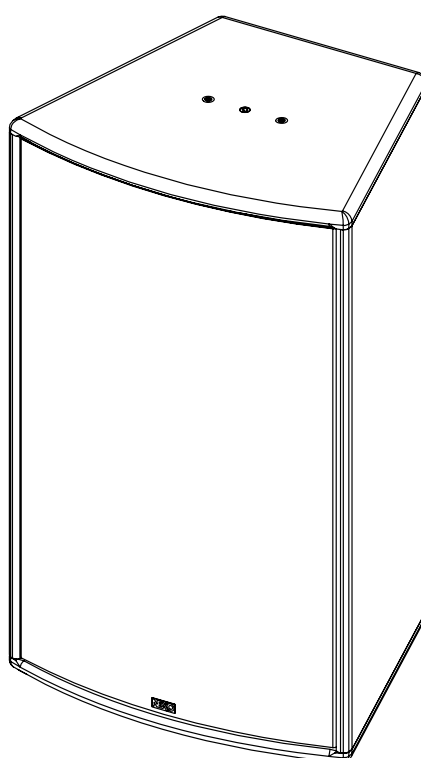


ePS12-EN54



User manual

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COMPLIANCE

ePS12-EN54 is certified EN54-24 by AFNOR Certification

The NEXO logo is written in a bold, black, sans-serif font. The letters are closely spaced, and the 'X' is particularly prominent.

Parc du Pré de la Dame Jeanne BP5 - FR 60128 PLAILLY – France

Tel : +33 3 44 99 00 70 – Fax : +33 3 44 99 00 30 – email : info@nexo.fr – nexo-sa.com

EN54-24 :2008

Voice alarm loudspeaker for fire detection and fire alarm systems for buildings

DoP NX-0333-CPR-075633

Type B

Technical data and setup instructions included in this manual

ePS12-EN54

WARNINGS

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 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



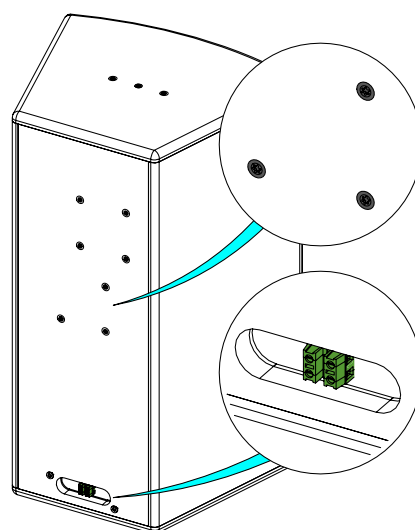
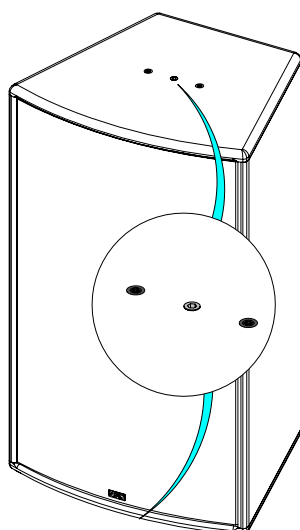
This symbol on the product or its packaging indicates that this product must not be treated as household waste. Instead, it is your responsibility to hand it over to a designated collection point for the recycling of waste electrical and electronic equipment. By ensuring your waste equipment is recycled,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

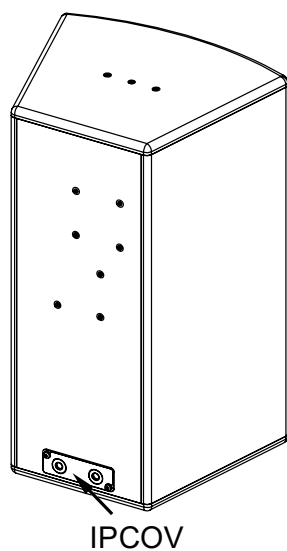
On each side of the cabinet, two M6 with 80 mm pitch plus one M10 fittings will connect the ePS12-EN54 to accessories (VNI-HCPL600, VNU-BUMP, VNU-HBRK600, or eyebolts).

The back of the speaker is fitted with 3x M6 (70mm pitch) to connect wallmount in both vertical and horizontal positions (VNI-WM02).

2 pairs (In/Out) of 7.62 mm pitch screw terminal blocks. Cables from 0.75 mm² to 3.31 mm² (12 to 15 AWG) copper section.



