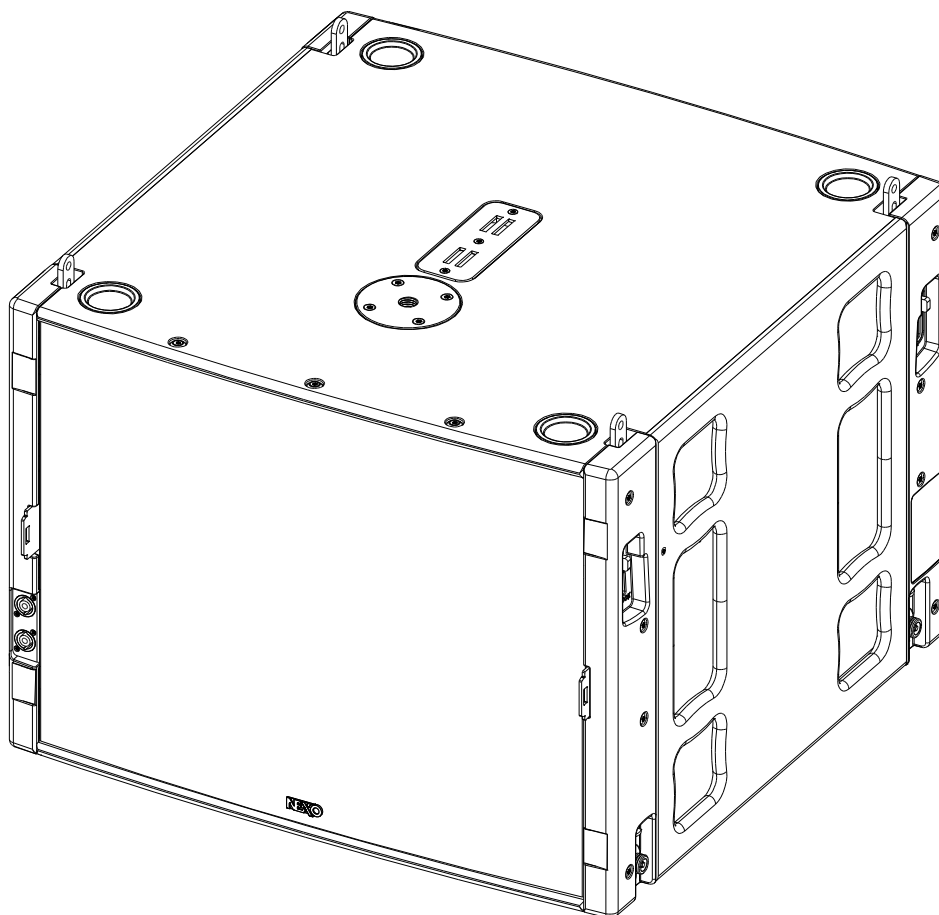


MSUB18



User Manual



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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 **MSUB18**

Serial number **On the product**

Is in conformity with the provisions of the following directive **2014/35/UE (Low Voltage Directive)**
including all applicable amendments:

Applied rules and standards: **EN 13155, EN 62368**

Plailly, January, 2019 **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.

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 it's 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 ACOUSTIC 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

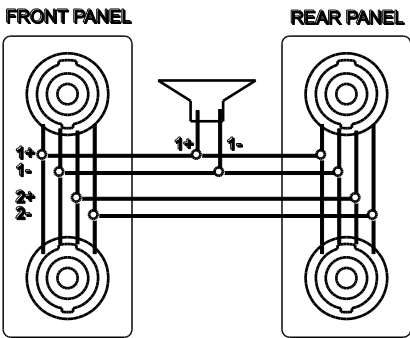
WASTE OF ELECTRIC OR ELECTRONIC EQUIPMENT



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.

DESCRIPTION

- The MSUB18 is a compact high technology arrayable sub, the ideal companion for the GEOM12 line array element, sharing same aesthetic design and arrayable in the same flown or stacked cluster.
- Versions:
 - MSUB18: for Touring applications; Black
 - MSUB18-PW: for Touring applications; White
- Connectors:
 - MSUB18: 2 connectors panels (one in front and one at back) with 2 NL4 sockets, the 4 pins of the 2 sockets are connected in parallel within the enclosure.
 - MSUB18 use 1+/1-, 2+/2- through.



- Amplification:
 - The MSUB18 must be used with a NEXO processor to handle EQ, phase alignment, crossover and excursion/thermal protection for the system loudspeakers.
 - The following table shows the number of MSUB18 subwoofers usable with each solution.

