

NEXO L20 Expands P+ Series Point Source Speakers User Manual

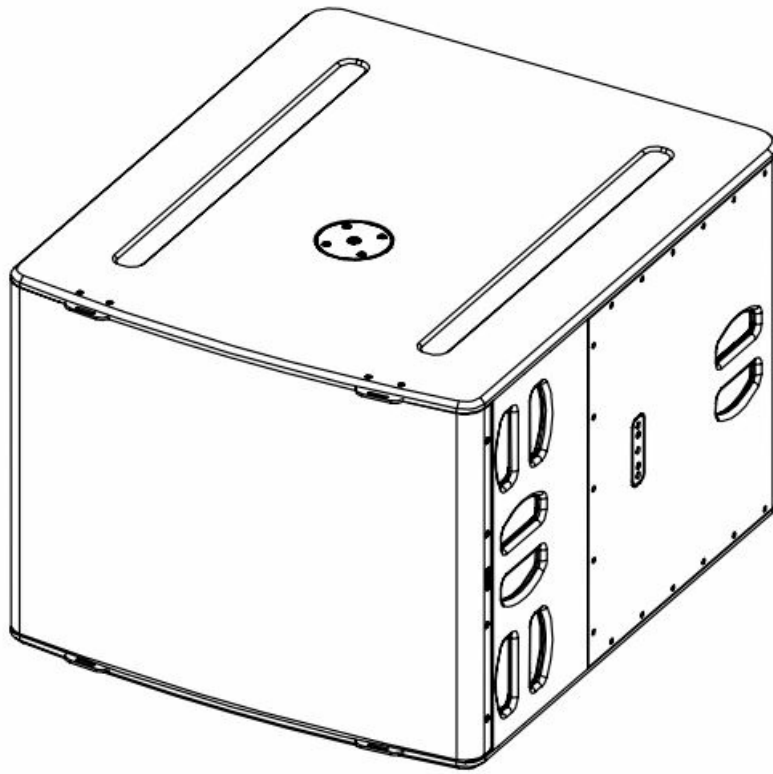
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NEXO L20 Expands P+ Series Point Source Speakers



Specifications

- Type: Loudspeaker L20
- Serial number: DP6418-01a-DI
- Compliance: EU Conformity declaration
- Directive: 2014/35/UE (Low Voltage Directive)
- Applied rules and standards: EN 12100, EN 13155, EN 62368

Product Information

The L20 is a compact and powerful subwoofer designed to complement the PLUS series speakers. It features two Speakon NL4 connectors with parallel-wired pins, using the 1+/1- pins (2+/2- through).

Warnings and Precautions

WARNINGS

- Please select screws and mounting location supporting 4 times the system weight.
- Do not expose the system to excessive dust, vibrations, extreme cold, or hot temperatures to avoid damaging components.
- Do not place the system in an unstable position to prevent accidental falls.
- If the system is used on a tripod, ensure the tripod's specifications are adapted and that its height does not exceed 1.40m/55. Do not move the tripod with the system in position.

Connection and Powering Precautions

- Unplug connected cables before moving the system.

- Power off the system before connecting or disconnecting any cables.
- When switching on/off the installation, power on/off the amplifier last.
- If working in cold temperatures, gradually raise the level to the nominal value during the first few minutes of use to allow the system components to stabilize.
- Regularly check the system condition.

High Sound Pressure Levels

Exposure to very high sound pressure levels may cause permanent hearing loss. The OSHA (Occupational Safety and Health Administration) specifies the following maximal exposures:

Number of Hours	Sound Pressure Level (dBA), Slow Response
90	92
95	97
100	102
105	110
115	

Equipment

The L20 subwoofer has 3 locations for hanging, 1 on the top for a speaker stand, and on both sides. To assemble on a distance rod or speaker stand:

1. Place the distance rod on the connector plate (M20) of the Sub.
2. Place the main cabinet on the distance rod/monitor stand (diameter of 35mm).

Important considerations:

- The speaker stand must be rated for the weight of the main cabinet.
- The speaker stand must always be installed on a horizontal surface.
- The stand height and footprint must be defined to prevent assembly collapse.
- Ensure that the audience is not allowed within a safety area with a radius equal to or higher than the assembly height.
- Test the steadiness of the assembly by pushing it in all directions.

FAQ

Q: What are the connectors on the L20 subwoofer?

A: The L20 subwoofer is equipped with two Speakon NL4 connectors with parallel-wired pins, using the 1+/1- pins (2+/2- through).

Q: What precautions should I take when connecting and powering the system?

A: It is important to unplug connected cables before moving the system and power off the system before connecting or disconnecting any cables. When switching on/off the installation, remember to power on/off the amplifier last. If working in cold temperatures, gradually raise the level to the nominal value during the first few minutes of use to allow the system components to stabilize. Regularly check the system condition.

Q: What are the maximal exposures to sound pressure levels?

A: According to OSHA, the maximal exposures to sound pressure levels are as follows:

Number of Hours	Sound Pressure Level (dBA), Slow Response
90	92
95	97
100	102
105	110
115	



EU Conformity declaration

	We, NEXO SA ZA DU PRE DE LA DAME JEANNE 60128 PLAILLY – France
Declare under our sole responsibility that the product	Loudspeaker
Type	L20
Serial number	On the product
Is in conformity with the provisions of the following directive including all applicable amendments:	2014/35/UE (Low Voltage Directive)
Applied rules and standards:	EN 12100, EN 13155, EN 62368
Plailly, September, 2023	Joseph CARCOPINO, R&D Director
	

WARNINGS

PRECAUTIONS

Do not open the speaker, do not try to disassemble it neither to modify it in any way. The system doesn't include

any user-repairable part. If the system seems to be malfunctioning or damaged, stop using it at once and have it repaired by a NEXO qualified technician. Do not expose the system directly to the sun or to the rain, do not immerse it into fluids, do not place objects filled with liquid on the system. If a liquid gets into the system, please have it inspected by a NEXO qualified technician. When flying outdoor systems ensure that the system is not exposed to excessive wind or snow loads and is protected from rainfall. In case of wind greater than 8 on Beaufort scale (72km/h – 45mph), a touring system has to be landed or an additional securing has to be implanted. For fixed installations, wind loading has to be taken into account in accordance to the national standards. The connection should be performed by qualified technician, by ensuring that power is off. Operating temperature with temperate climate: 0°C to +40°C (+32°F to +104°); -20°C à +60°C (-4°F to +140°F) for storage.