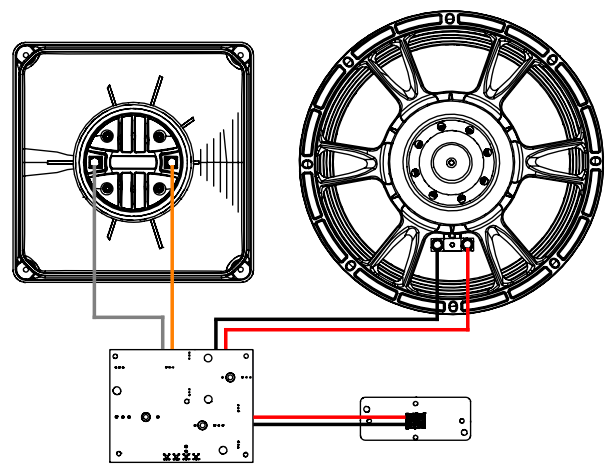
ePS12-EN54 with IPCov



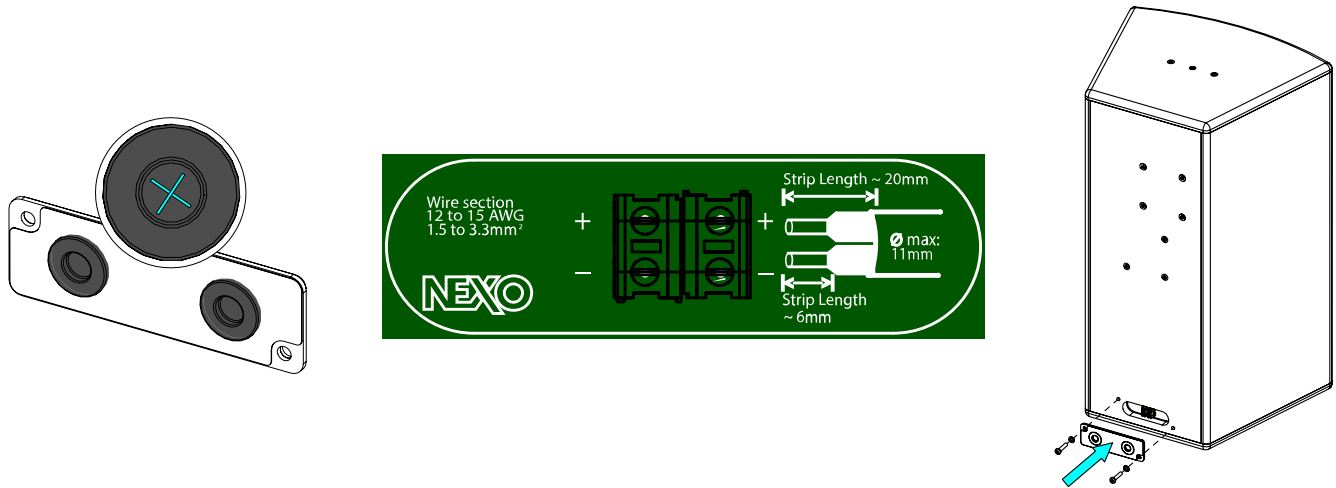
DESCRIPTION

DESCRIPTION

- The ePS12-EN54 is a compact full-range 2 ways speaker
- Asymmetrical HF dispersion “PS” type.
- ePS12-EN54 can be used alone or with eLS18 subwoofer
- The speaker is equipped with 2 pairs (In/Out) of screw terminal blocks, permissible cables from 0.75 mm² to 3.31 mm² (12 to 15 AWG) copper section. Cable with maximum outside diameter of 11mm.



- To wire ePS12-EN54, slit the membrane of the grommet crosswise, pass the cable through and make the connection to the screw terminals. Place the IPCOV.



- IP55: be careful to place the IPCOV correctly.
- Amplification
 - The ePS12-EN54 speakers 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 ePS12-EN54 speakers and eLS18 subwoofers usable with each solution.

| → | DTD + DTDAMP4X0.7 | DTD + DTDAMP4X1.3 | NXAMP4X1mk2 | NXAMP4X2mk2 | NXAMP4X4mk2 |
|------------|------------------------|------------------------|------------------------|---------------------|---------------------|
| ePS12-EN54 | 1 per bridged channels | Up to 2 per channel | 1 per channel * | Up to 4 per channel | Up to 4 per channel |
| eLS18 | 1 per bridged channels | 1 per bridged channels | 2 per bridged channels | 1 per channel * | Up to 4 per channel |

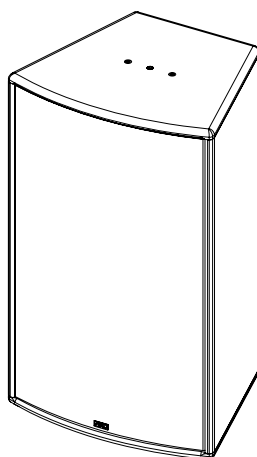
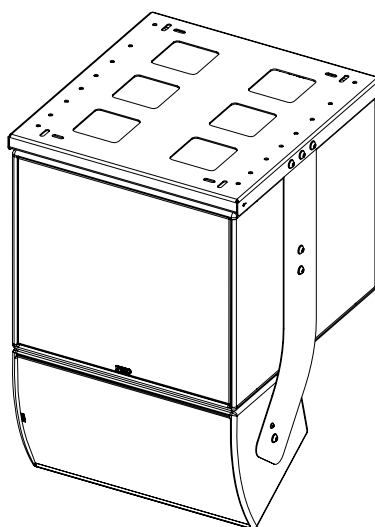
* Recommended powering solution

PRESET

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

For the ePS12-EN54, the following setups are available:

- ePS12 MAIN PA, 60-120kHz
- ePS12 MAIN PA, 85-120kHz.
- ePS12 MAIN PA, 120-120kHz.

ePS12-EN54**ePS12-EN54 + eLS18**

HF DIRECTIVITY

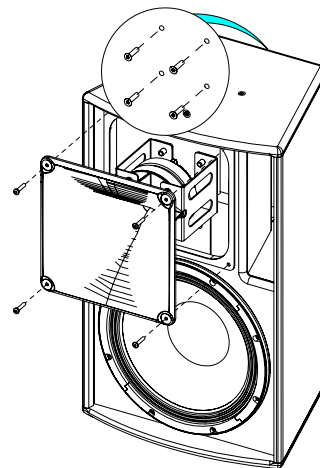
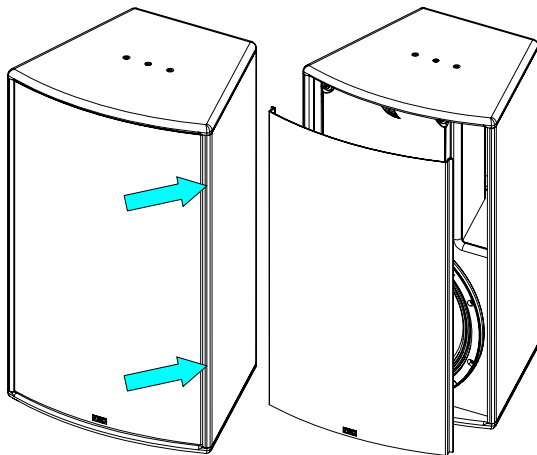
HF DIRECTIVITY

- The ePS12-EN54 speaker can be used in horizontal or vertical position.
- It's easy to change the HF dispersion to deal with every request.

