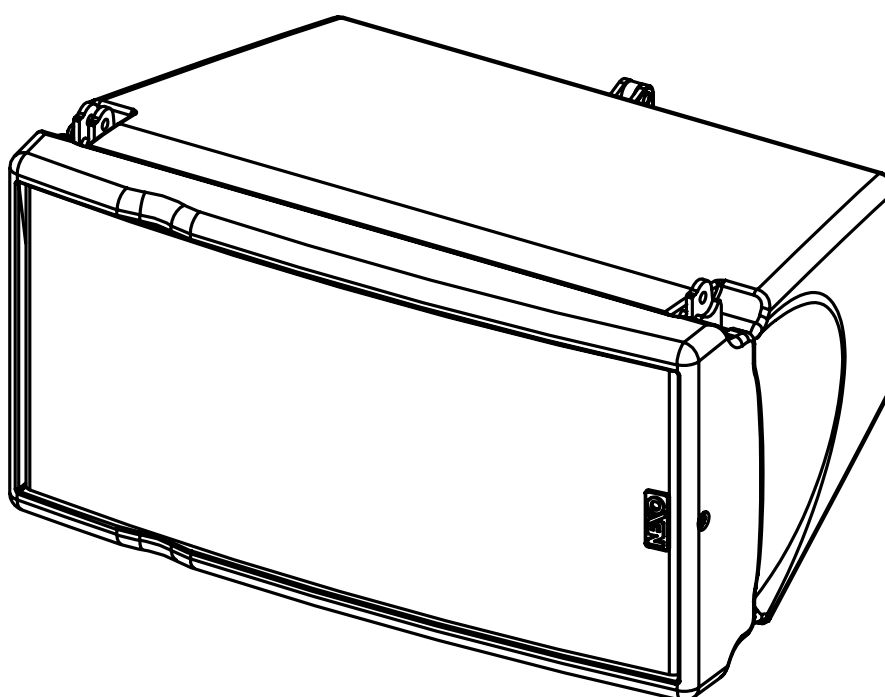


# GEO M6

## GEOM620 – GEOM6B



User manual



## TABLE OF CONTENTS

TABLE OF CONTENTS	2
WARNINGS	3
DESCRIPTION	4
PRESET GEOM6	5
GEOM6 RIGGING	9
GEOM6 – ACCESSORIES	10
ARRAY EQ	14
MAINTENANCE	15
TECHNICAL SPECIFICATIONS	17
USER NOTES	19

### 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**

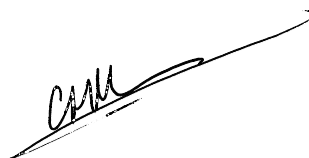
Type **GEOM6**

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, June, 2014 **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](http://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

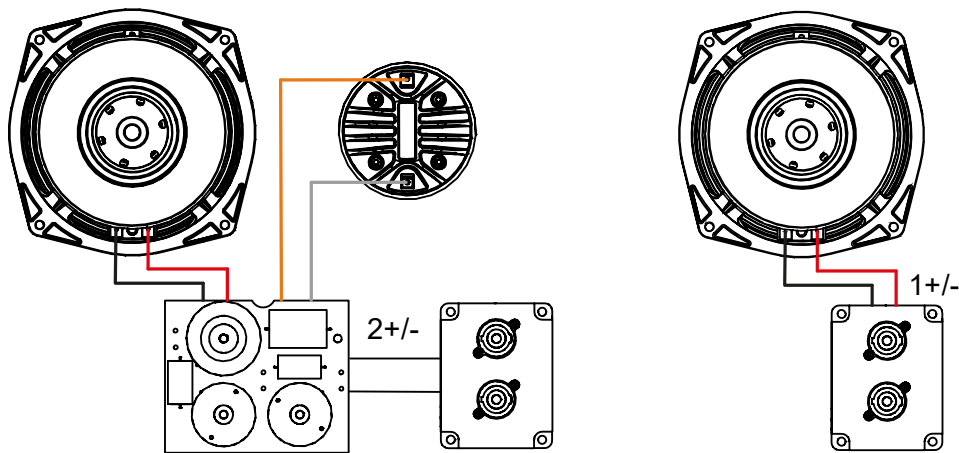


This symbol on the product or its packaging indicates that this product must not be treated as household waste. Instead, it is your responsibility to hand it over to a designated collection point for the recycling of waste electrical and electronic equipment. By ensuring your waste equipment is recycled, 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.

DESCRIPTION

DESCRIPTION

- GEOM620 and GEOM6B are a mid-size line array. GEOM620 is a 2 ways passive, with a 6.5" LF and a 1" HF; GEOM6B is a bass extension with a 6.5" driver.  
With GEOM620, you can change the HF horizontal directivity from 80° to 120° by adding a pair of flanges.
- The GEOM6 can be stacked of flown with the HF waveguide exit on the left or the right side of the front panel, allowing to broaden or narrow the stereo image depending on your need and the characteristics of the venue. We recommend to build system with the HF waveguide on the outside of each assembly (larger stereo image).
- Versions:
  - GEOM620: Touring or fix application; Black
  - GEOM620-PW: Touring or fix application; White
  - GEOM6B: Touring or fix application; Black
  - GEOM6B-PW: Touring or fix application; White
- Connectors:
  - GEOM620/6B: two NL4 connectors, the 4 pins of the 2 sockets are connected in parallel within the enclosure.
    - GEOM620: 2+/-.
    - GEOM6B: 1+/-



- Amplification:
  - The GEOM6 cabinets 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 GEOM6 speakers and MSUB12 subwoofers usable with each solution.