SAFETY INFORMATION

- Read this manual before using the speaker.
- Keep this manual available for further reference.
- Observe all warnings and cautions.
- Please check the NEXO Web site nexo-sa.com to get the most up-to-date version of this manual.
- Ensure you are aware of the safety rules applying to rigging, stacking or installing on tripod or speaker stand. Failure to observe these rules may expose persons to potential wounds or even death.
- Only use the system with accessories specified by NEXO.
- Please always consult a NEXO-accredited technician if the installation needs architectural works and observe following precautions:

Mounting Precautions:

- Please select screws and mounting location supporting 4 times the system weight.
- Do not expose the system to excessive dust, vibrations, to extreme cold or hot temperatures, to reduce the risk of damaging components.
- Do not place the system in an unstable position: it could fall accidentally.
- If the system is used on a tripod, please ensure the tripod's specifications are adapted and that its height does not exceed 1.40m/55". Do not move the tripod with the system in position.

Connection and Powering Precautions:

- Unplug connected cables before moving the system.
- Power off the system before connecting the system.
- When switching on the installation, the amplifier must be powered last; when switching the installation off, shut off the amplifier first.
- If you work by cold temperatures, progressively raise the level to nominal value during the first minutes of use, to allow the system components to stabilize.
- Please check regularly the system condition.

HIGH SOUND PRESSURE LEVELS

Exposure to very high sound pressure levels may cause permanent hearing losses. Degrees of hearing losses may be different from one person to another, but almost everybody will be affected if exposed to high sound pressure levels during a long period of time. The OSHA (Occupational Safety and Health Administration) American Agency specified the following maximal exposures:

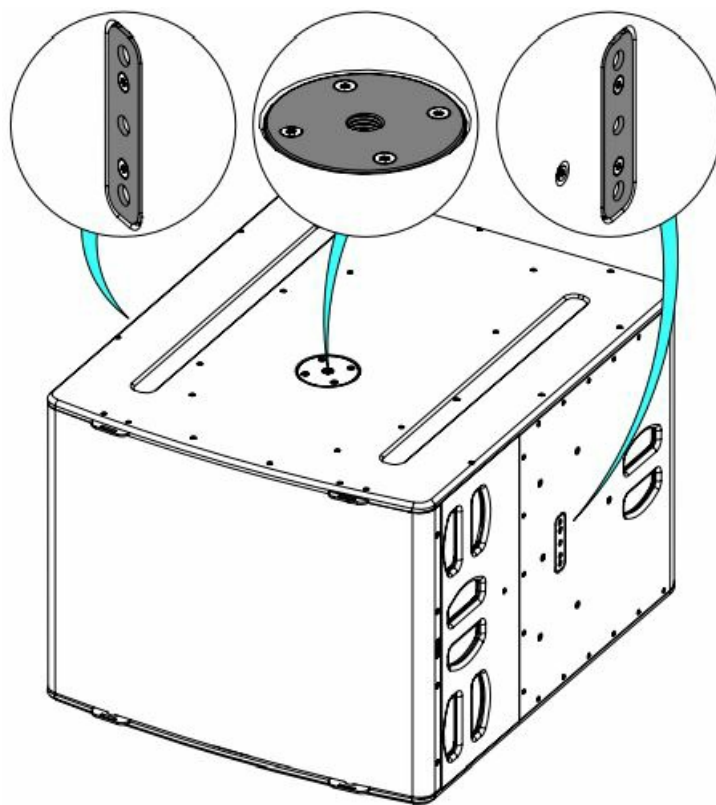
Number of Hours	Sound Pressure Level (dBA), Slow Response
8	90
6	92
4	95
3	97
2	100
1 ½	102
1	105
½	110
¼ or less	115

WASTE OF ELECTRIC OR ELECTRONIC EQUIPMENT

This symbol on the product or its packaging indicates that this product must not be treated as household waste. Instead, it is your responsibility to hand it over to a designated collection point for the recycling of waste electrical and electronic equipment. By ensuring your waste equipment is recycled, you will help prevent potential negative consequences for the environment and human health, which could appear if this product was not recycled. Recycling helps spare natural resources. For more information about the recycling of this product, please contact your local city office, your household waste disposal service or your reseller.

EQUIPMENT

3 locations for hanging, 1 on the top for speaker stand and on both side.



Assembly on distance rod or speaker stand

Place distance rod on the connector plate (M20) of the Sub.