Place a flathead screwdriver in the space between the grille and the cabinet to release the grille.

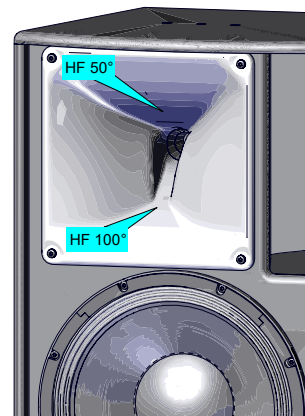
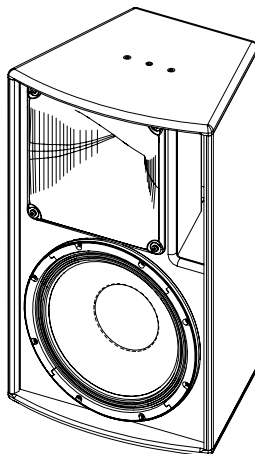
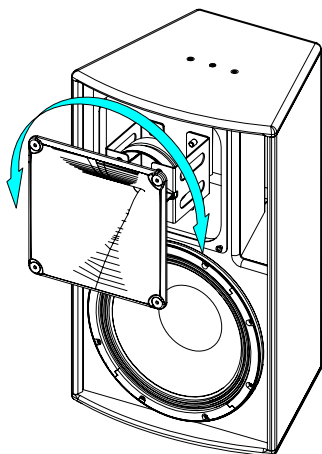
Remove the grille.

Remove the 4 screws at the front, 4 screws at the back that hold the horn. Remove it.



Position the horn according to the desired HF dispersion.

Narrow aperture = widest Dispersion



Reassemble the assembly and replace the grille.

CROSSOVER FREQUENCY

- 60 Hz: Full range application.
- 85, 120 Hz: Use with eLS18.

ACCESSORIES

WARNINGS

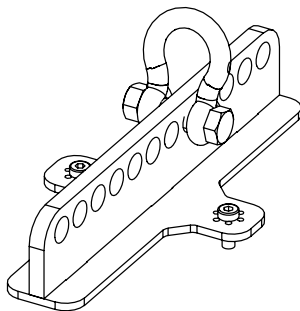
All ePS accessories are specifically rated in agreement with structural computations.

Never use other accessories when assembling ePS12-EN54 cabinets than the ones provided by NEXO: NEXO will decline responsibility if any component is purchased from different supplier.

PROHIBITED: ePS12-EN54 below ePS12-EN54 or ePS12-EN54 below eLS18 without dedicated accessory

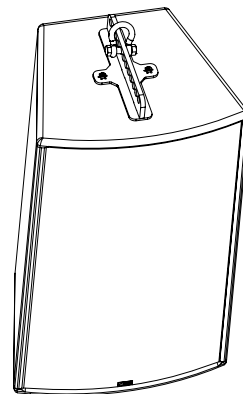
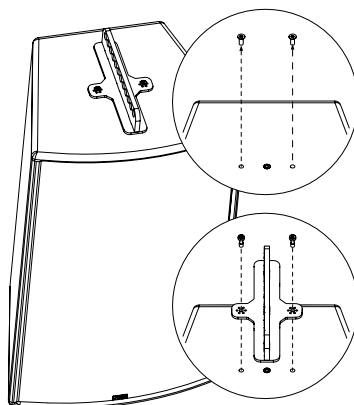
VNU-BUMP

LiftBar, can be used with VNI-WMADAPT.



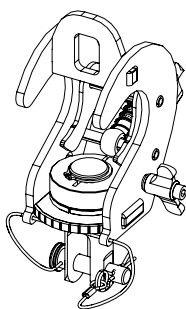
Remove 2 screws on the top
Screw VNU-BUMP to ePS12-EN54 (use only screws provided with VNU-BUMP).
Tight properly.

Refer to the Product Data Sheet



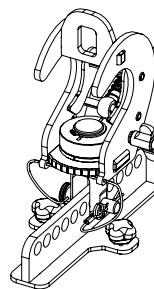
VNT-TCBRK3551

Rotary Truss Clamp



Place VNT-TCBRK3551 on VNU-BUMP at the desired hole.

Refer to the Product Data Sheet



ACCESSORIES

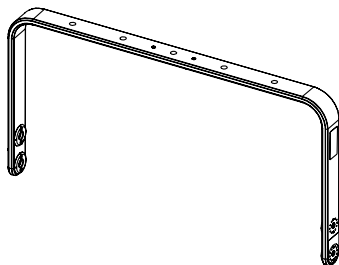
VNU-HBRK600

Horizontal Cradle, usable with:

VNI-CLADAPT.

VNI-WM380.

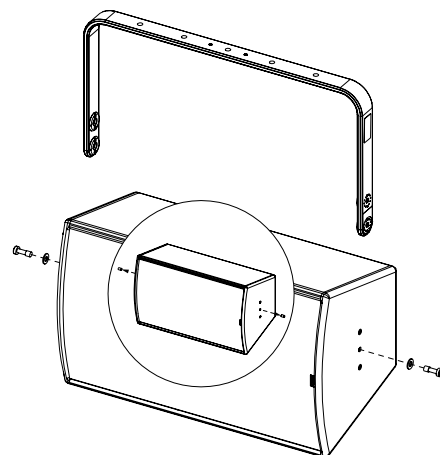
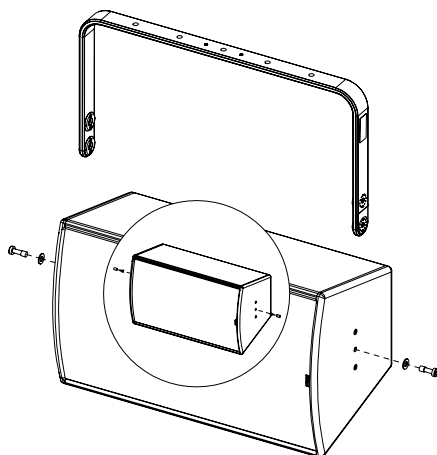
VNU-PLADAPT



Remove the M10 inserts from each side.

