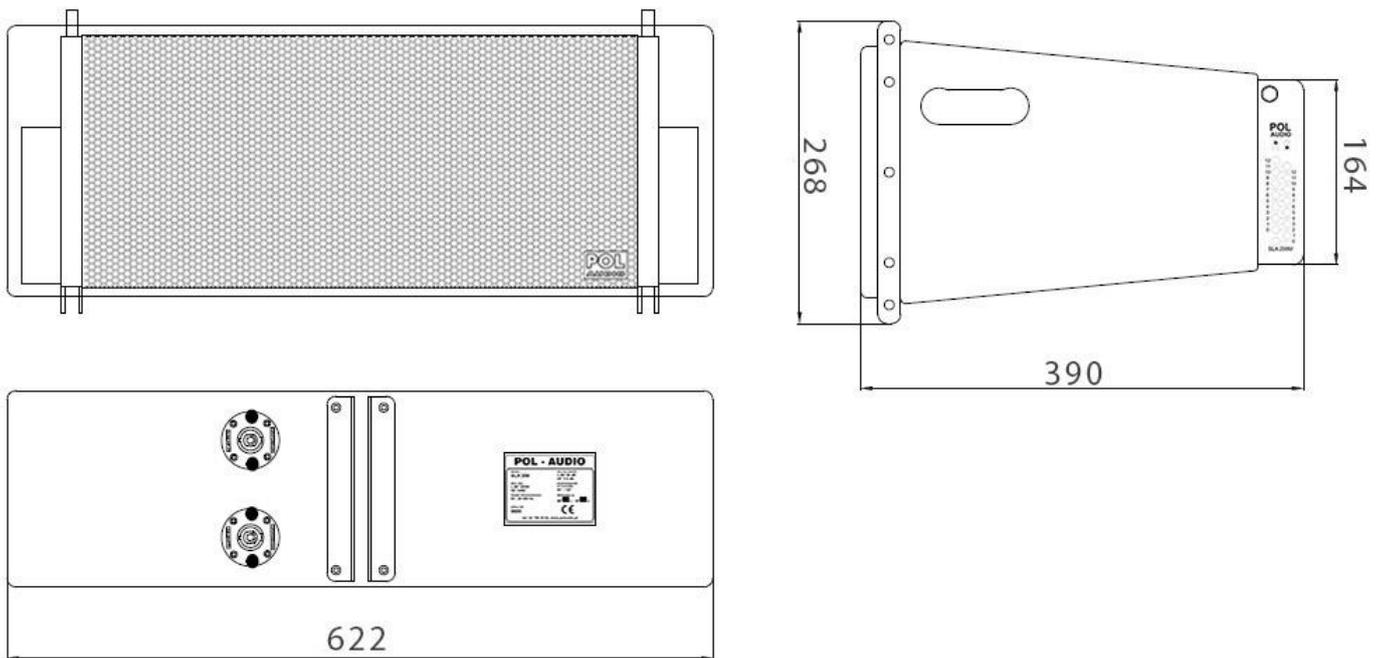
MOCOWANIE PIERWSZEGO GŁOŚNIKA DLA KĄTÓW 3° do 6°



Picture 5 Angle between frame and first module.

TECHNICAL DATA

Model	SLA 208M ND
Type	Concert Line Array
Application	Medium to Large scale open air events. Conferences and concert arenas.
Simulation software	EASE Focus II / EASE Focus III
Frequency Range	65Hz-20kHz
Components	2 x 8" (2") 2 x 4" / 1" (1,75") [Planar driver]
AES Power	160 W HF / 560 W LF
SPL	114 dB HF / 98 dB LF
Dimensions [no pin]	
Height	268 mm
Width	622 mm
Depth	390 mm
Weight	15 kg
Connectors	2 x Neutrik® NL4MP