Place the main cabinet on the distance rod / monitor stand (diameter of 35mm),

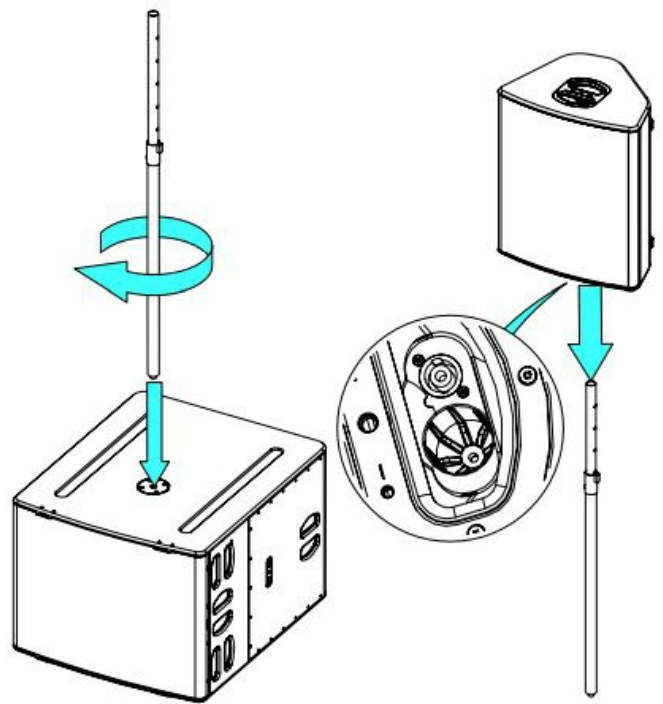
IMPORTANT

Speaker stand must be rated for the weight of the main cabinet. Speaker stand must always be installed on a horizontal surface.

Stand height and footprint must be defined to prevent assembly from collapsing.

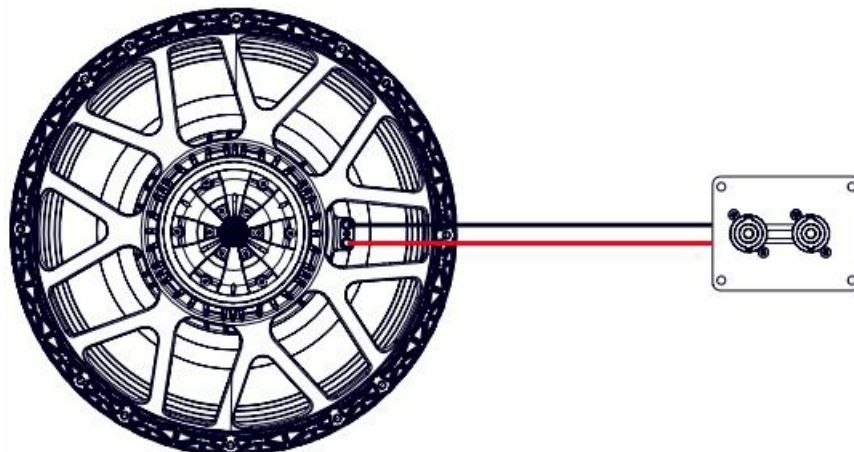
Ensure that audience is not allowed within a safety area which radius is equal or higher than assembly height.

Test steadiness of the assembly by pushing in all directions.



DESCRIPTION

- The L20 is a compact and powerful subwoofer, ideally complementing PLUS serie speakers
- The L20 subwoofer is equipped with two Speakon NL4 connectors, with parallel-wired pins,
- L20 uses the 1+/1- pins, (2+/2- through).



Amplification

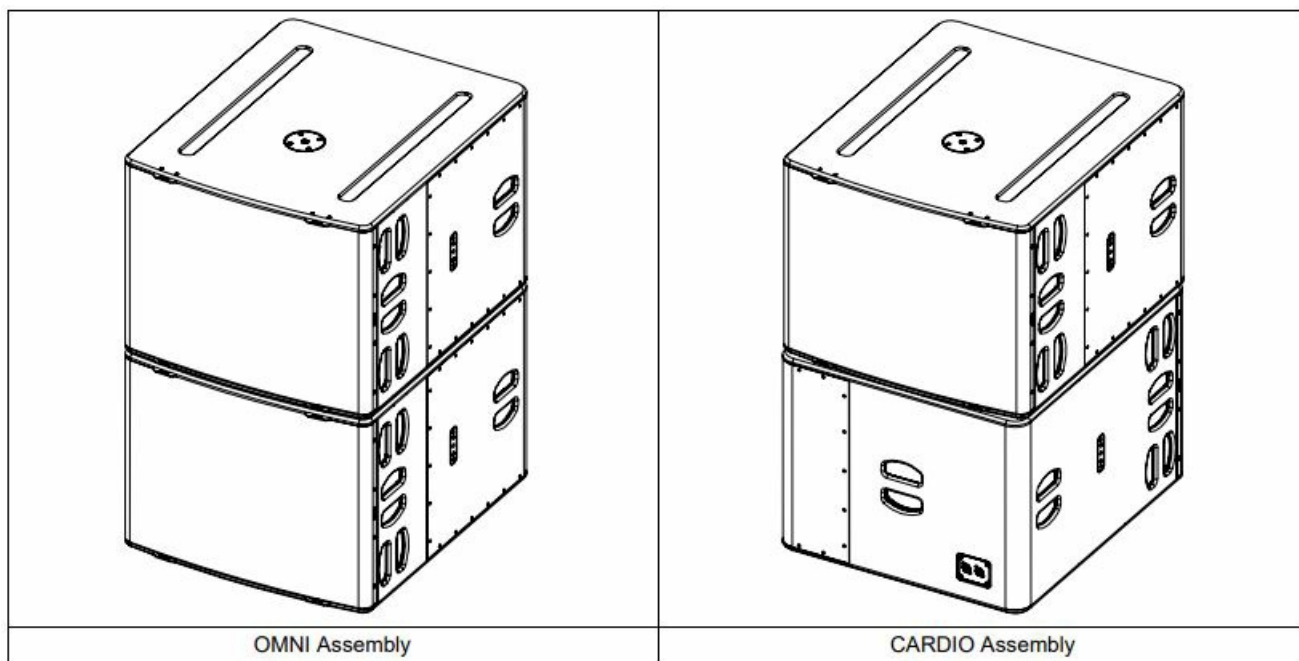
- The L20 subwoofer must be used with a NEXO processor to handle EQ, phase alignment, crossover and excursion/thermal protection for the system loudspeaker.
- The following table shows the number of L18 or L20 subwoofers usable with each solution.

NXAMP4X2mk2		NXAMP4X1mk2 (BRIDGED)	NXAMP4X4mk2
P18	1 per channel	Up to 2 per channel	Up to 2 per channel
L18	1 per channel	1 per channel	Up to 2 per channel
L20	Not authorized	1 per channel	Up to 2 per channel

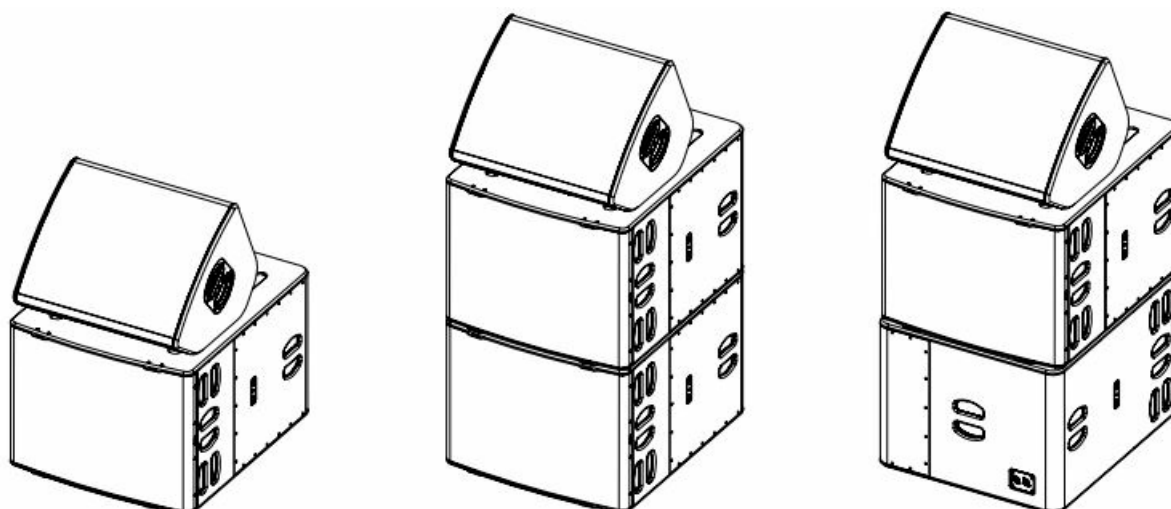
PRESET

Please consult nexo-sa.com for NEXO TD Controllers firmware information.

- There are two setting range for surrounding speaker L20:
 - “OMNI” Setups; For a traditional use of the subwoofer in omnidirectional radiation (require at least one subwoofer and a channel of amplifier).
- Omnidirectional Main setup, with low-pass at 60, 85 or 120 Hz.
- Omnidirectional Monitor setup, with low-pass at 60, 85 or 120 Hz.
 - “CARDIO” Setups; For a directional use (cardioid) of subwoofers (require at least two subwoofers and two channels of amplifier).
- Cardioid back and front setups, with low-pass at 60, 85 or 120 Hz.
 - Setup « FR » (Front) for the subwoofer pointed at the audience.
 - Setup « BA » (Back) for the subwoofer turned around.
- The ideal ratio for a directional use is 2x L20 in CARDIO FRONT mode on top of 1x Reversed L20 in CARDIO BACK mode. From 1:1 to 3:1 ratio can be used.

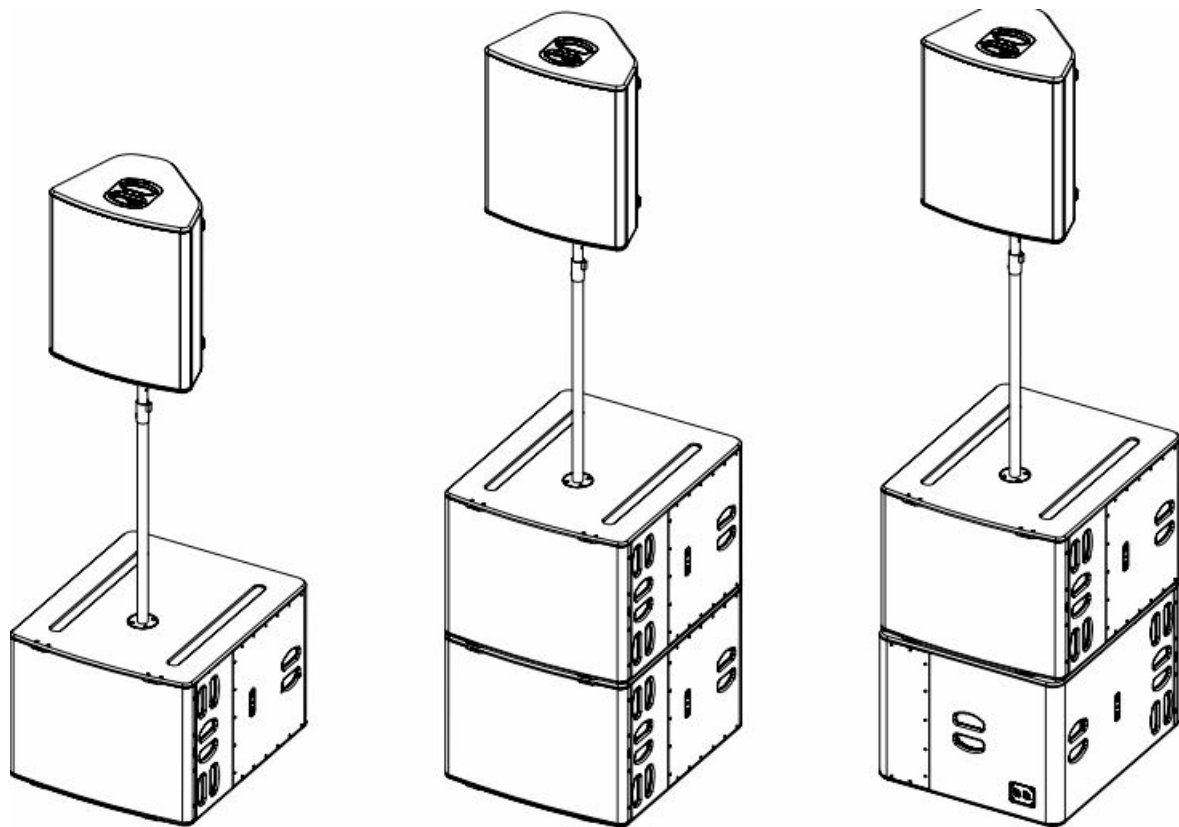


With P18 in stage monitor



Stage monitor applications with Subs (OMNI or CARDIO modes)

With P18 in front of house



Front of house applications with Subs (OMNI or CARDIO modes)

ACCESSORIES

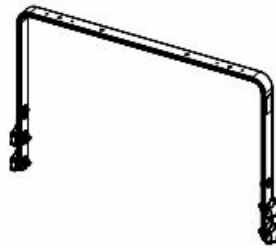
WARNINGS

- All L20 accessories are specifically rated in agreement with structural computations.
- Never use other accessories – including push-pins – when assembling L20 cabinets than the ones provided by NEXO: NEXO will decline responsibility over the entire L20 accessory range if any component is purchased from different supplier.
- All L20 accessories have been designed so that cabinet are arrayed vertically.
- PROHIBITED: L20 below L20 or PLUS serie below L20 without dedicated accessory

LNU-HBRK20

LNU-HBRK20

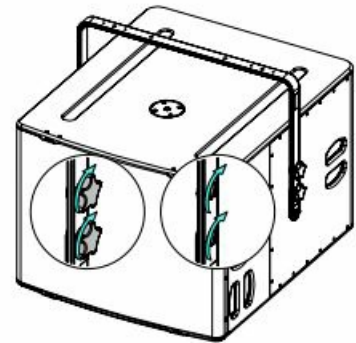
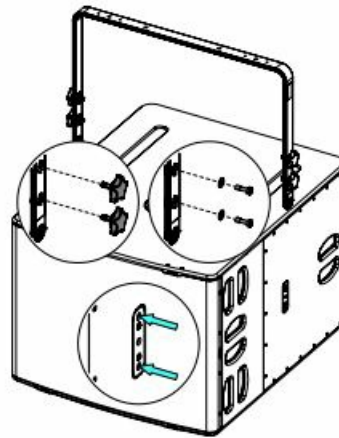
Horizontal Cradle, use with L20
CLADAPT.



Place HBRK20 on L20, use only fasteners
provided.

Tight properly.

Refer to the Product Data Sheet.



VNI-CLADAPT (PNI-CLADAPT)

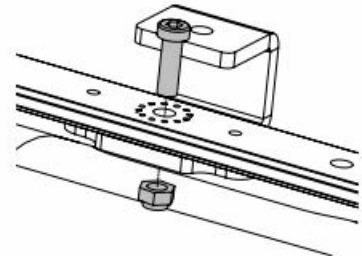
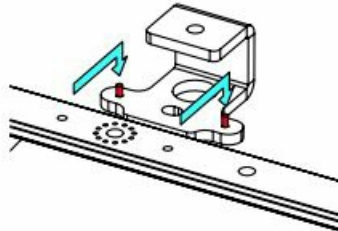
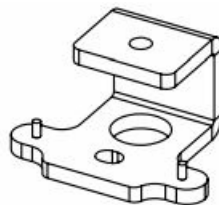
VNI-CLADAPT (PNI-CLADAPT)

Ceiling adapter, use with
LNU-HBRK20.

Screw CLADAPT to the ceiling (fasteners
not provided).

Place the assembly on CLADAPT, use
the 2 guides. Tight with the fasteners
provided with CLADAPT.

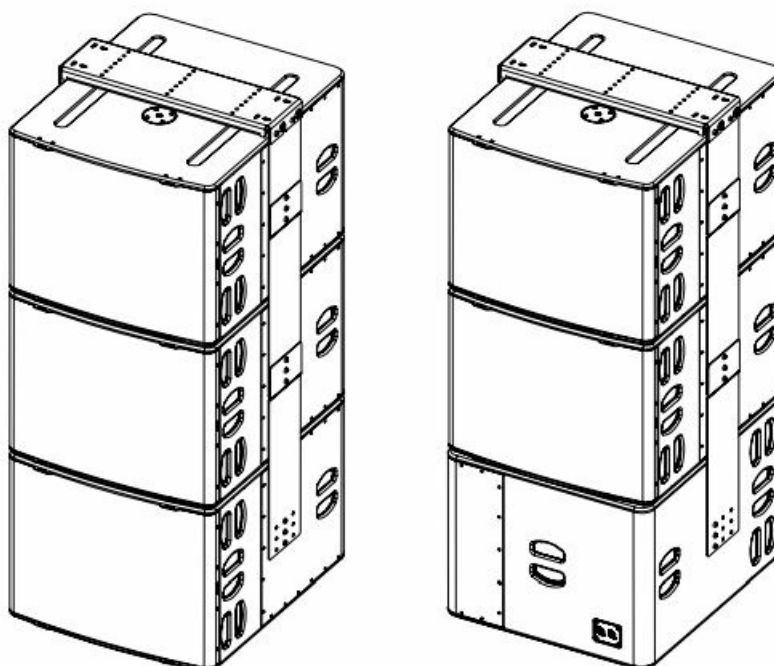
Refer to the Product Data Sheet.



LNI-3L20

L20 Rigging system (up to 3; Cardio or Omni)

Refer to the Product Data Sheet.

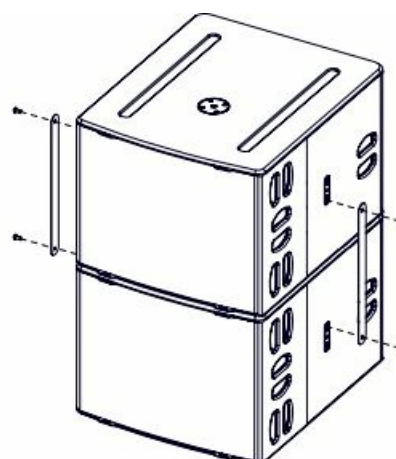


VNI-CPL03

VNI-CPL03

Coupling Bar for 2 or 3 L20

Refer to the Product Data Sheet.

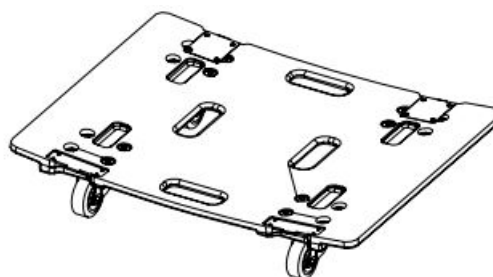


LNT-WB20

LNT-WB20

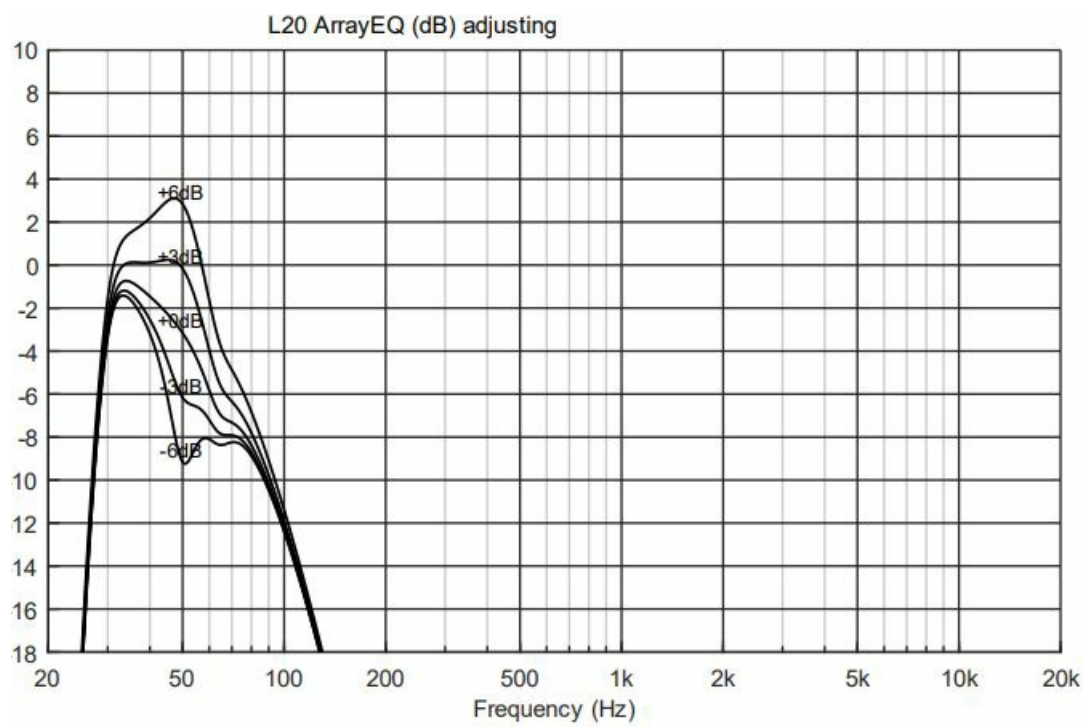
Wheelboard

Refer to the Product Data Sheet.



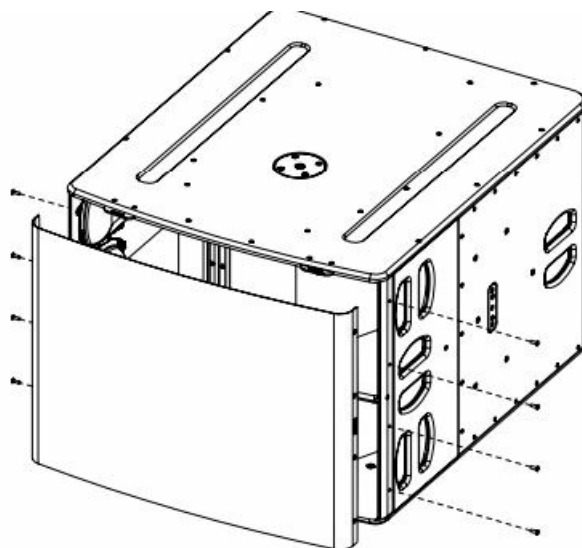
ARRAY EQ

The ArrayEQ allows to adjust the system frequency response in its lower range (see curves below, with different ArrayEq values):



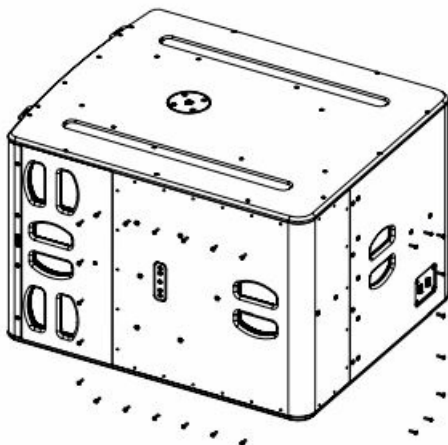
MAINTENANCE

Grille Changing: Remove 8 screws

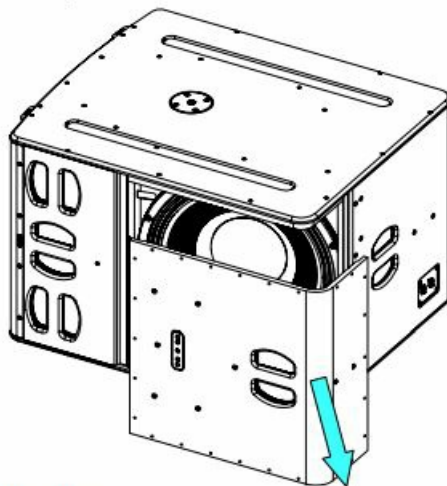


21" Driver

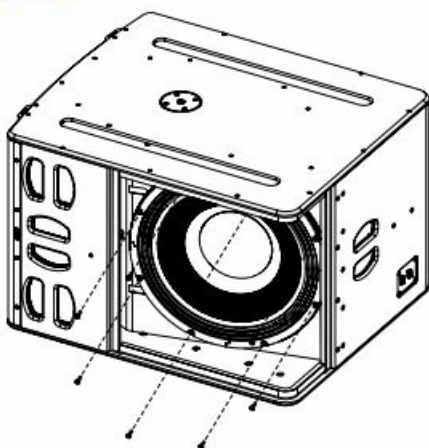
Remove 26 screws



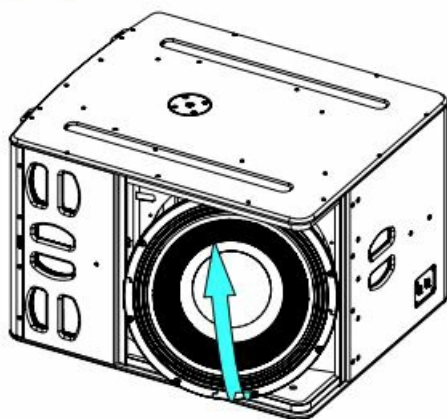
Remove the trap



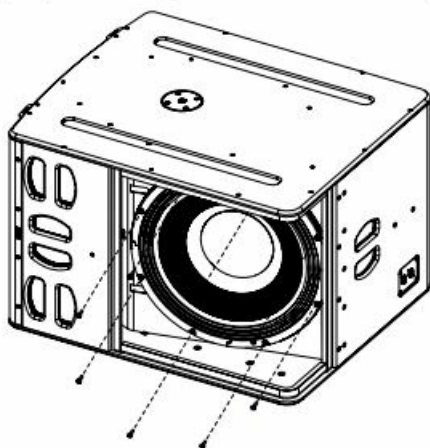
Remove 8 screws.



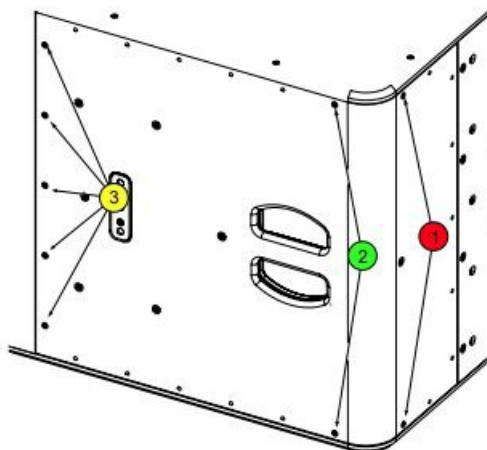
Remove the driver.



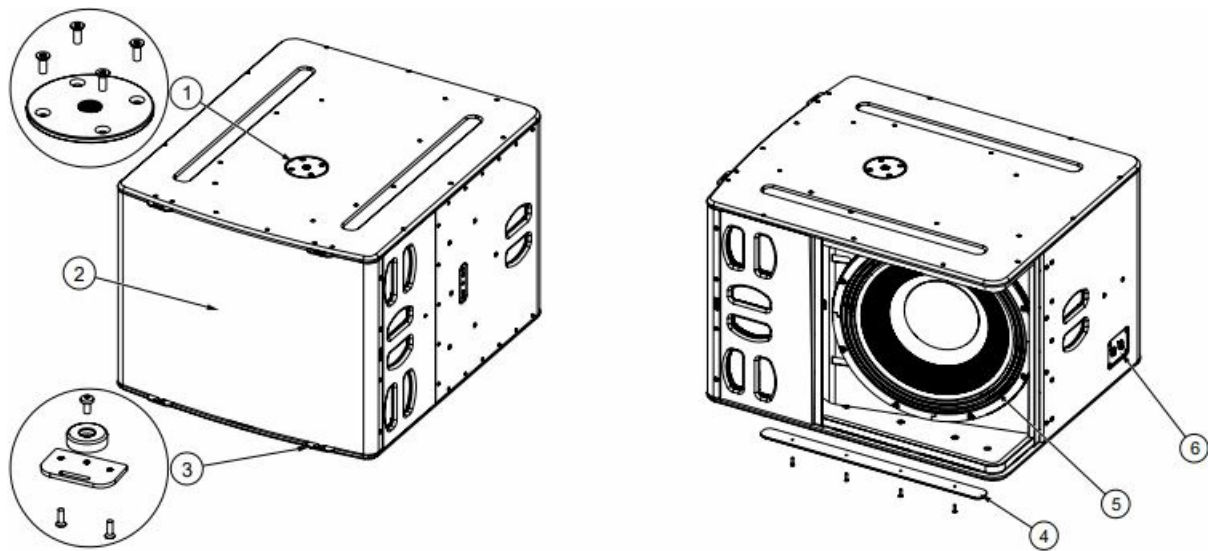
Place 6 screws.
Tightening torque: 3.0 Nm (Thread Locker: Loctite 242)



Follow the sequence below to tight the screw.Place and tight the 12 others screws.



Spare parts



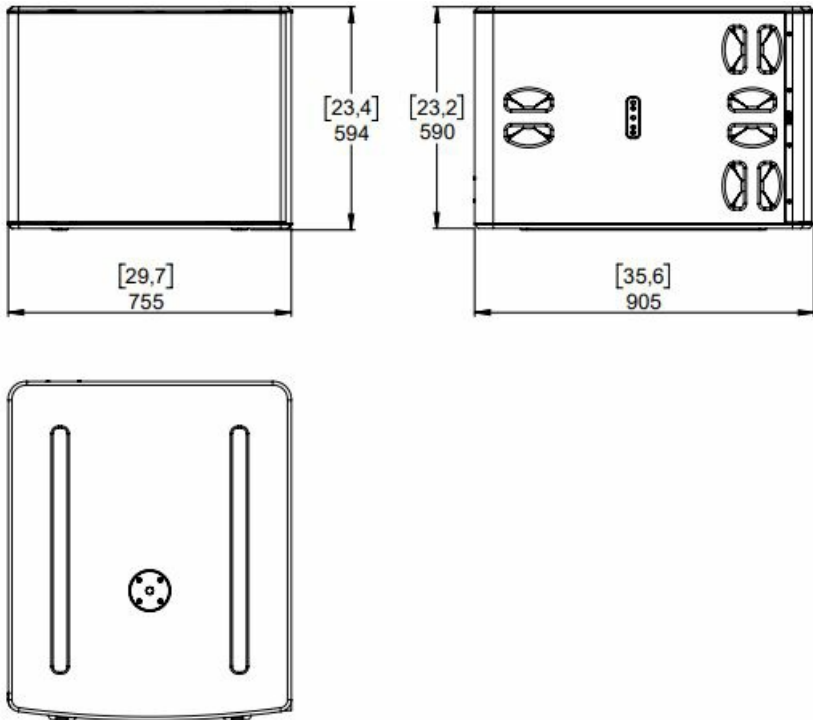
MAR K	QUAN TITY	REFERENCE	DESIGNATION
1	1	05DOUILM20N	Connector Plate M20 Black (with fasteners)
	1	05DOUILM20W	Connector Plate M20 White (with fasteners)
2	1	05L20UA	Complete grille Black (with fasteners)
	1	05L20UA-PW	Complete grille White (with fasteners)
3	4	05AMPLAVER02	Wheelboard attachment Black (with fasteners)
	4	05AMPLAVER02-P W	Wheelboard attachment White (with fasteners)
4	2	05PATIN01	Rubber Skid Black (with fasteners)
	2	05PATIN01-PW	Rubber Skid White (with fasteners)
5	1	05HPB20-4	HP 20" BASS NEODYNIUM 4 Ohms QUAD 4.5" VOICE COIL
	1	05HPB20-4R/K	HPB20-4 RECONE KIT
6	1	05CNX02	Connection plate Black without lexan (with fasteners)
	1	05CNX02-PW	Connection plate White without lexan (with fasteners)
6a	1	05LEXCNX-L20	Lexan CNX L20 Black
	1	05LEXCNX-L20PW	Lexan CNX L20 White
6b	2	05CNXNL4MDV-1	Speakon NL4 MDV1

TECHNICAL SPECIFICATIONS

L20 WITH NEXO ELECTRONICS

Model	L20
Frequency range ($\pm 6\text{dB}$)	28Hz – 120Hz
Peak SPL Level (1m)	141 dB Peak
Operating voltage	80 Vrms (180 Vpeak)
Crossover Frequency	60 Hz; 85Hz; 120Hz
Nominal Impedance	4 Ω

SPECIFICATIONS

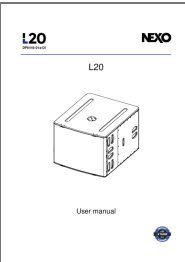
Model	L20
Components	1x 20" – 4 ohms – Long excursion – Neodymium driver
Material	Baltic birch / Poplar plywood
Finish	Black or white structural paint
Front finish	Steel front grille
Fittings	Handles on both sides Threated inserts on both sides for connection of mounting accessories Stand fitting M20
Connector	2x NL4, 4 poles connectors
Weight	59 kg / 130 lb
Dimensions	 <p>The technical drawings show the L20 subwoofer from three perspectives:</p> <ul style="list-style-type: none"> Front View: Shows a rectangular enclosure with a width of [29,7] inches (755 mm) and a height of [23,4] inches (594 mm). Side View: Shows the profile of the enclosure with a depth of [23,2] inches (590 mm) and a total width of [35,6] inches (905 mm). It also shows the internal driver and crossover components. Rear View: Shows the back of the enclosure with two vertical handles and a central mounting point.

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-

Documents / Resources

	<p>NEXO L20 Expands P+ Series Point Source Speakers [pdf] User Manual L20 Expands P Series Point Source Speakers, L20, Expands P Series Point Source Speakers, Point Source Speakers, Source Speakers, Speakers</p>
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References

- [NEXO](#)
- [User Manual](#)