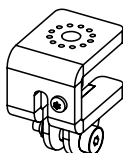
Place HBRK600 on ePS12-EN54, use only fasteners provided. Tight properly.

Refer to the Product Data Sheet



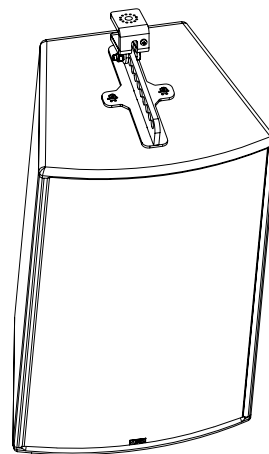
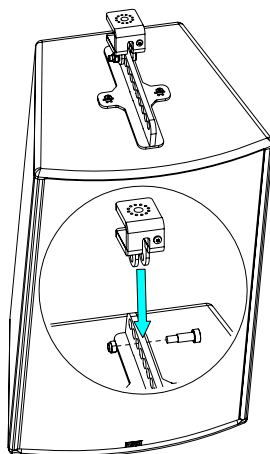
VNI-WMADAPT

Wall mount adapter



Place VNI-WMADAPT on VNU-BUMP, use only fasteners provided. Tight properly.

Refer to the Product Data Sheet



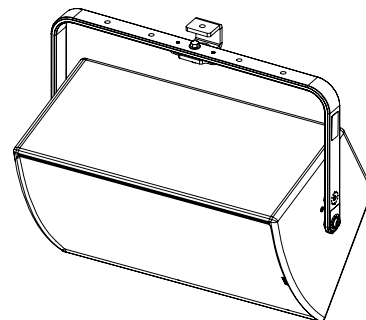
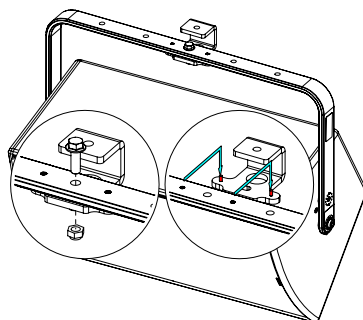
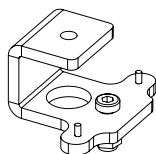
VNI-CLADAPT

Ceiling Adapter, use with VNU-HBRK600.

Screw VNI-CLADAPT to the ceiling
(fasteners not provided).

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

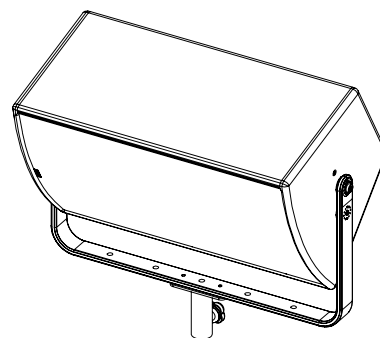
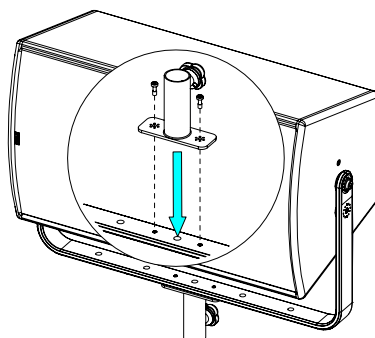
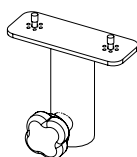
Refer to the Product Data Sheet

**VNU-PLADAPT**

Pole adapter

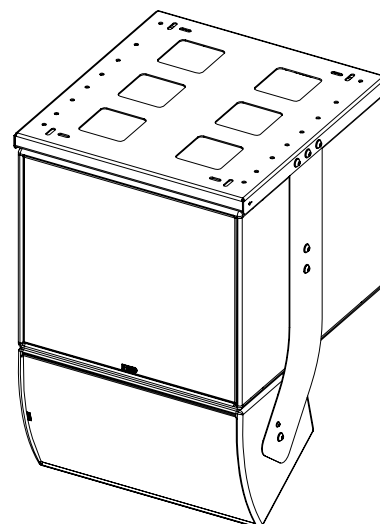
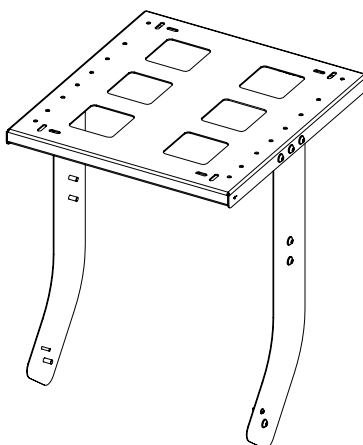
Place VNU-PLADAPT on VNU-HBRK600,
use only fasteners provided.
Tight properly.

Refer to the Product Data Sheet

**VNI-HCPL600**

Coupler ePS12-EN54 under horizontal
eLS18

Refer to the Product Data Sheet



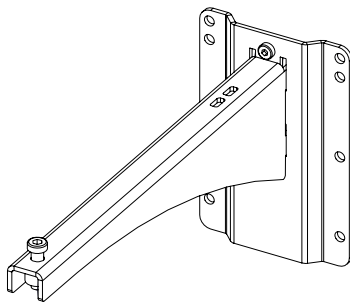
ACCESSORIES

VNI-WM380

Wallmount, usable with:

VNI-WMADAPT / VNU-BUMP

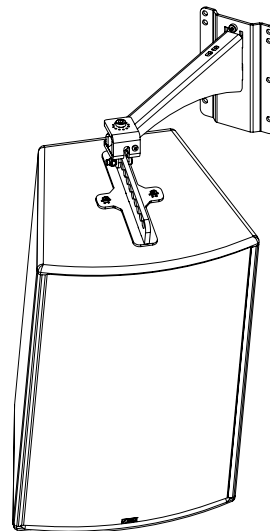
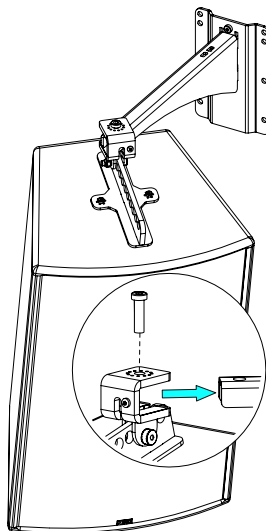
VNU-HBRK600



ePS12-EN54 / BUMP / WMADAPT

Place the assembly on VNI-WM380. Tight with the fasteners provided with VNI-WM380.

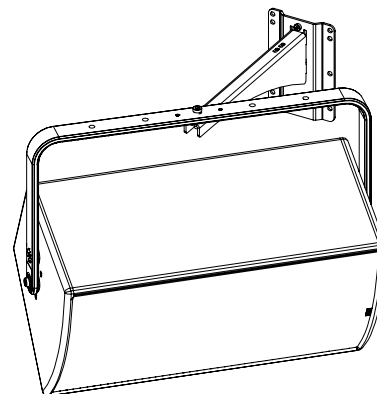
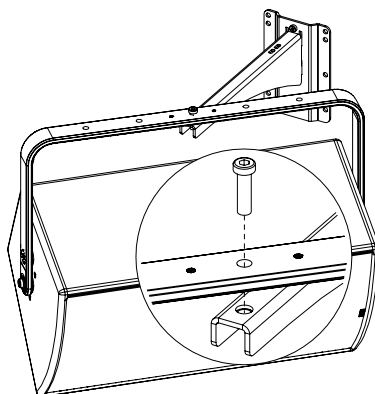
Refer to the Product Data Sheet



ePS12-EN54 / HBRK600

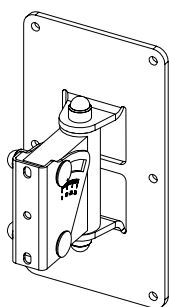
Place the assembly on VNI-WM380. Tight with the fasteners provided with VNI-WM380.