	DTD + DTDAMP4x0.7	DTD + DTDAMP4x1.3	NXAMP4x1MK2	NXAMP4x2MK2	NXAMP4x4MK2
GEOM620	Up to 2 per channel	Up to 2 per channel	Up to 3 per channel	Up to 4 per channel	Up to 4 per channel
GEOM6B	Up to 2 per channel	Up to 2 per channel	Up to 3 per channel	Up to 4 per channel	Up to 4 per channel
MSUB12	1 per channel	1 per channel	Up to 2 per channel	Up to 3 per channel	Up to 3 per channel
			Recommended		

**PRESET GEOM6**

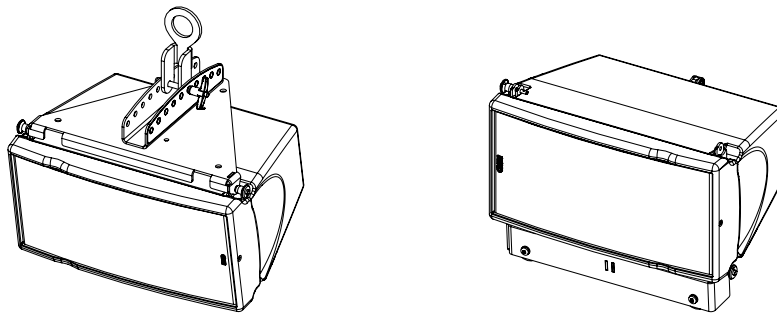
Please consult [nexo-sa.com](http://nexo-sa.com) for NEXO TD Controllers firmware information.

For the **GEOM620** or **GEOM6B**, with or without directivity flanges, the following setups are available:

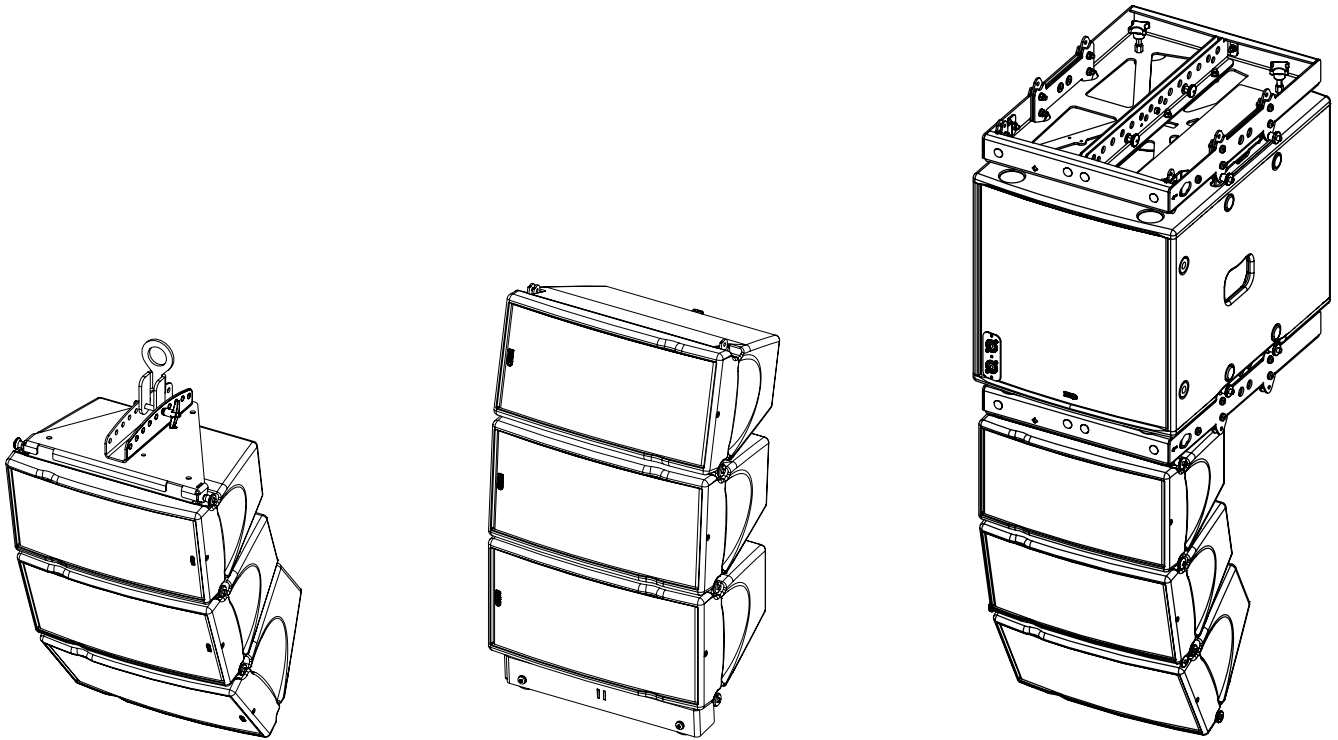
Passive Mode

- Setup for one stand-alone box, with high-pass at 50, 60, 75, 85, 95 or 120 Hz.
- Setup for arrays from 2 to 3 boxes, with high-pass at 50, 60, 75, 85, 95 or 120 Hz.
- Setup for arrays from 4 to 6 boxes, with high-pass at 50, 60, 75, 85, 95 or 120 Hz.
- Setup for arrays from 7 to 12 boxes, with high-pass at 50, 60, 75, 85, 95 or 120Hz.
- Setup for Stack Monitor, with high-pass at 50, 60 or 75 Hz.