Picture 6 SLA 208M ND dimensions

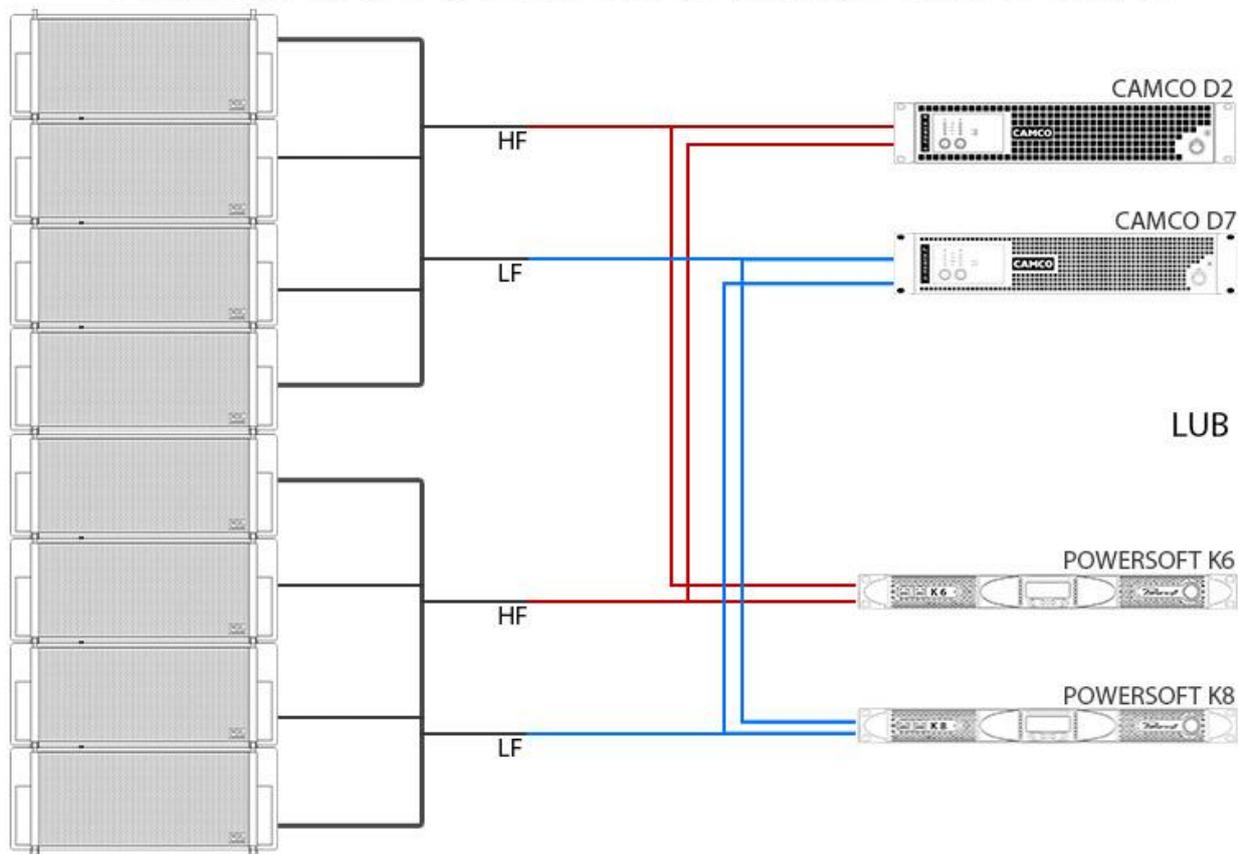
OPTIONAL ACCESSORIES

Transport Case	Up to 4 module of SLA 208M ND can be placed inside
Speaker stand bar	Bar for placing up to 4 modules of SLA 208M ND on a speaker stand
SWL118 adapter	Adapter for placing up to 6 modules

SYSTEM CONFIGURATION

WIRING SCHEMA

ZALECANA KONFIGURACJA SYSTEMU SLA 208M ND



Picture 7 Recommended SLA 208M ND configuration

RECOMMENDED AMPLIFIER PARAMETERS

- HF** from 320 W to 400 W per module
- LF** from 800 W to 1000 W per module

Recommended amplifiers CAMCO[®] D, POWERSOFT[®] K / X

RECOMMENDER DSP

- OUTPUT** Minimum 3 [HF L / HF R / M-LF]
- PEQ** Minimum 7 points per output
- CROSSOVER** Two per output. Filters: Butterworth 18 dB / oct, 24 dB / oct
- DELAY** At HF L and HF R outputs, minimum 0,135ms
- LIMITER** Per output
- GAIN** Per output
- Recommended models** Xilica[®] XP/XD

ARRAY CONFIGURATION

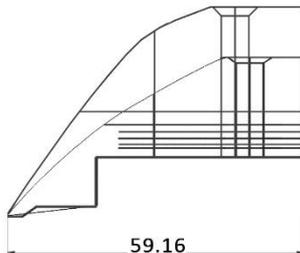
Recommended array length Minimum 6 pieces per side to achieve vertical dispersion control in full operating range of SLA 208M ND.

DISPERSION CONFIGURATION

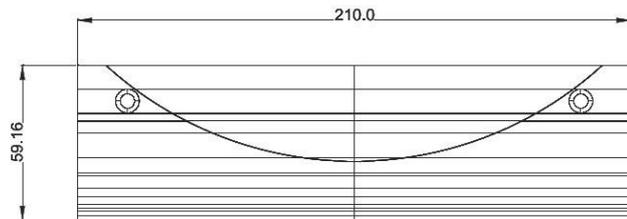
SLA 208M ND system is shipped with two sets of front fins, that allow to modify horizontal dispersion. Two sets are available: 60 and 40 degrees per side. Depending on application requirement system can be configured as 80 or 120 degrees dispersion for far and near field optimum coverage.