Refer to the Product Data Sheet



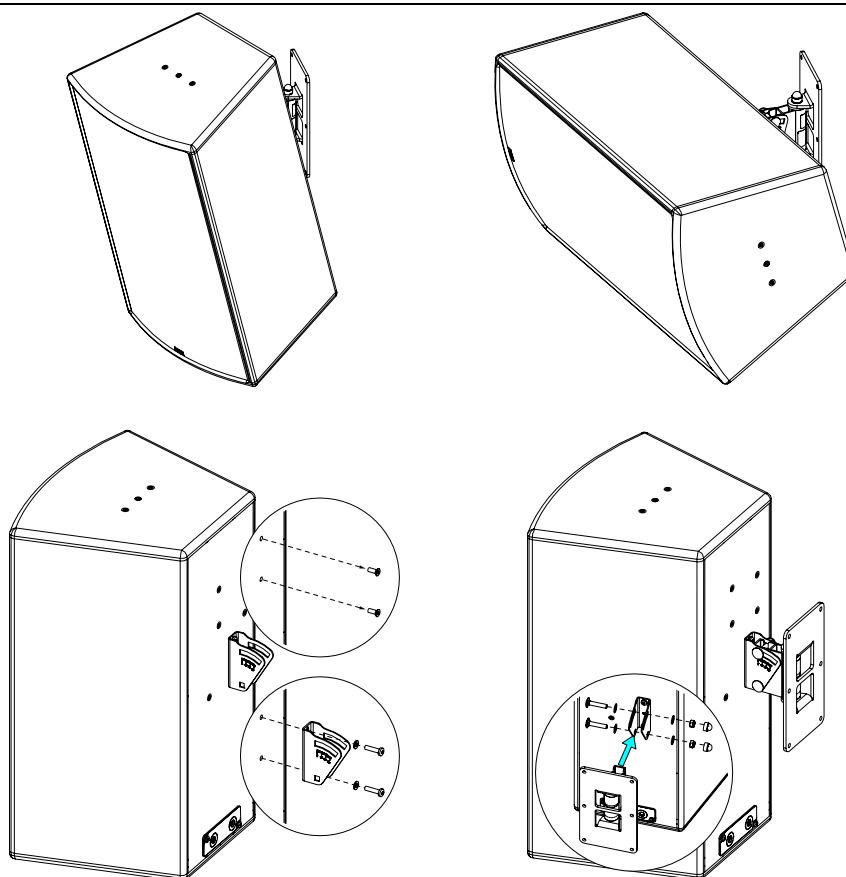
VNI-WM02

Wall mount adapter 25kg max



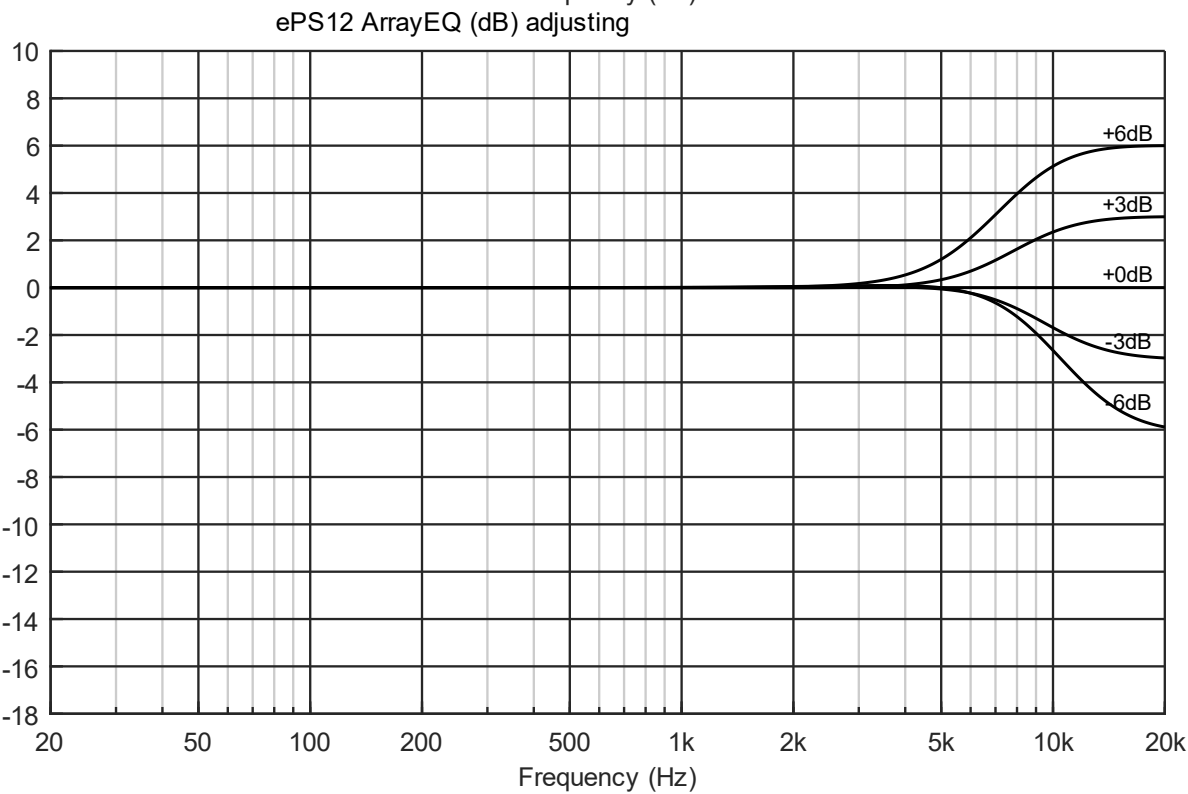
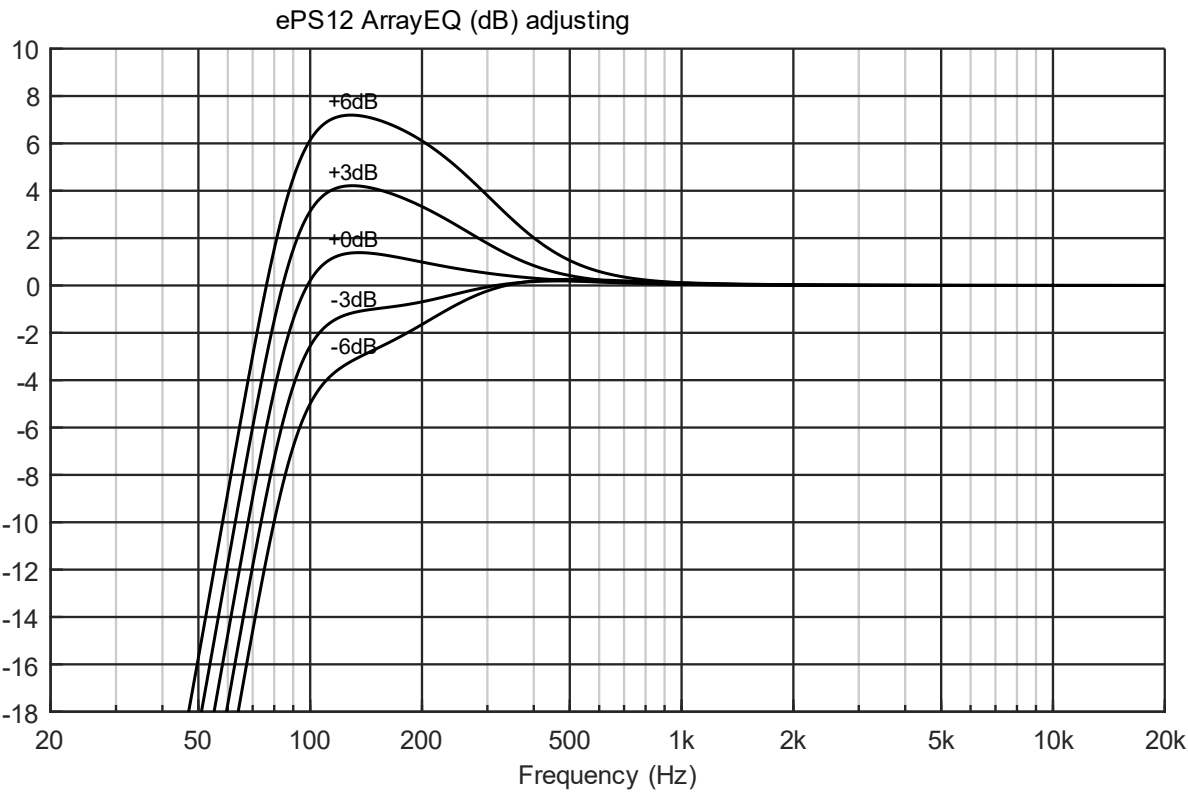
Remove 2 of the 3 screws on the back.
Screw speaker plate to ePS12-EN54 (use only screws provided with ePS12-EN54).
Place the speaker holder with ePS12-EN54 into wall bracket. Fix by tightening bolted assembly.

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

NOTE:

Speakers and Grills can be sent back to NEXO for recycling

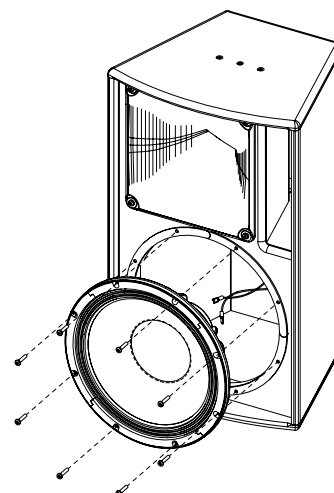
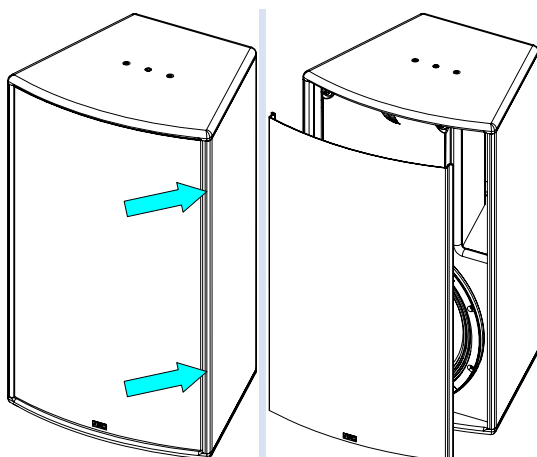
Driver access

Place a flathead screwdriver in the space between the grille and the cabinet to release the grille.

Remove the grille.

Remove the 4 screws to access the LF driver.

Tightening torque: 3.5 Nm (Thread Locker: Loctite 242)

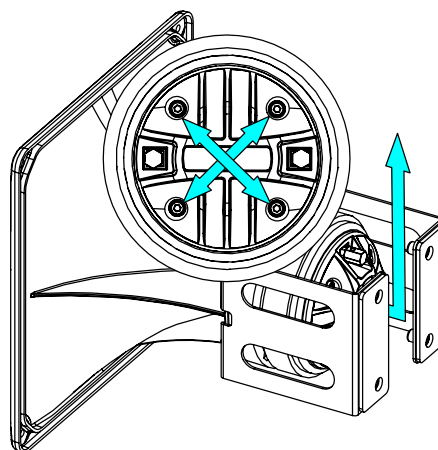
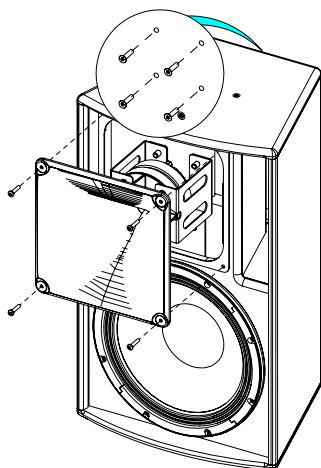


Remove the 4 screws at the back of ePS12-EN54 and the 4 screws that hold the horn. Remove it.

Tightening torque: 2.5 Nm (Thread Locker: Loctite 242)

To access the HF diaphragm, remove the 4 screws.

Tightening torque: 2.5 Nm



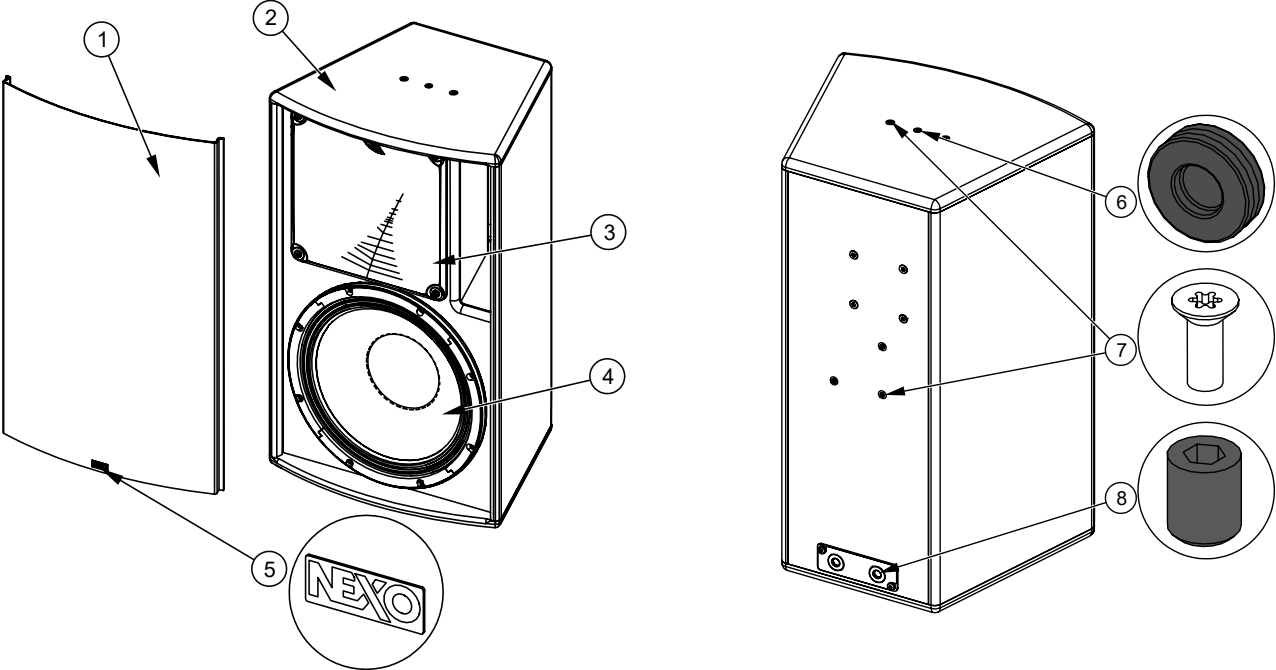
Reassemble the assembly and replace the grille.

LF: red (+) / black (-)

HF: orange (+) / grey (-)

MAINTENANCE

Spare parts



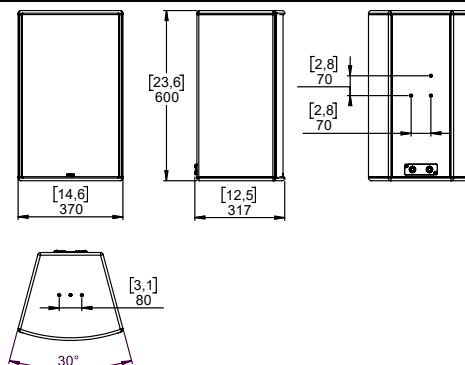
| MARK | QUANTITY | REFERENCE | DESIGNATION |
|------|----------|------------------|--|
| 1 | 1 | 05EPS12EN54-UA | ePS12-EN54 complete grille Black |
| | 1 | 05EPS12EN54-UAPW | ePS12-EN54 complete grille White |
| 2 | 1 | 05EBEPS12 | ePS12 Cabinet Black |
| | 1 | 05EBEPS12-PW | ePS12 Cabinet White |
| 3 | 1 | 05PAVEPS12 | ePS12 Horn sub-assembly |
| | 1 | 05HPADE250-16 | DE250 Driver HF 16 ohm |
| | 1 | 05NH25-16R/K | DE250-16 diaphragm (with screws) |
| 4 | 1 | 05HPB12ND8 | Bass driver 12" neodymium 8 ohms (with screws) |
| | 1 | 05HPB12ND8R/K | Recone Kit for HPB12ND8 (with screws) |
| 5 | 1 | 05LOGNEXO3 | Logo NEXO |
| 6 | 2 | 05VXTSTHC1012N | HEADLESS Screw M10x12 Black (x10) |
| | | 05VXTSTHC1012 | HEADLESS Screw M10x12 White (x10) |
| 7 | 7 | 05VXTCFX616N | VXFX 6x16 Black (x10) |
| | | 05VXTCFX616 | VXFX 6x16 White (x10) |
| 8 | 2 | 05PASF-DG9E1 | Grommet DG11 Ø15.5mm (x2) |
| | | 05PASF-DG11PW | Grommet DG11 White Ø15.5mm (x2) |

TECHNICAL SPECIFICATIONS

WITH NEXO ELECTRONICS

| Model | ePS12-EN54 |
|-------------------------------|--------------------------|
| Frequency range (± 6 dB) | 60 Hz – 20 kHz |
| Sensitivity 1W@1m | 103 dB SPL Nominal |
| Peak SPL Level (1m) | 133 dB Peak |
| Operating voltage | 35 Vrms |
| Vertical Dispersion | +25°/-30° |
| Horizontal Dispersion: | 50° to 100° asymmetrical |
| Crossover Frequency | 60 Hz, 85 Hz, 120 Hz |
| Nominal Impedance | 8 ohms |

SPECIFICATIONS

| Model | ePS12-EN54 |
|--------------------------|---|
| Components | LF 12" Neodymium long excursion 8 ohms HF 1.7" diaphragm – 8 ohms |
| Material | Baltic birch plywood 15mm |
| Finish | Black or White structural paint (Custom RAL upon request) |
| Front finish | Black acoustic fabric fitted back steel front grille |
| Fittings | 2x M6 and 1x M10 on the top and bottom for rigging accessories. 3x M6 on the back for rigging accessories (70mm pitch). |
| Connector | 2 pairs (In/Out) of 7.62 mm pitch screw terminal blocks. Cables from 0.75 mm ² to 3.31 mm ² (12 to 15 AWG) copper section. Cable with maximum outside diameter of 11 mm. |
| Weight | 18 kg / 40 lb |
| ID Classification | IP55 with IPCOV |
| Dimensions |  <p>Technical drawings of the ePS12-EN54 speaker showing front, side, and top views with dimensions in millimeters and inches.</p> <ul style="list-style-type: none"> Front view: Width [14,6] 370, Height [23,6] 600. Side view: Width [12,5] 317, Height [23,6] 600. Top view: Width [14,6] 370, Height [12,5] 317. Bottom view: Width [14,6] 370, Height [12,5] 317. Mounting holes: [2,8] 70. Dispersion angle: 30°. |

TECHNICAL SPECIFICATIONS

DATA ACCORDING TO EN54-24 : 2008

| | |
|--|------------|
| Nominal Continuous Power | 400 W |
| Operating Voltage | 35 Vrms |
| Nominal Impedance | 3 Ω |
| Sensitivity 1W@4meters | 78 dB |
| Max Continuous Sound Pressure @4meters | 104 dB SPL |

| | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|-------|------|
| Frequency Band | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1000 |
| Sound Pressure Level per band / Total 1W @ 4 meters (dBSPL) | 66 | 67 | 64 | 68 | 66 | 64 | 65 | 65 | 66 | 63 | 61 |
| Frequency Band | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 | 6300 | 8000 | 10000 | |
| Sound Pressure Level per band / Total 1W @ 4 meters (dBSPL) | 62 | 60 | 61 | 62 | 63 | 63 | 63 | 65 | 66 | 68 | |

Sound Pressure Level per band / Total 1W @ 4 meters (dBSPL)

100 Hz à 10 kHz 78

Directivity

| Frequency Band | 500 | 1000 | 2000 | 4000 |
|--|-----|------|------|------|
| Horizontal directivity averaged per octave on-axis normalized -6 dB (Positive Angle) | 75 | 50 | 50 | 40 |
| Horizontal directivity averaged per octave on-axis normalized -6 dB (Negative Angle) | -75 | -50 | -50 | -40 |
| Vertical Directivity averaged per octave on-axis normalized -6 dB (Positive Angle) | 90 | 65 | 60 | 40 |
| Vertical Directivity averaged per octave on-axis normalized -6 dB (Negative Angle) | -80 | -65 | -40 | -20 |

All above specifications are for free-field measurements.
Reference axis is the line orthogonal to the grill, intersecting the grill in the middle.
Reference plane is aligned on cabinet front grill.
Horizontal plan is perpendicular to the reference plane in the width direction.

USER NOTES

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