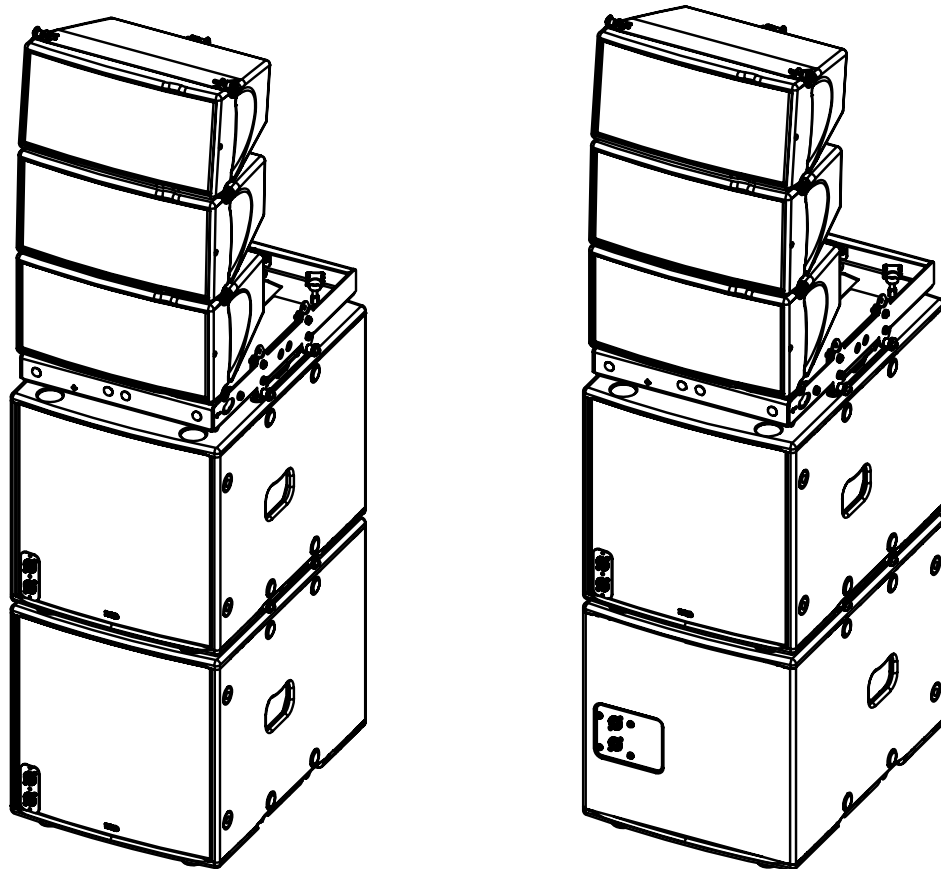
**1 Box**



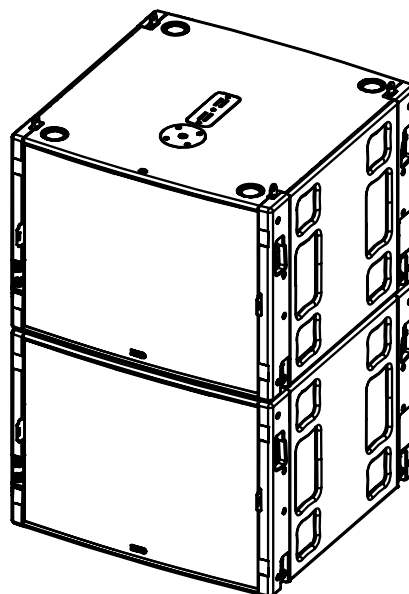
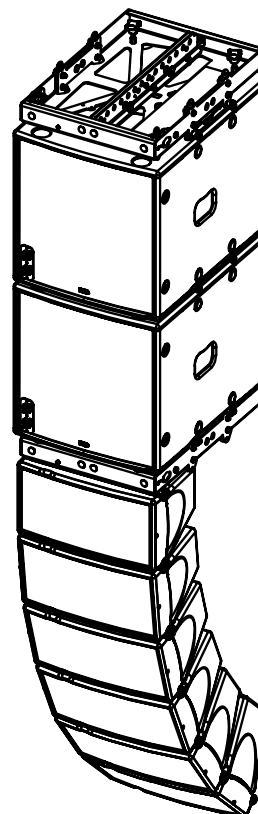
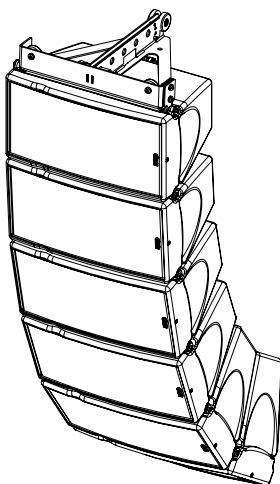
Default Cross over on one box 50 Hz Front Fill, multi-diff, sound reinforcement all short throw application;  
High SPL Small system using 2x GEOM6 and 2x MSUB12 in 85 Hz;



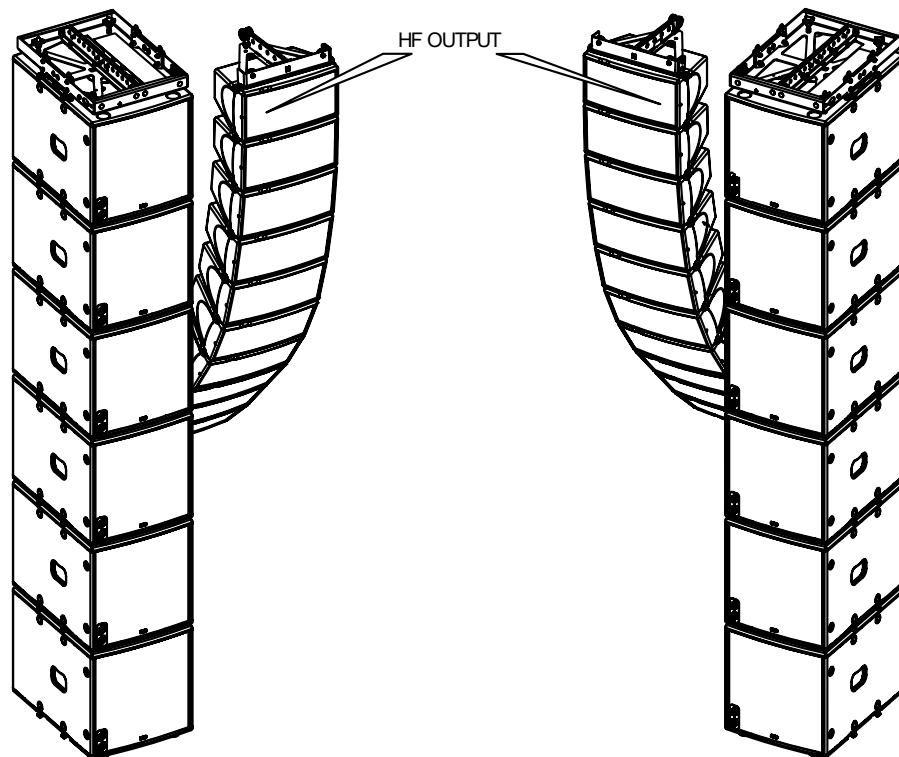
For small flying or stacking configuration, mid throw application used at 60 Hz without MSUB12 and 85 Hz with set up 50-85 Hz for MSUB12.