Changing dispersion parts

To change front HF horn parts you need to remove front grill. Unscrew two screws placed on the sides of the grill from the front. Inside you will find two wooden parts that determine the horizontal dispersion for the HF unit.



Picture 8 Side view of the fins



Picture 9 Top view of the fins

40 degrees dispersion parts have higher side view profile (Picture 8). To change the part, unscrew two screws that are holding it and gently remove the part. Make sure there is a sealing on the edge that the part touches the HF unit exit.

New set of elements should be placed tightly just next to the HF exit. Parts should be placed parallel to each other. Use the same screws for screwing new part.

When performing any simulation in EASE Focus software, remember to pick the correct version of SLA 208M ND (80 or 120).



WHERE TO KEEP SPARE ELEMENTS

Best solution for keeping the spare dispersion parts is to put them inside transportation case so they will be available on the spot when something changes in venue configuration.



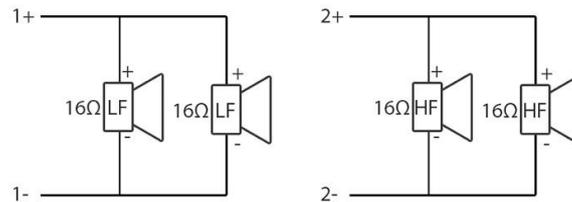
HOW TO ACHIEVE OPTIMUM NEAR FIELD COVERAGE

When public is close to the array rigging point, use modules with wider dispersion at the very bottom. This way you may be able to avoid the need of front fill application.

SPEAKERS WIRING

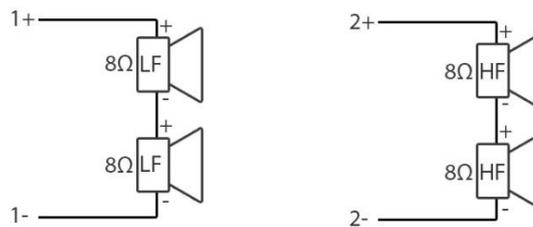
SLA 208M ND is available with two impedance configuration

HF 8 Ohm / LF 8 Ohm:



Picture 10 Wiring schema for SLA 208M ND 8/8

HF 16 Ohm / LF 16 Ohm:

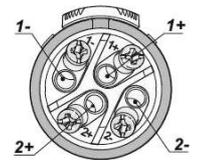


Picture 11 Wiring schema for SLA 208M ND 16/16

+1 and +2 are pin connectors placed in the enclosure so make sure to use proper wired cables to power up the system.

TRANSPORT

SLA 208M ND system should be transported with cases made of durable material with amortization inside.



Picture 12 NL4 SPEAKON® pins

CONSERVATION

System should undertake review:

- First, 6 months after the buy
- Every 2 years after that.

To clean up the system, cloth with water should be used. Do not use any other chemical substances to clean the system. It may damage the enclosure or speakers.

Hearing PROTECTION

We suggest using hearing protection when long exposure to high sound pressure is necessary. If not, temporarily or permanently hearing damage can occur.

Remember: Hearing is one of our primary working tools. Take care of it.



SPARE PARTS

Manufacturer uses only original spare parts for performing repairs. **If system will be repaired in external service facility with different spare parts, the warranty is no longer valid.**

ORIGINAL PRODUCT

When encountered a product that looks like a counterfeit please contact manufacturer. We treat each notification very seriously. The logo is a warranty of a product quality. Non-original products impact interest of: event organizer, artists, rental companies and manufacturer. Each notification will be forwarder to appropriate law enforcement department.

CE Declaration of conformity

NAME AND ADRES OF MANUFACTURER:

POL-AUDIO Leszek Polanowski
ul. M.C. Skłodowskiej 33
05-420 Józefów
Poland

SYSTEMS LIST:

Passive loudspeaker systems: POL-AUDIO SLA 112, POL-AUDIO SLA 208M ND, POL-AUDIO SLA 210CX

DIRECTIVES AND NORMS:

- EMC 89/336/EEC 03.05.1989 with annotations 91/31/EEC and 93/68 EEC
- 73/23/EC 19.02.1973 with annotations 93/68/EEC
- PN-EN50081-1: 1996
- PN-EN50082-1: 1999

Declarations was issued by POL-AUDIO Leszek Polanowski company.

Issue date:

Sign: