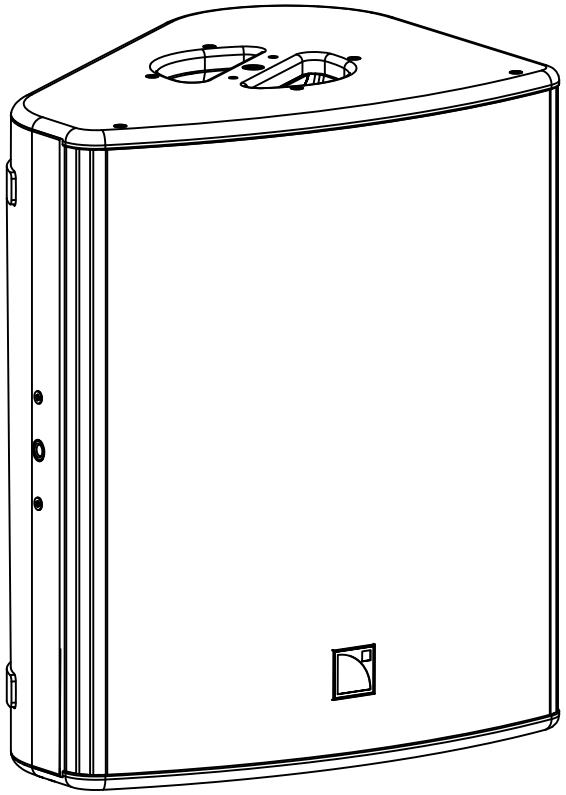
# X12

user manual (EN)



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**Contents**

# Safety

## Instructions

**Inspect the product before operation.**
If any sign of defect or damage is detected, immediately withdraw the product from use for maintenance.

**Never incorporate equipment or accessories not approved by L-Acoustics.**

**Read all the related PRODUCT INFORMATION documents shipped with the products before exploiting the system.**

**Do not store the product on an unstable cart, stand, tripod, bracket, or table.**

**Beware of sound levels.**
Do not stay within close proximity of loudspeakers in operation.
Loudspeaker systems are capable of producing very high sound pressure levels (SPL) which can instantaneously lead to permanent hearing damage to performers, production crew and audience members. Hearing damage can also occur at moderate level with prolonged exposure to sound.
Check the applicable laws and regulations relating to maximum sound levels and exposure times.

**This system is intended for professional use.**

**Read the RIGGING MANUAL before installing the system.**
Use the rigging accessories described in the rigging manual and follow the associated procedures.

**Read the maintenance section of this document before servicing the product.**

**Do not expose the product to extreme conditions.**
Do not expose the product to rain or sea spray.
Do not expose the product to moisture (mist, steam, humidity, condensation…) or excessive heat (direct sun, radiator…) for a long period of time.

**Contact L-Acoustics for advanced maintenance.**
Any unauthorized maintenance operation will void the product warranty.

## Symbols

The following symbols are used in this document:

This symbol indicates a potential risk of harm to an individual or damage to the product.
It can also notify the user about instructions that must be strictly followed to ensure safe installation or operation of the product.

This symbol notifies the user about instructions that must be strictly followed to ensure proper installation or operation of the product.

This symbol notifies the user about complementary information or optional instructions.

# Welcome

Thank you for purchasing the L-Acoustics X12.

This document contains essential information on using the system properly.

**As part of a continuous evolution of techniques and standards, L-Acoustics reserves the right to change the specifications of its products and the content of its document without prior notice.** Please check *www.l-acoustics.com* on a regular basis to download the latest document and software updates.

## X12 multi-purpose enclosure

The X12 is a multipurpose coaxial system perfectly suited to all short throw sound reinforcement applications. The enclosure features a 3" diaphragm compression driver coaxially loaded by a 12" low frequency transducer in a bass-reflex cabinet. The L-Vents laminar vented ports reduce turbulence and port noise at high levels to increase LF efficiency.

The X12 operates from 59 Hz to 20 kHz. The coaxial transducer arrangement and its ellipsoid acoustic design produce a 90° x 60° directivity pattern with a smooth tonal response free of secondary lobes over the entire frequency range.