For stack configuration using MSUB12 in OMNI or CARDIO mode with 1 Back and 2 Front and GEOM6 on top of them, MSUB12 should use the 50-85 Hz setup (85 Hz crossover should be used for GEOM6 as well). A small overlap could have impact if needed, for example use MSUB12 with 50-120 Hz setup.

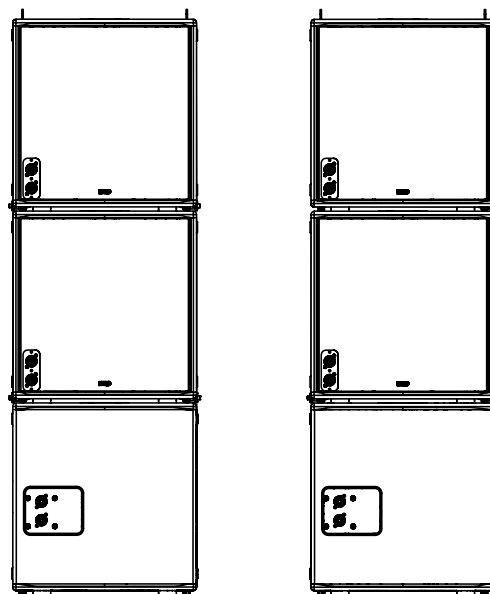
**4-6 Boxes**

For long throw flying application used in GEOM6 at 60 Hz without Sub. MSUB12 should use the 50-120 Hz setup (120 Hz crossover should be used for GEOM6 as well). If a larger stacked Sub is used all together, MSUB12 should use the 63-120 Hz setup.



For very long throw application, MSUB12 should be deployed using the 50-120 Hz setup (120 Hz crossover should be used for GEOM6).

Don't forget to put HF Waveguide either to the exterior or the interior of the venue.

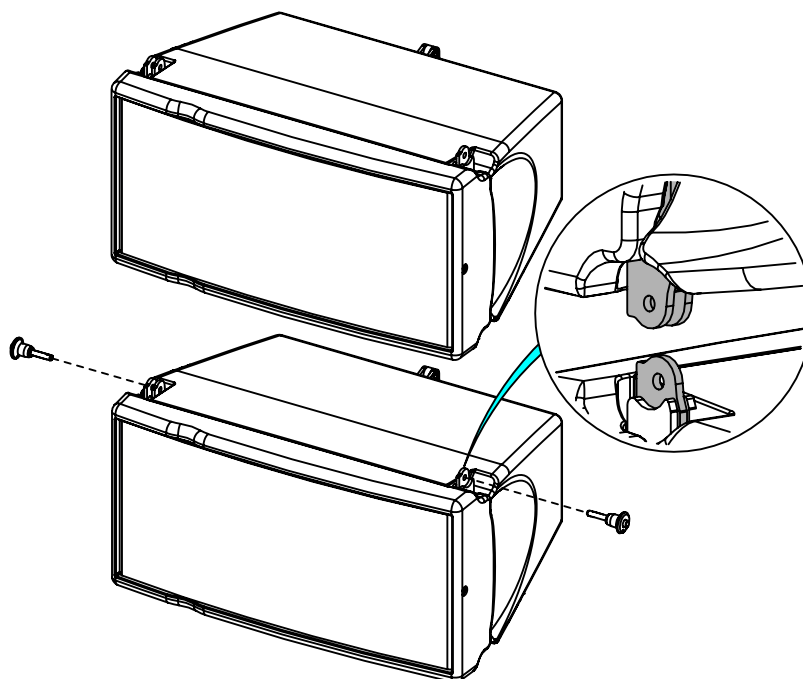


Ground Stack Sub design

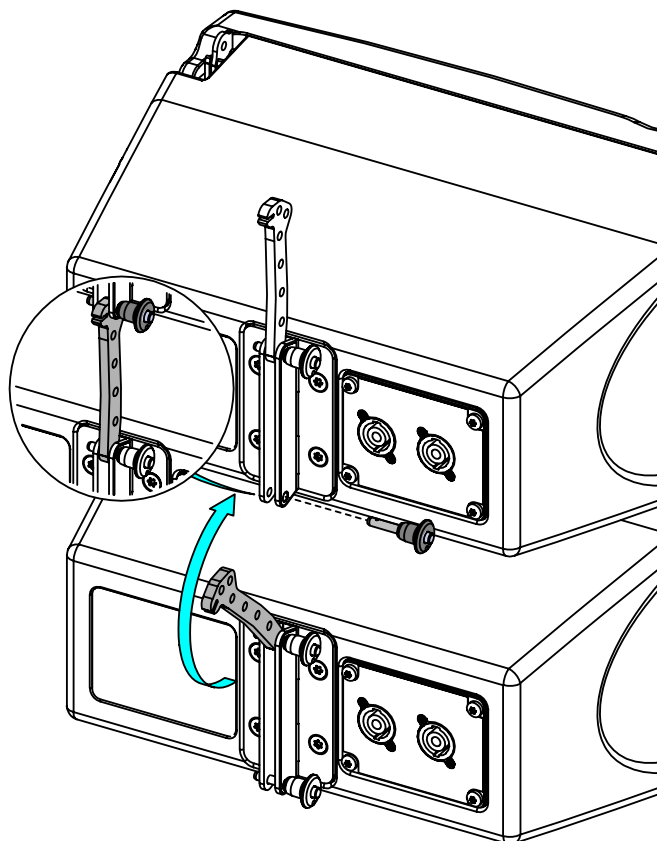


**GEOM6 RIGGING****Assembly****Front**

Insert quick release pins 5x15mm (VXT-BL515) on both sides (or use GMI-BNFIX).

**Back**

Adjust the angle with the lift bar and lock with the quick release pin VXT-BL515 (or fasteners provided with GMI-BNFIX).