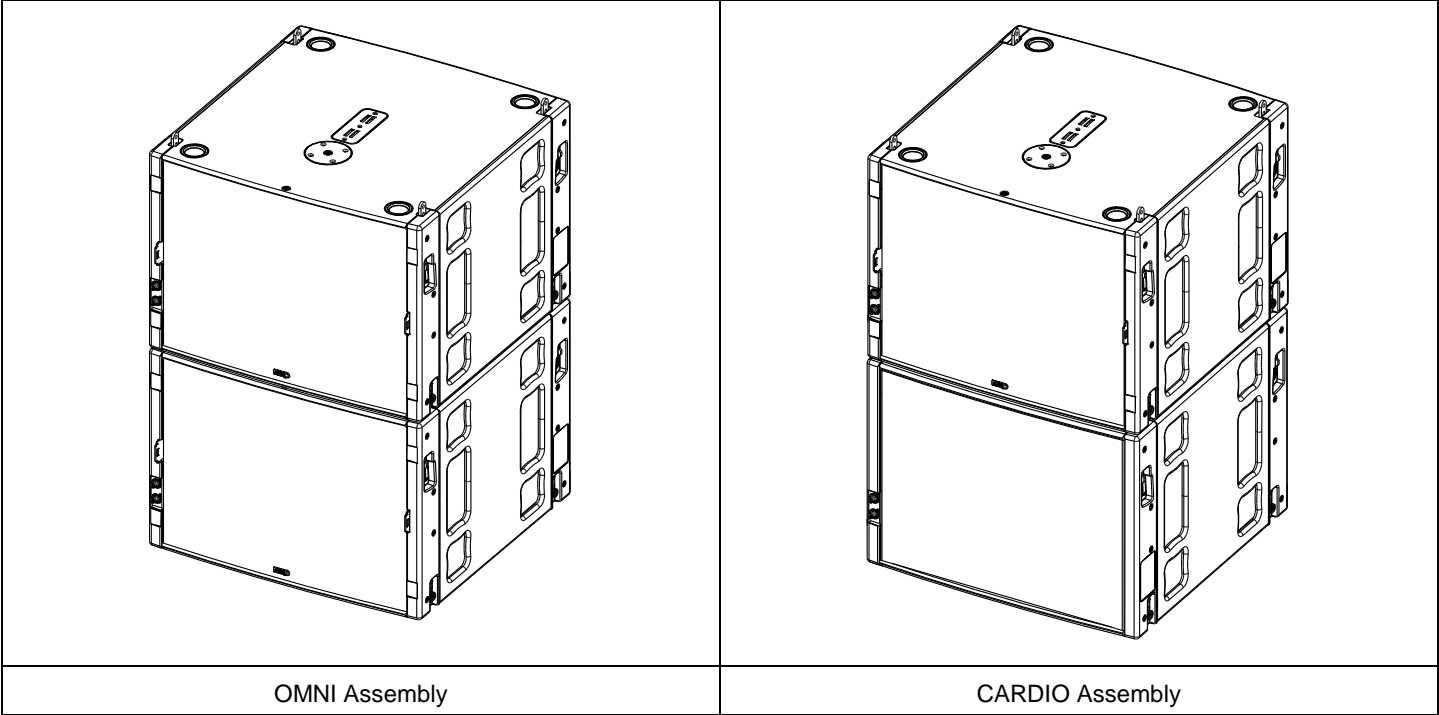
	NXAMP4x1mk2 (bridged)	NXAMP4x2mk2	NXAMP4x4
MSUB18	1 per channel	1 per channel	Up to 2 per channel
			Recommended

SETTING RANGE

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

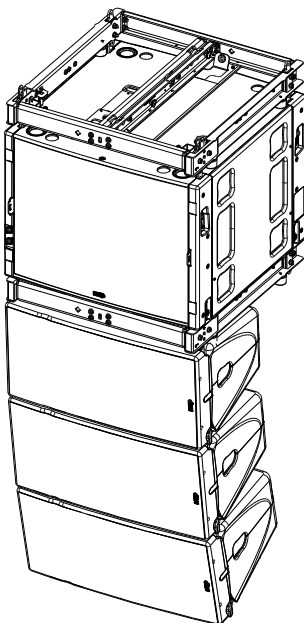
There are two setting ranges for surrounding speaker MSUB18:

- « 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 50, 60, 75, 85, 95 or 120 Hz.
 - Omnidirectional Monitor setup, with low-pass at 60, 75 or 85 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 50, 60, 75, 85, 95 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 2 x MSUB18 in CARDIO FRONT mode on top of 1x Reversed MSUB18 in CARDIO BACK mode. From 1:1 to 4:1 ratio can be used

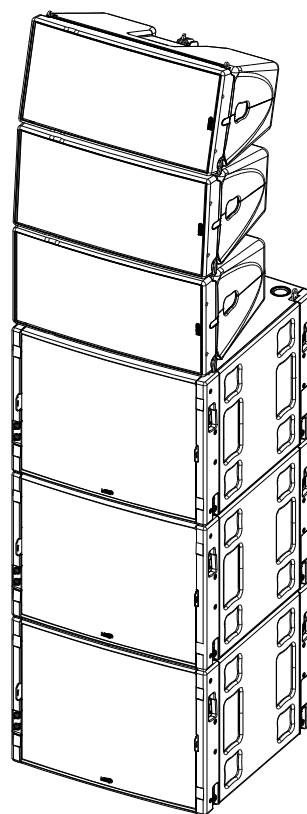
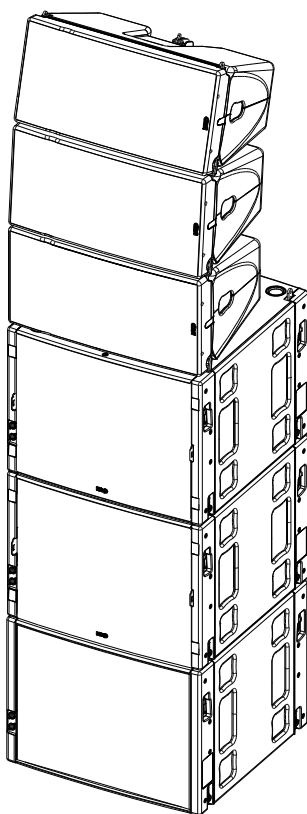


SETTING RANGE

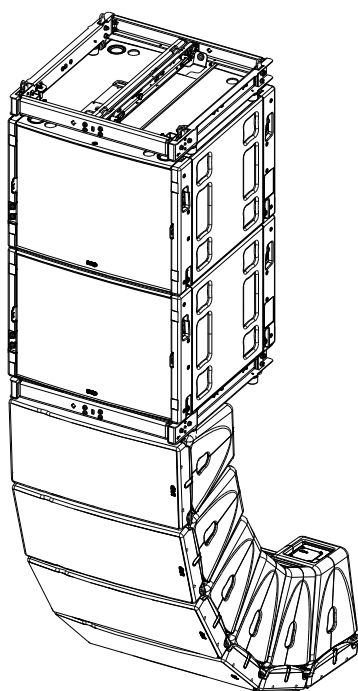
With 1 to 3 GEOM12



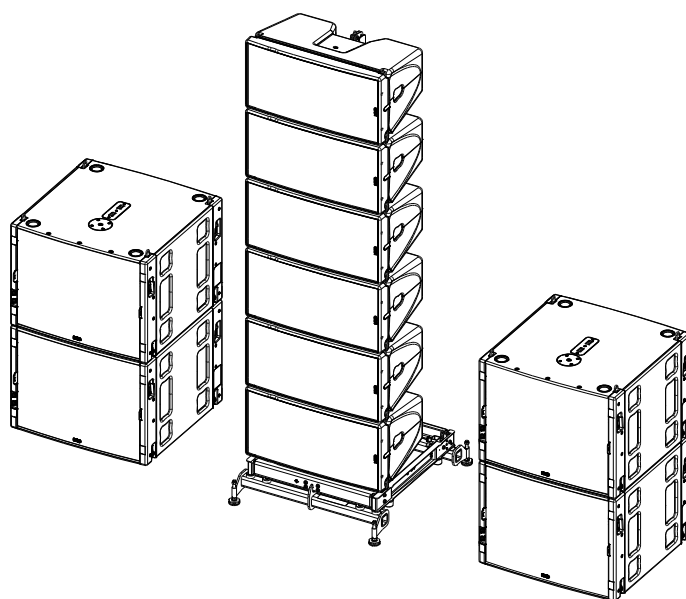
For these configurations, crossover frequency 85 Hz is recommended (85 Hz also for GEOM12).



For stack configuration using MSUB18 in OMNI or CARDIO mode with 1 Back and 2 Front and GEOM12 on top of them, crossover 85 Hz is recommended (85 Hz also for GEOM12). A small overlap could have impact if needed, for example (MSUB18 120 Hz and GEOM12 75 Hz).

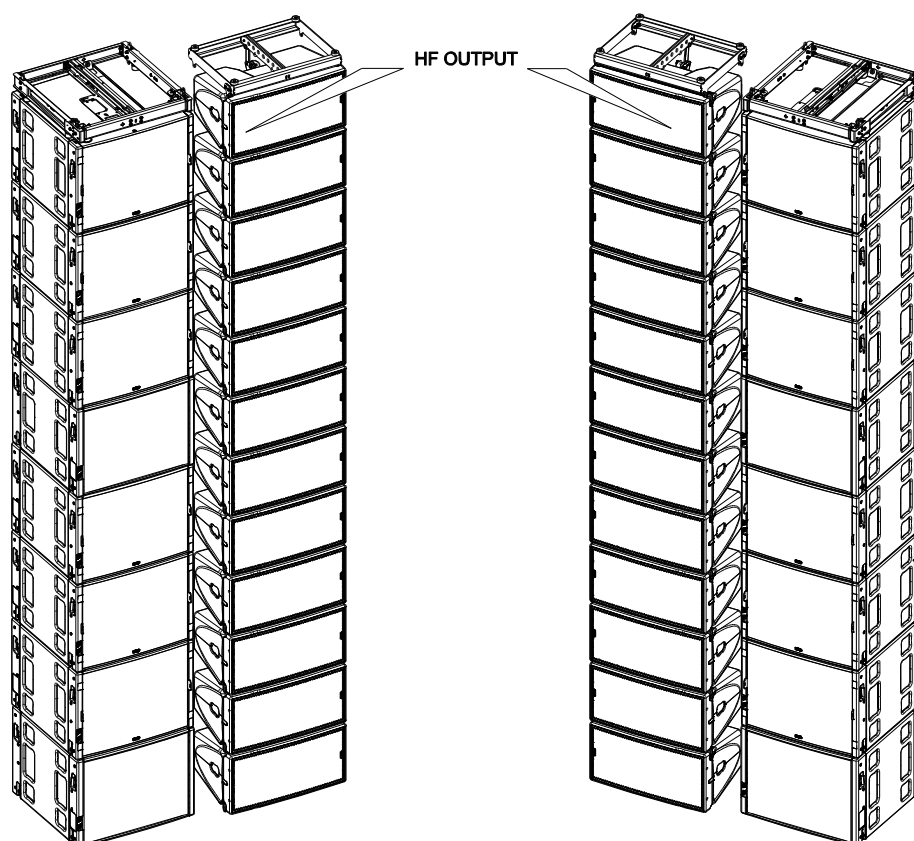
With 4 to 6 GEOM12

For long throw application, crossover 95 Hz is recommended (OMNI mode).

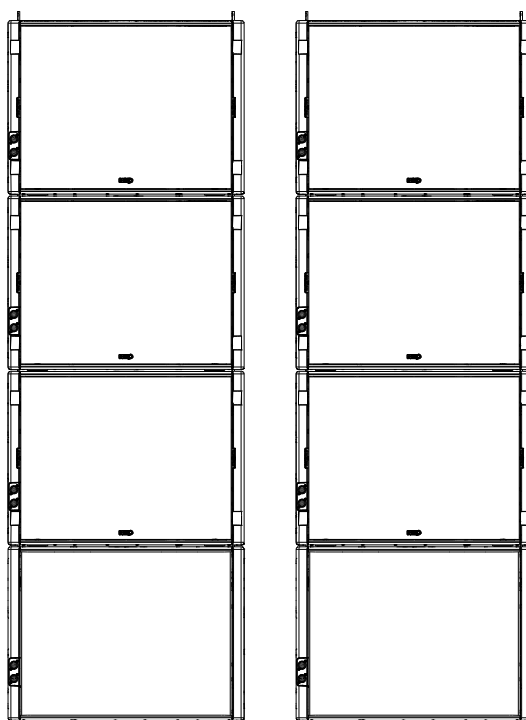


For long throw stacking application, up to 6 GEOM12, crossover 85 Hz is recommended on MSUB18 (also for GEOM12).

With 7 to 12 GEOM12



For very long throw application, with flown or stacked MSUB18, recommended MSUB18 cardioid mode, crossover MSUB18 95 Hz and 12 GEOM12 crossover 75 Hz for the maximum impact.

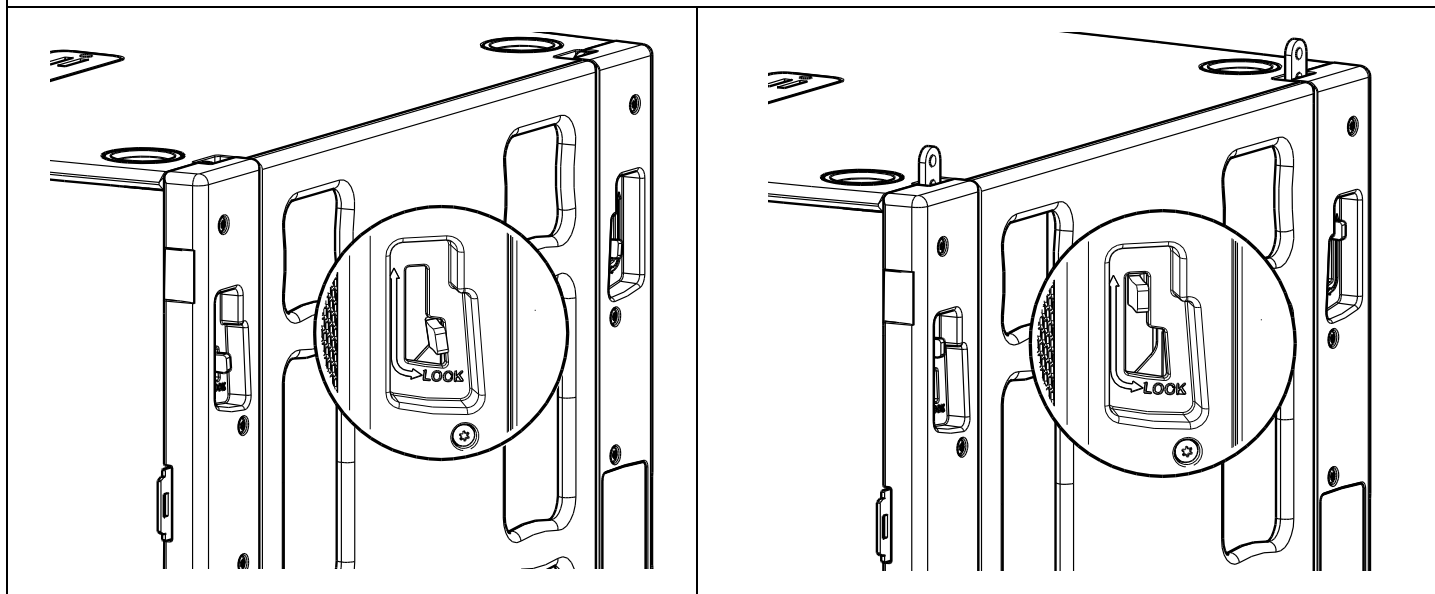


Ground Stack Sub design

MSUB18 RIGGING

Upper retractable rigging link

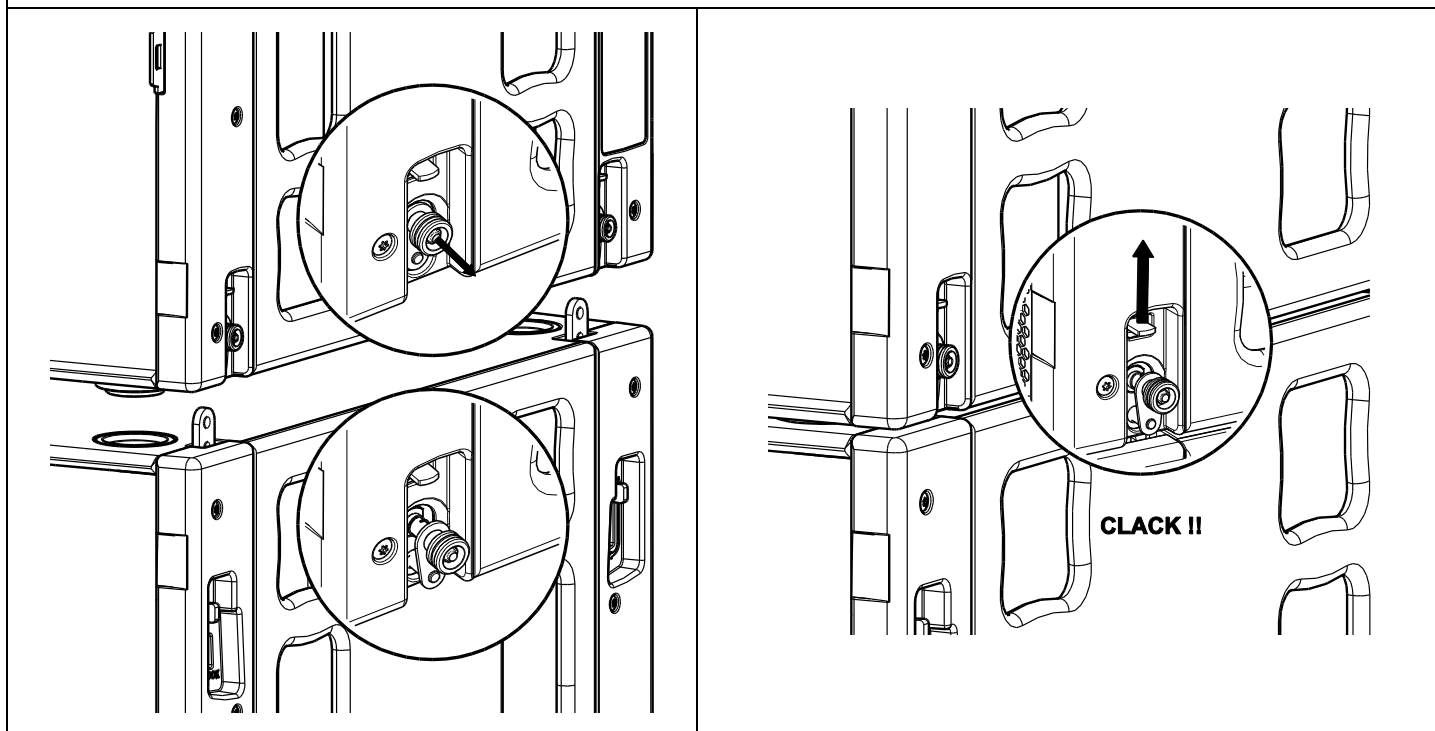
At each upper corner, a lever allows to take out or to bring in the rigging link. LOCK position allows to keep the link inside



Lower semi-auto lock system

At each lower corner, you have a semi-auto lock system.

- Pull the knob to auto-lock.
- Pull the lever up to lock.
- Proceed the same way for the disassembly.



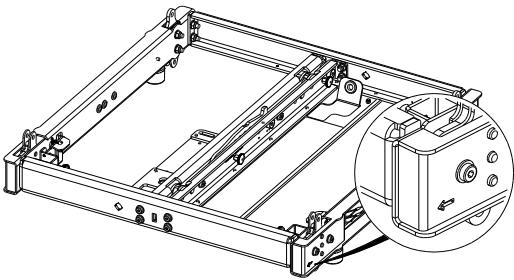
MSUB18 - ACCESSORIES

WARNINGS

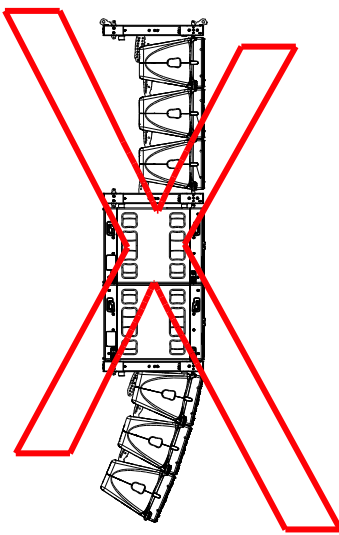
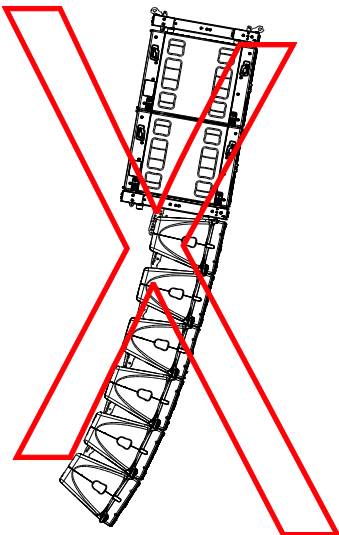
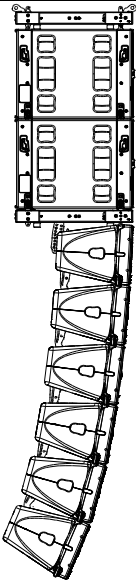
All MSUB18 accessories are specifically rated in agreement with structural computations.
Never use other accessories – including push-pins – when assembling MSUB18 cabinets than the ones provided by NEXO: NEXO will decline responsibility over the entire MSUB18 accessory range if any component is purchased from different supplier.
All MSUB18 accessories have been designed so that cabinet are arrayed vertically.

VNI-BUMPM12 / VNT-BUMPM12

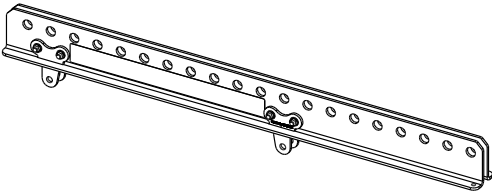
Rated for a maximum of 12 GEOM12 or 8 MSUB18, or a combination with a maximum of 4 MSUB18 and 6 GEOM12.
Flown on 2 rigging points with retractable rings.
Usable with VNT-EXBARM12 for extra tilt angle and flown on one or two rigging points.
Ground stack assembly alone, or with VNT-GSTKM10M12S / VNT-GSTKM10M12L for adding stability.
2 locations for laser/clinometer (VNT-BUMPM12 only).



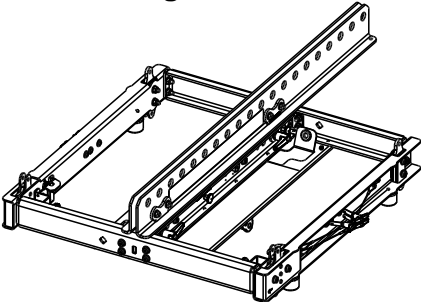
NO TILT – MSUB18 MUST ALWAYS BE POSITIONED STRAIGHT AND ON THE TOP THE ARRAY



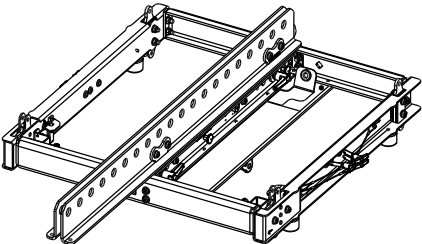
VNT-EXBARM12

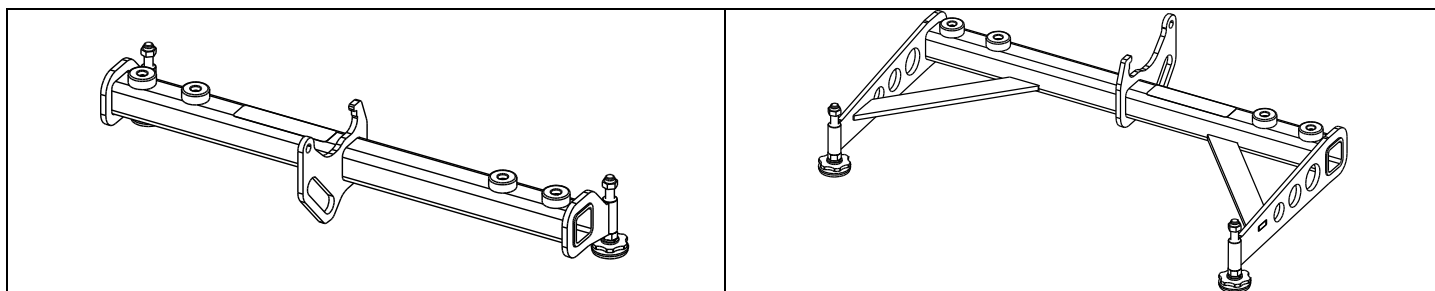


Negative Tilt

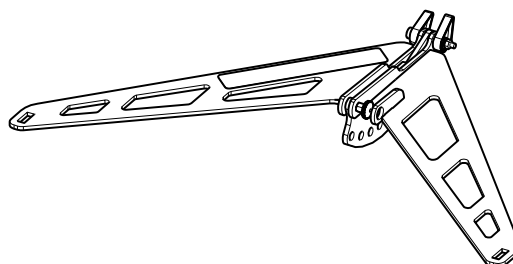
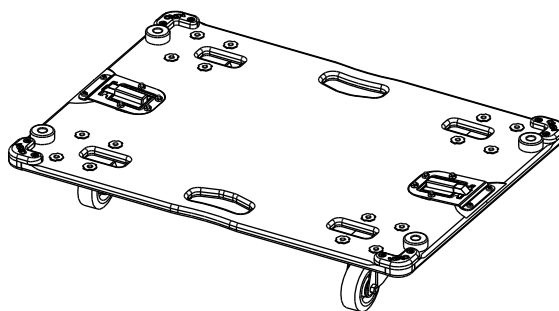
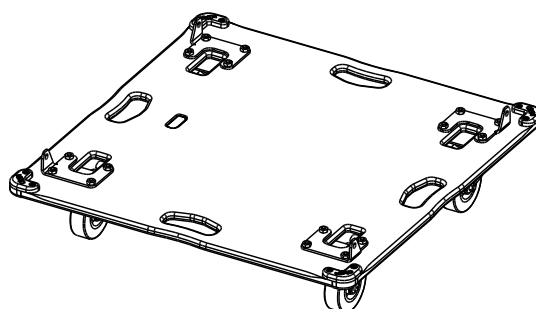


Positive Tilt



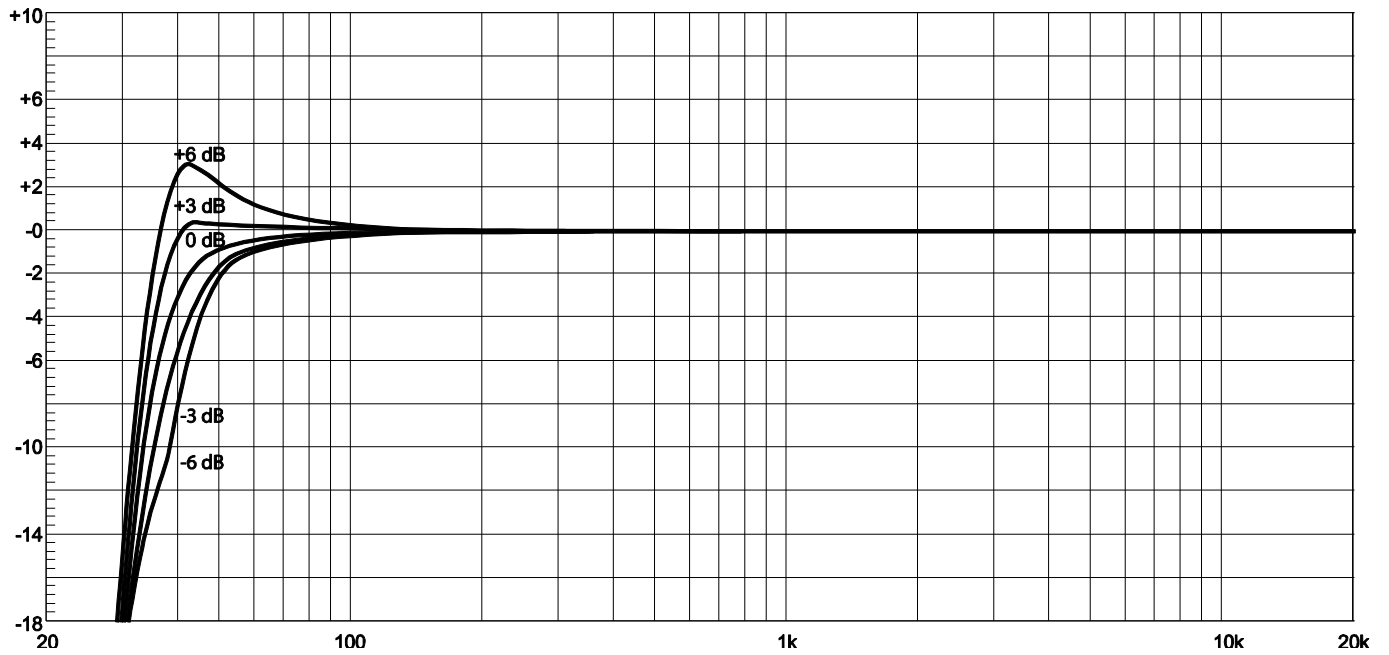
VNT-GSTKM10M12S – VNT-GSTKM10M12L**VNT-MNSTKM12**

Rated for a maximum of 3 GEOM12 on the top of MSUB18.

**MST-WBMSUB18: Wheelboard for 1x MSUB18****MST-DOLLYMSUB18: Dolly for 2x MSUB18****MST-COVMSUB18: Cover for 1x MSUB18****MST-COV2MSUB18: Cover for 2x MSUB18**

ARRAY EQ

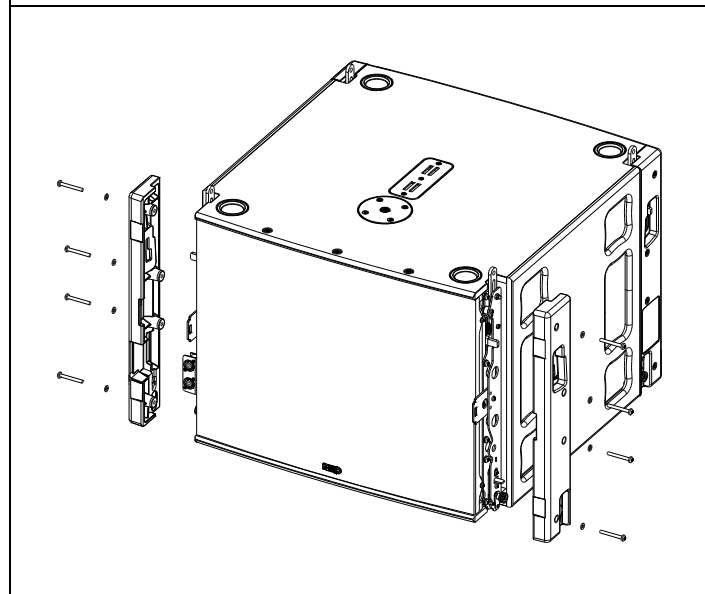
The ArrayEQ allows to adjust the system frequency response in its lower range (see curves below, with different ArrayEq values):



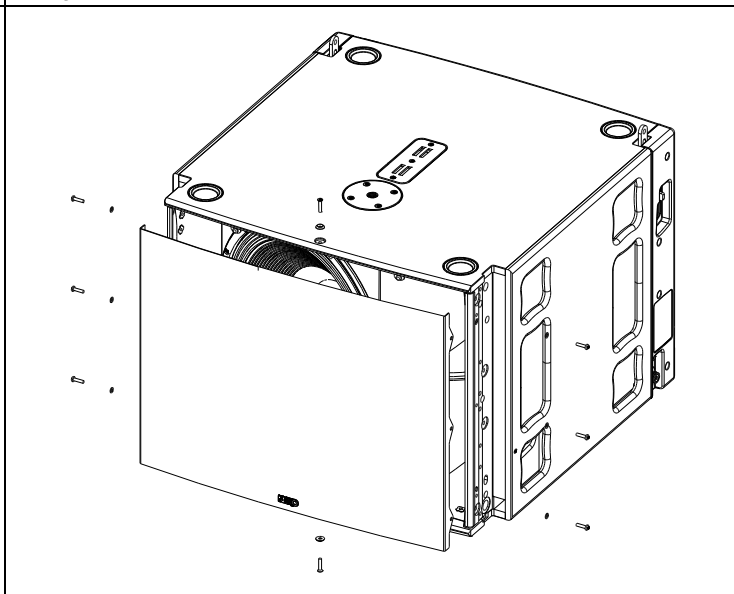
MAINTENANCE

Grille changing

Remove 8 screws (Tx30) and the bumper.

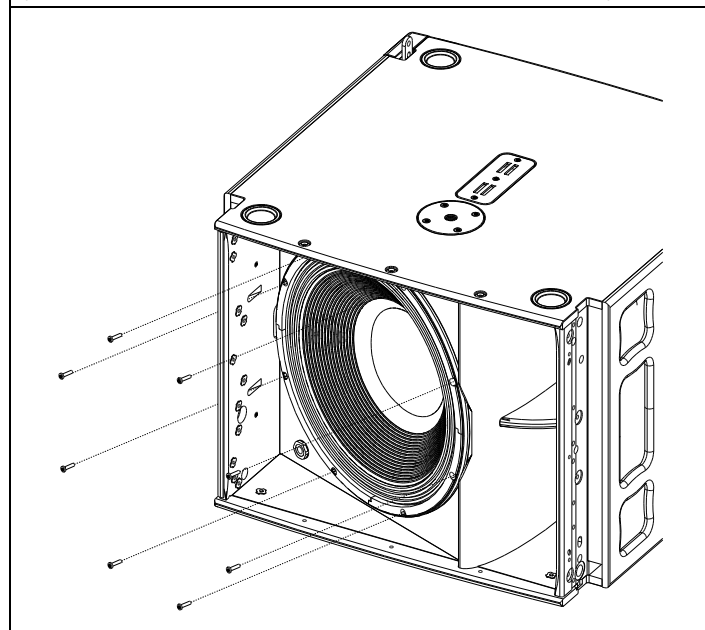


Remove 12 screws (TX25) on the side, top and below to remove the grille.

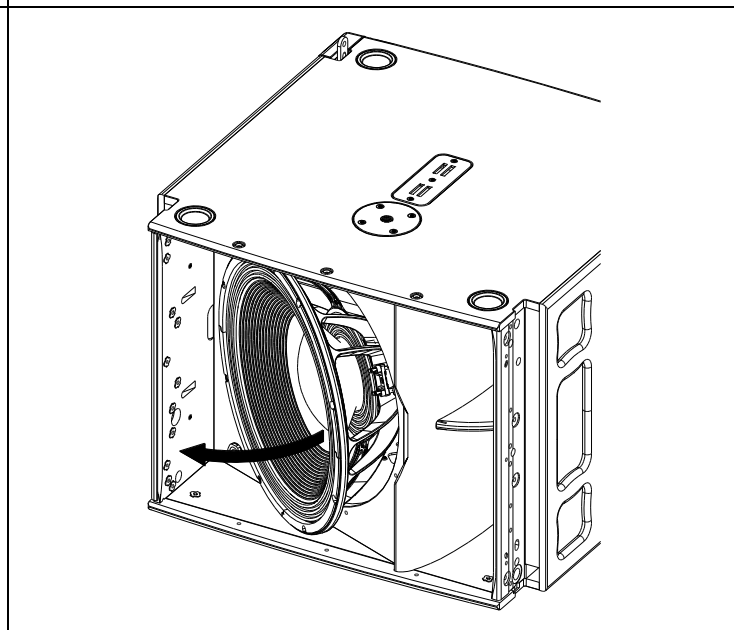


18" Driver

Remove 8 screws (Tx25) to remove the Driver.
If you remove the side rigging and untighten the cable gland, you have 2 windows to access 2 screws (not mandatory).

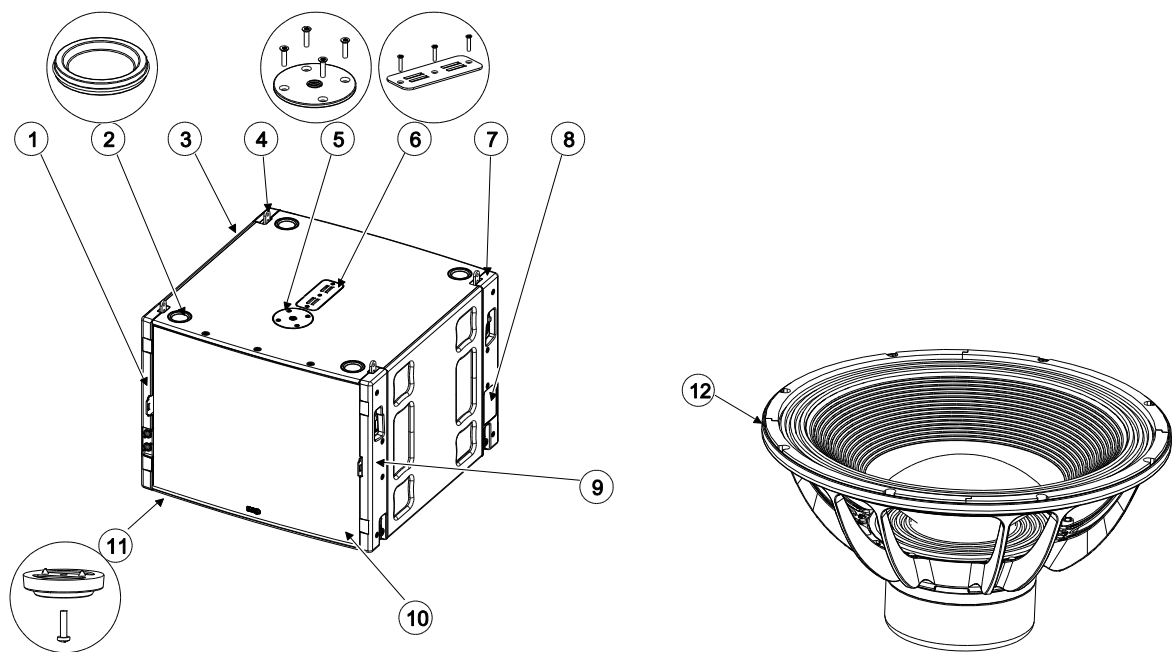


To remove the driver, pull and swing it towards you.



Red (+) / Black (-)

Spare parts



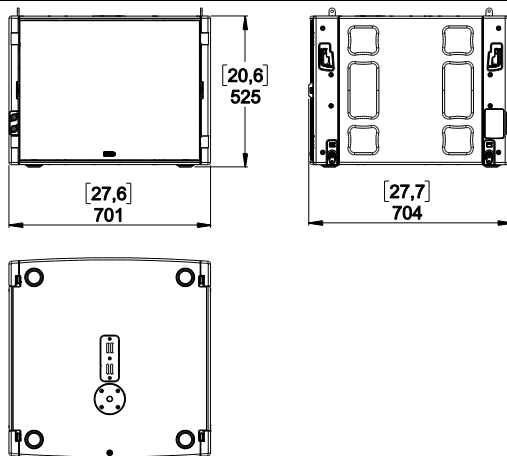
MARK	QUANTITY	REFERENCE	DESIGNATION
1	1	05MS18CATAVL	Bumper FL Black (with screws)
	1	05MS18CATAVL-PW	Bumper FL White (with screws)
2	4	05PC60	Hoosing Feet 60
3	1	05LEXMS15WAR	Lexan Warning
	1	05LEXMS15WAR-PW	Lexan Warning White
4	1	05MS18CATAR	Bumper RL Black (with screws)
	1	05MS18CATAR-PW	Bumper RL White (with screws)
5	1	05DOUILM20	Connector Plate M20 (with screws)
	1	05DOUILM20W	Connector Plate M20 White (with screws)
6	1	05AMS18FIX	MNSTK FIXING PLATE Black (with fasteners)
	1	05AMS18FIX-PW	MNSTK FIXING PLATE White (with fasteners)
7	1	05MS18CATARR	Bumper RR Black (with fasteners)
	1	05MS18CATARR-PW	Bumper RR White (with fasteners)
8	1	05LEXSUB18	Lexan MSUB18
	1	05LEXSUB18-PW	Lexan MSUB18 White
9	1	05MS18CATAVR	Bumper FR Black (with screws)
	1	05MS18CATAVR-PW	Bumper FR White (with screws)
10	1	05MSUB18-UA	Complete grille touring Black (with fasteners)
	1	05MSUB18-UAPW	Complete grille touring White (with fasteners)
11	4	05PT60	Feet 60 (with screw)
12	1	05HP18SW-4	18" Driver (with screws)
	1	05HP18SW-4-RK	Recone kit HP18SW-4 (with screws)

TECHNICAL SPECIFICATIONS

MSUB18 WITH NEXO ELECTRONICS

Frequency range (± 6 dB)	32Hz – 120Hz
Sensitivity (1W / 1m)	107dB SPL Nominal
Peak SPL Level (1m)	139 dB
Operating voltage	80 Vrms (180 Vpeak)
Crossover Frequency	32-65; 32-75; 32-85; 32-95; 32-120 Hz
Nominal Impedance	4 Ω
Recommended Amplification	2000 W per cabinet

SPECIFICATIONS

Model	MSUB18
Components	1x 18" – 4 Ohms – Long excursion – Neodymium driver
Material	Baltic birch plywood
Finish	Black or white structural paint
Front finish	Steel front grille + Back mesh
Fittings	8x Side handles Retractable rigging Semi-auto lock
Connectors	4x NL4, 4 poles connectors
Weight	55 kg – 122 lb
Dimensions	 <p>The technical drawings show the MSUB18 subwoofer cabinet from three perspectives: front, side, and top. The front view shows a width of 27.6 inches (701 mm) and a height of 20.6 inches (525 mm). The side view shows a depth of 27.7 inches (704 mm). The top view shows the cabinet's footprint with four mounting holes at the corners.</p>

USER NOTES

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