The internal passive crossover network uses custom filters. The L-Acoustics amplified controllers L-Drive parameters ensure the linearization and protection of the transducers.

With a cabinet combining the properties of birch and beech plywood, X12 weighs 20 kg and its elegance makes for an easy integration in any situation. Ergonomic handles provide a solid grip and efficient handling. An optional white or RAL color program means that it can melt into any architecture. The X12 provides a stage monitoring angle setting of 35° with regard to vertical or 55° thanks to its built-in risers.

The ellipsoid directivity of 90° x 60° gives optimized coverage for FOH and fill applications, distributed systems, stage monitoring and more. The compact footprint allows for discreet integration, preserving sightlines. The passive design reduces the need for amplified controller.

The X12 can be pole-mounted using the integrated socket. Other deployments such as wall-mounted, ceiling-mounted or flown are quick and easy, with a complete range of rigging accessories that offer multiple set-up options and various orientations.

# System components

### Loudspeaker enclosures

| | |
|---|---|
| X12 | 2-way-passive coaxial enclosure: 12'' LF + 3'' HF diaphragm (white) |
| SB15m | High power compact subwoofer : 1 x 15'' |
| SB18 | High power compact subwoofer: 1 x 18'' |

**SB18 / SB18i / SB18m**
In this document, the SB18 term and illustrations refer equally to SB18, SB18i or SB18m.

### Powering and driving system

| | |
|---|---|
| LA4X / LA8 / LA12X | Amplified controller with DSP, preset library and networking capabilities |
| LA-RAK | Touring Rack (RK9U/3xLA8/LA-POWER/ LA-PANEL/LA-PANELAES3/2U panels) |
| LA-RAK II | Touring rack containing three LA12X, LA-POWER II for power distribution and LA-PANEL II for audio and network distribution |

Refer to the LA4X / LA8 / LA12X user manual for operating instructions.

### Loudspeaker cables

| | |
|---|---|
| SP cables | 4-point speakON loudspeaker cables (4 $mm^2$ gauge) |
| | SP cables come in four sizes: SP.7 (0.7 m/2.3 ft), SP5 (5 m/16.4 ft), SP10 (10 m/32.8 ft) and SP25 (25 m/82 ft) |
| SP-Y1 | breakout cable for two passive enclosures (2.5 $mm^2$ gauge) provided with a CC4FP adapter |
| | 4-point speakON to 2 × 2-point speakON |
| DO | 8-point PA-COM loudspeaker cables (4 $mm^2$ gauge) |
| | DO cables come in three sizes: DO.7 (0.7 m/2.3 ft), DO10 (10 m/32.8 ft) and DO25 (25 m/82 ft) |
| DOSUB-LA8 | breakout cable for four passive enclosures (4 $mm^2$ gauge) |
| | 8-point PA-COM to 4 × 2-point speakON |

**Information about the connection of the enclosures to the LA amplifiers is given in this document.**
Refer to the LA4X / LA8 / LA12X user manual for detailed instructions about the whole cabling scheme, including modulation cables and network.

### Rigging elements

Rigging elements or procedures are not presented in this document.
Refer to the X12 rigging manual.

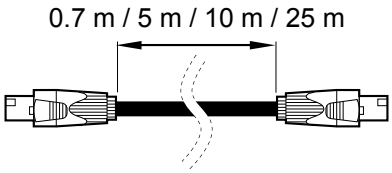
### Software applications

| | |
|---|---|
| Soundvision | 3D acoustical and mechanical modeling software |
| LA Network Manager | Software for remote control and monitoring of amplified controllers |

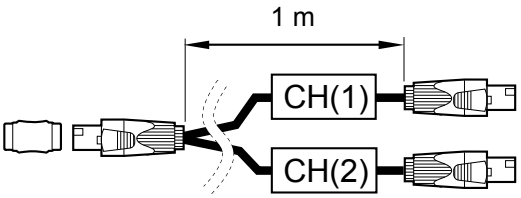
Refer to the **Soundvision** help.

Refer to the **LA Network Manager video tutorial**.

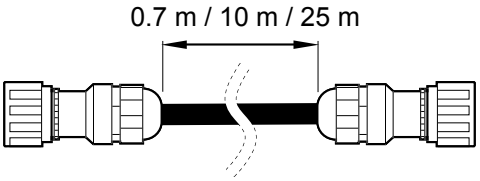
## Loudspeaker cables



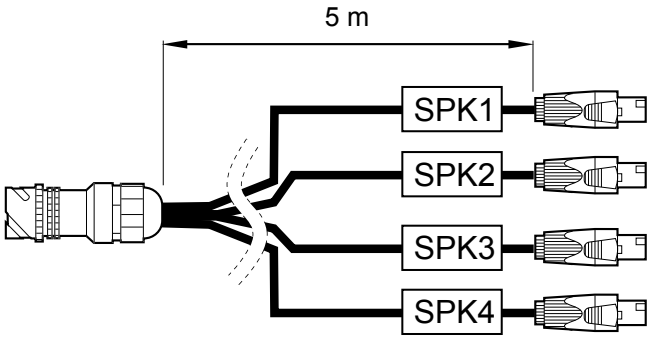

**SP.7 / SP5 / SP10 / SP25**




**SP-Y1**




**DO.7 / DO10 / DO25**




**DOSUB-LA8**

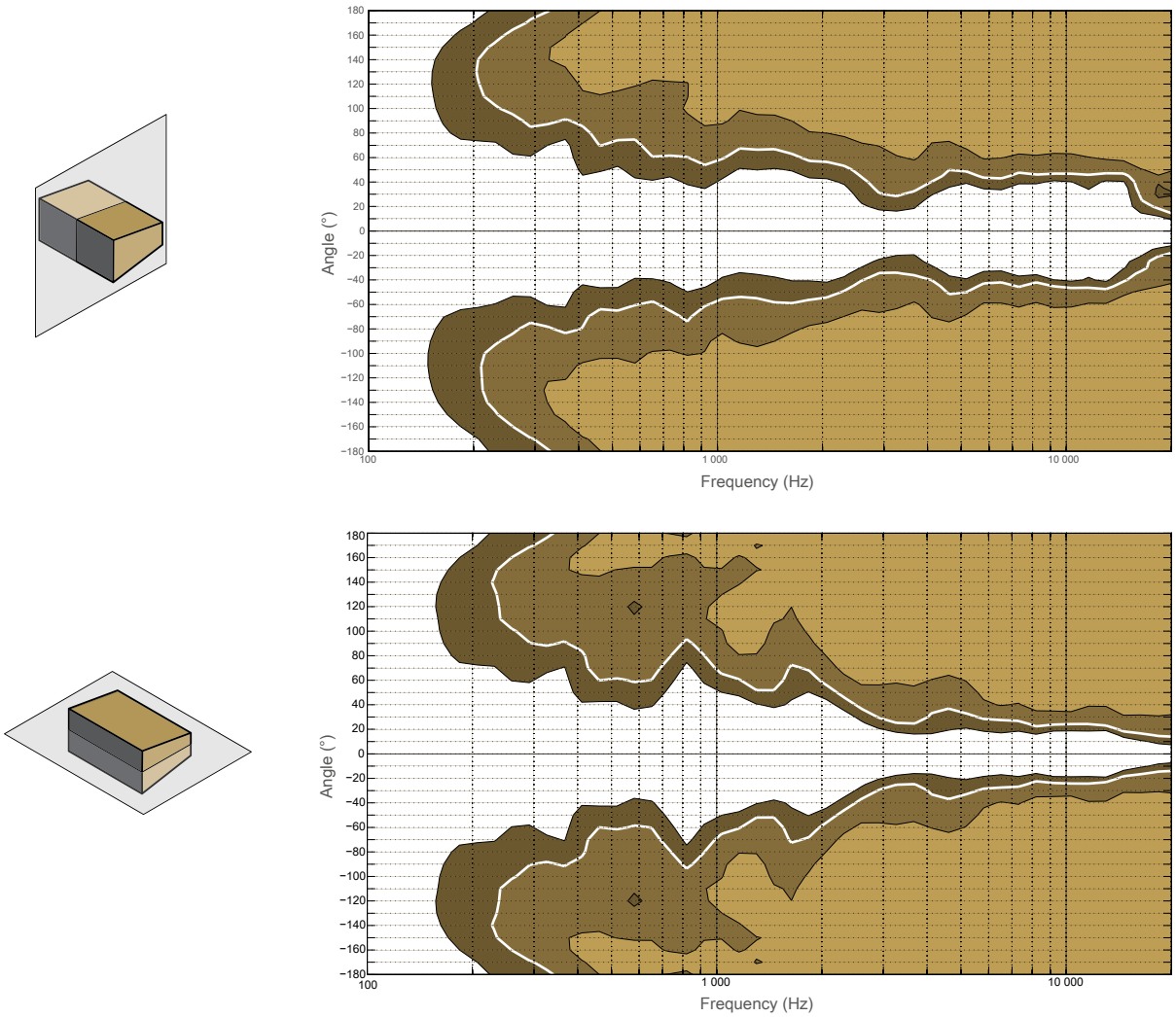
# Technical description

## Low-latency preset

A low-latency preset is available for the X12 enclosure used as a monitor ([X12_MO]). It reduces latency from 3.84 ms down to 1.19 ms (LA8) and 0.76 ms (LA4X / LA12X). If the monitor is combined with a subwoofer, a custom preset must be used.