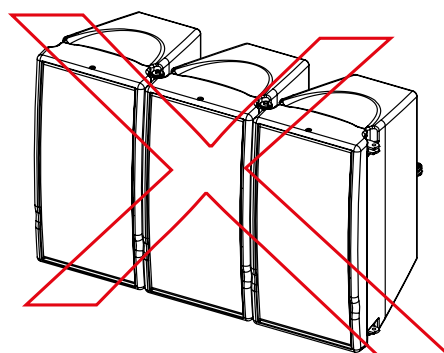
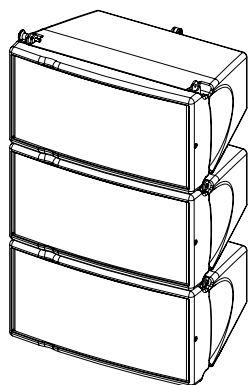
**WARNINGS**

All GEOM6 accessories are specifically rated in agreement with structural computations.

Never use other accessories – including push-pins – when assembling GEOM6 cabinets than the ones provided by NEXO: NEXO will decline responsibility over the entire GEOM6 accessory range if any component is purchased from different supplier.

All GEOM6 accessories have been designed so that cabinet are arrayed vertically.

GEOM6 horizontal assemblies as shown in figure below are **UNSAFE** and **STRICTLY PROHIBITED**

**VNT-BUMPM6**

Rated for a maximum of 12 GEOM6 or 8 MSUB12, or a combination with a maximum of 4 MSUB12 and 6 GEOM6.

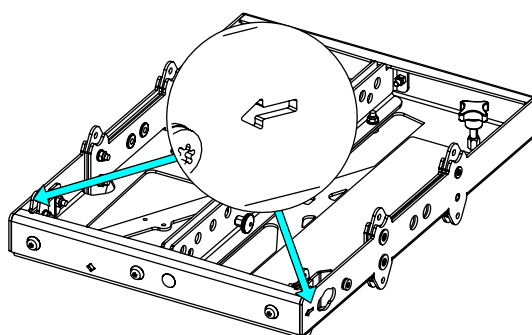
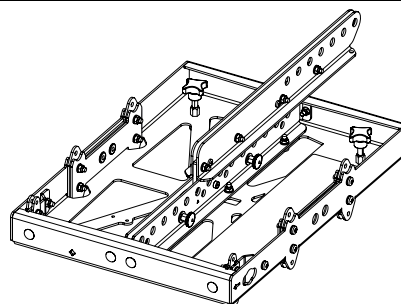
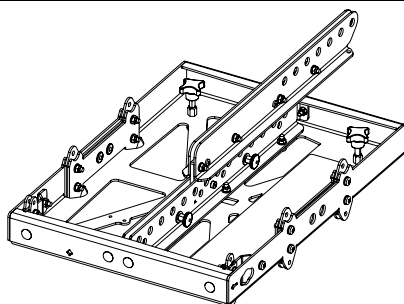
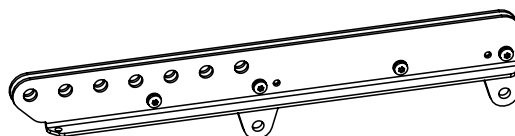
Flown on 1 or 2 rigging points.

Usable with VNT-EXBARM6 for extra tilt angle and flown on one or two rigging points.

1 location for laser/clinometer.

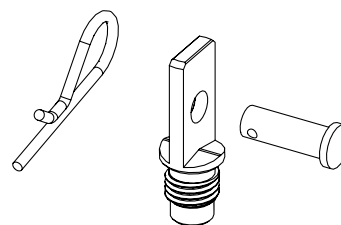
Use VXT-BL615 or VNI-FIXBUMPM6 with MSUB12.

Use VXT-BL515 or GMI-BNFIK with GEOM6.

**VNT-EXBARM6**

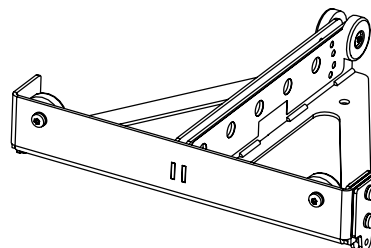
# VNT-MNSTKM6

Stacking option for GEOM6 on top of MSUB12 (with GMT-BUMPER).



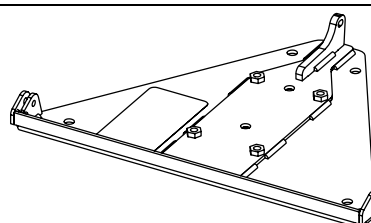
# GMT-BUMPER

Rated for a maximum of 12 GEOM6.  
Usable with GMT-EXBAR for a one rigging point.  
Stacking alone, rated for a maximum of 3x GEOM6.

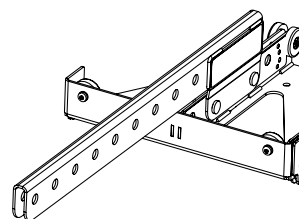
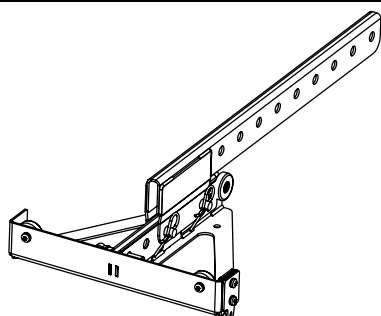
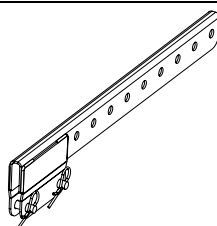


# GMT-LBUMP

Rated for a maximum of 3 GEOM6.

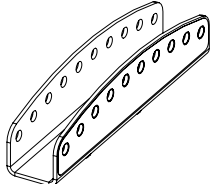


# GMT-EXBAR

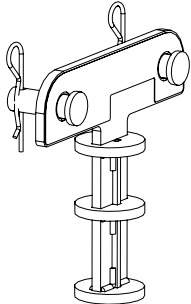


**GEOM6 – ACCESSORIES**

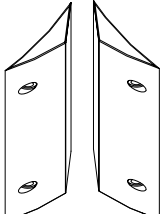
**GMT-LBPADPT**

Use with GMT-LBUMP	
--------------------	---

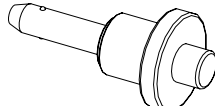
**GMT-BPADPT-2**

Use with GMT-BUMP for stacking.	
---------------------------------	---

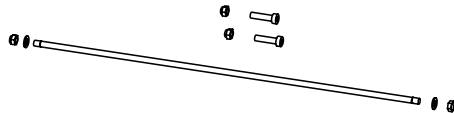
**GMT-FLG**

Pair of flanges for 120°horizontal directivity.	
---	--

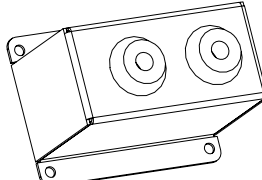
**VXT-BL515**

Quick release pin 5x15mm for touring application.	
---	---

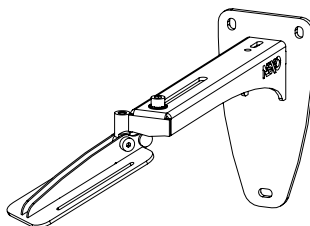
**GMI-BNFIK**

Rigging fix.	
--------------	--

**GMI-IPCOV**

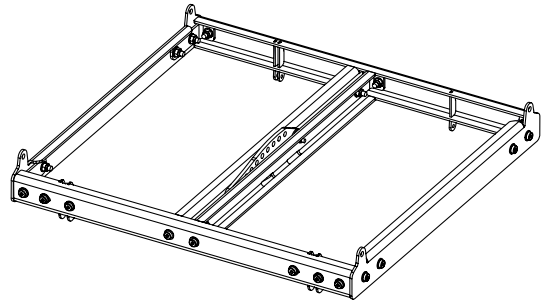
IP54 connector box	
--------------------	---

**VNI-WS15**

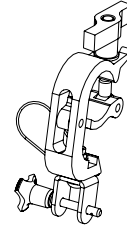
Wall bracket, use with GMT-LBUMP (3 GEOM6 max)	
--	--

**VNI-LNKM61018**

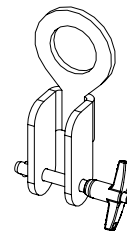
Adapter MSUB18-I to GEOM6 (with GMI-BNFIK).  
(max 6x GEOM6)

**VNT-TCBRK**

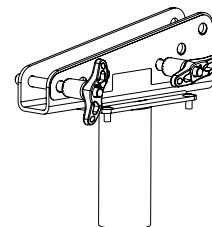
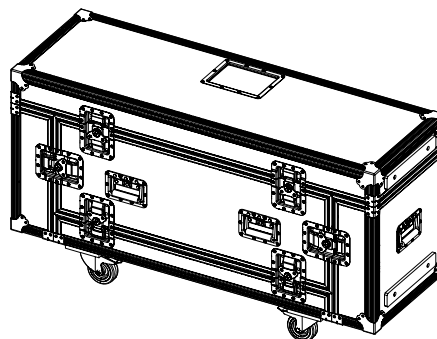
Truss clamp adapter

**VNT-XHBRK**

Lifting ring

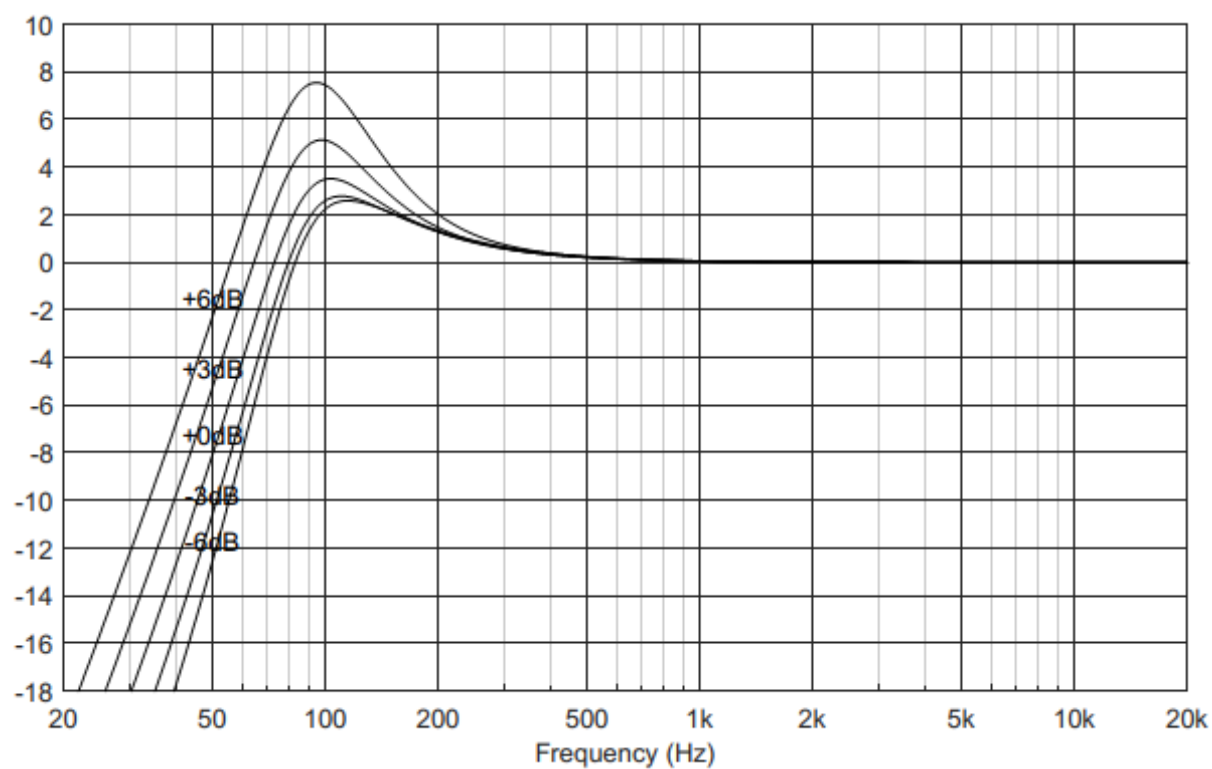
**VNT-POLE**

Pole mount adapter

**GMT-6CASE: use for 6x GEOM6 and accessories**

**ARRAY EQ**

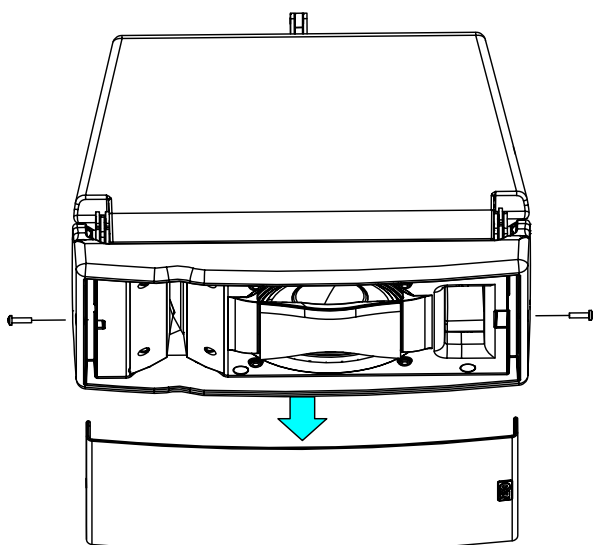
The ArrayEQ allows to adjust the system frequency response in its lower range  
(see curves below, with different ArrayEq values):



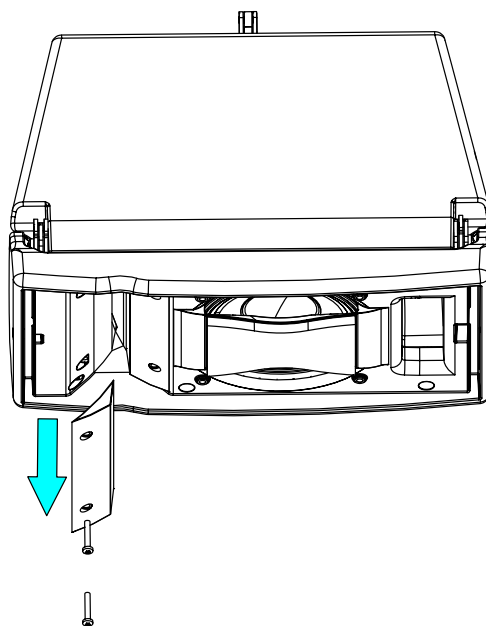
# MAINTENANCE

## Front panel disassembly

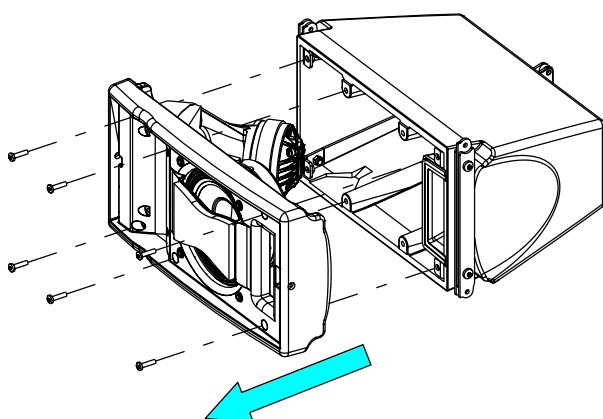
**1** Remove the grid (2 screws Tx25).



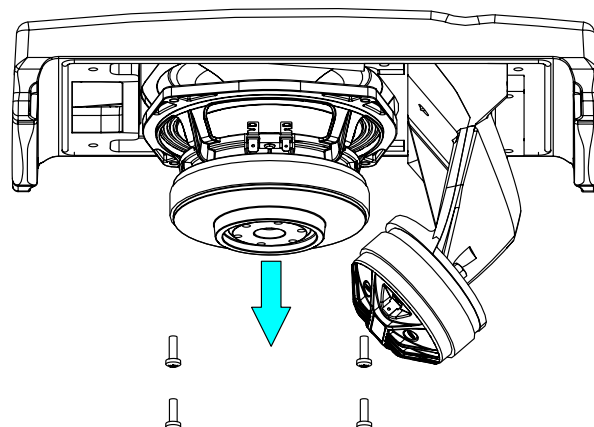
**2** Remove external 120° flange (2 screws Tx20).



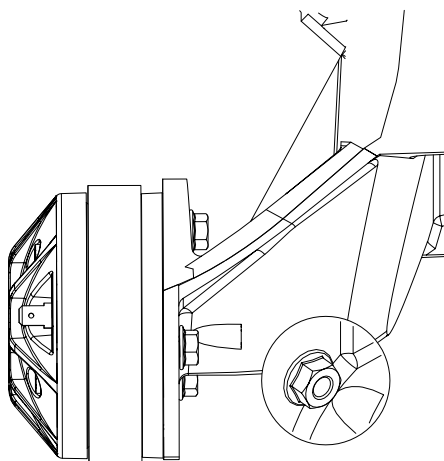
**3** Remove the front cabinet (6 screws Tx25).



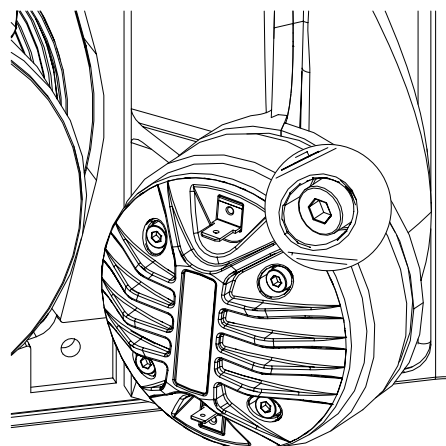
**4** Remove 4 screws Tx25 to access to the speaker.  
Tightening torque: 3,5 Nm



**5** Remove 3 nuts (Hex10) to access to the speaker.

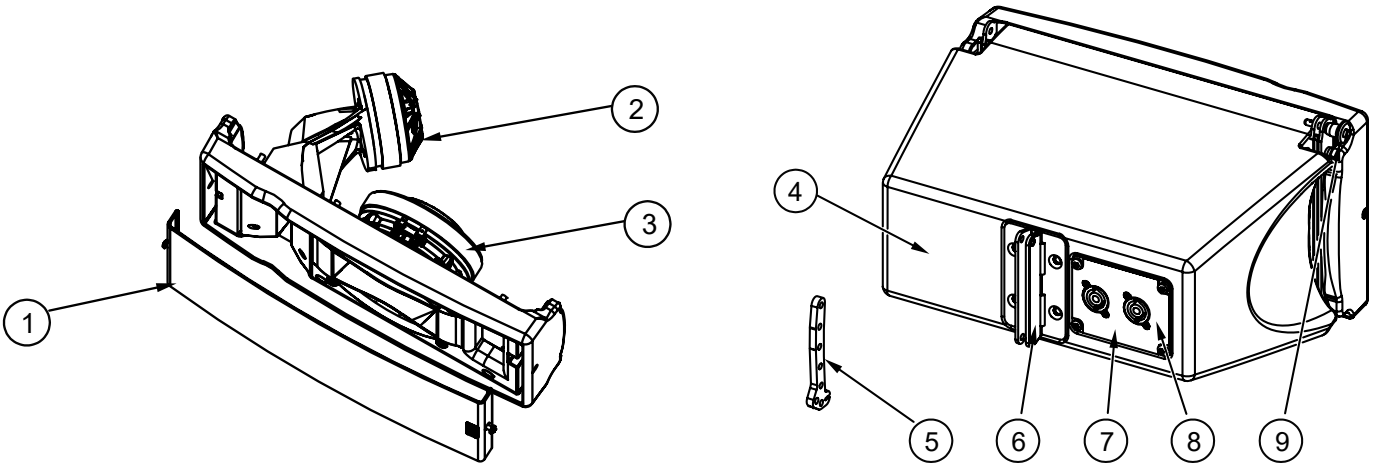


**6** Remove 4 screws (Allen 3), remove the cover and access to the diaphragm.



MAINTENANCE

Spare parts



MARK	QUANTITY	REFERENCE	DESIGNATION
1	1	05GEO-6UA	Complete grille black with logo and screws
	1	05GEO-6UAPW	Complete grille white with logo and screws
2	1	05HPADE14-16	HF driver complete (with screws)
	1	05NH14-16R/k	HF diaphragm HPADE14-16
3	1	HPB6-F	6.5" driver
	1	05HPB6-FR/K	Recone kit HPB6-F
4	1	05LEXWARM6	Lexan warning
5	1	05GEOM6LKB	LinkBar
6	2	05LEXRIGM6AG	Lexan angle
7	1	05GEOM620-FPA	Connecting plate
8	1	05LEXCNX620	Lexan GEOM620
	1	05LEXCNX6B	Lexan GEOM6B
9	1	04VXT-BL515	Quick release pin 5x15

NOTE:

Speakers and Grills can be sent back to NEXO for recycling



## TECHNICAL SPECIFICATIONS

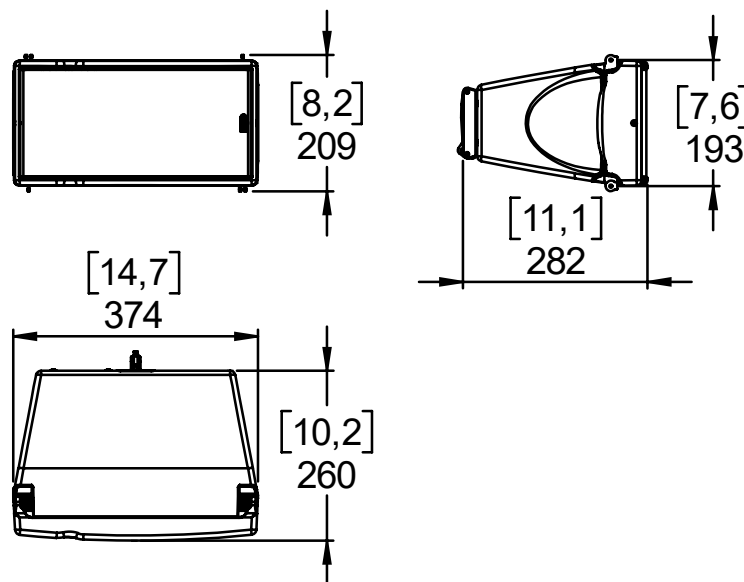
### GEOM620 WITH NEXO ELECTRONICS

Model	GEOM620
Frequency range ( $\pm 6$ dB)	75Hz – 20kHz
Sensibility (1W / 1m)	95dB SPL Nominal
Peak SPL Level (1m)	128dB
Operating voltage	30 Vrms
Vertical Dispersion	20°
Horizontal Dispersion	80° or 120° (with flanges GMT-FLG)
Crossover Frequency	LF-HF: 2kHz Passive
Nominal Impedance	8 $\Omega$
Recommended Amplification	450 W per cabinet

### SPECIFICATIONS

Model	GEOM620
Components	LF: 1x 6.5" - 8 $\Omega$ - Long excursion HF: 1x1" throat driver on a BEA/FEA optimized HRW™
Material	Lightweight polyurethane composite
Finish	Black or white structural paint
Front finish	Steel front grille Black or white paint Black or white mesh
Fittings	2 Side handles
Connector	2x NL4 connectors, 4 poles connectors
Weight	9.7 kg – 21.4 lb

#### Dimensions



TECHNICAL SPECIFICATIONS

GEOM6B WITH NEXO ELECTRONICS

Model	GEOM6B
Frequency range (±6dB)	70Hz – 1kHz
Sensibility (1W / 1m)	94dB SPL Nominal
Peak SPL Level (1m)	125dB
Operating voltage	30 Vrms
Nominal Impedance	8 Ω
Recommended Amplification	450 W per cabinet

SPECIFICATIONS

Model	GEOM6B
Components	LF: 1x 6.5" - 8Ω - Long excursion
Material	Lightweight polyurethane composite
Finish	Black or white structural paint
Front finish	Steel front grille Black or white paint Black or white mesh
Fittings	2 Side handles
Connector	2x NL4 connectors, 4 poles connectors
Weight	7.6 kg – 13.8 lb
Dimensions	

**USER NOTES**

**NEXO S.A.**

Parc d'activité de la Dame Jeanne  
F-60128 PLAILLY

Tel: +33 3 44 99 00 70

Fax: +33 3 44 99 00 30

E-mail: [info@nexo.fr](mailto:info@nexo.fr)

[nexo-sa.com](http://nexo-sa.com)

**NEXO**