## Directivity

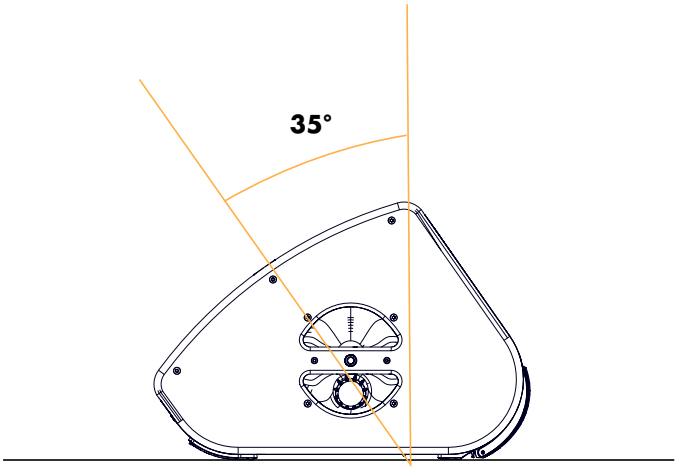
X12 features a coaxial transducer arrangement coupled with an ellipsoid waveguide that generates an H/V directivity pattern of 60° x 90°.

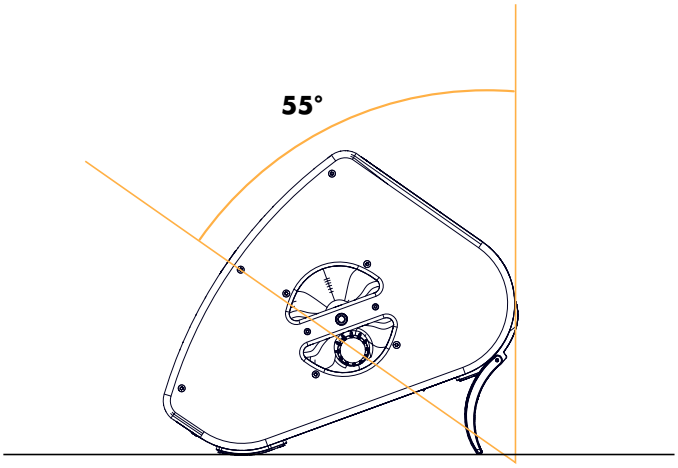



Dispersion angle diagram of a single X12 using lines of equal sound pressure at -3 dB, -6 dB, -12 dB.

## Monitor angles

X12 features risers that allow to change the monitor angle from 35° to 55°.



# Loudspeaker configurations

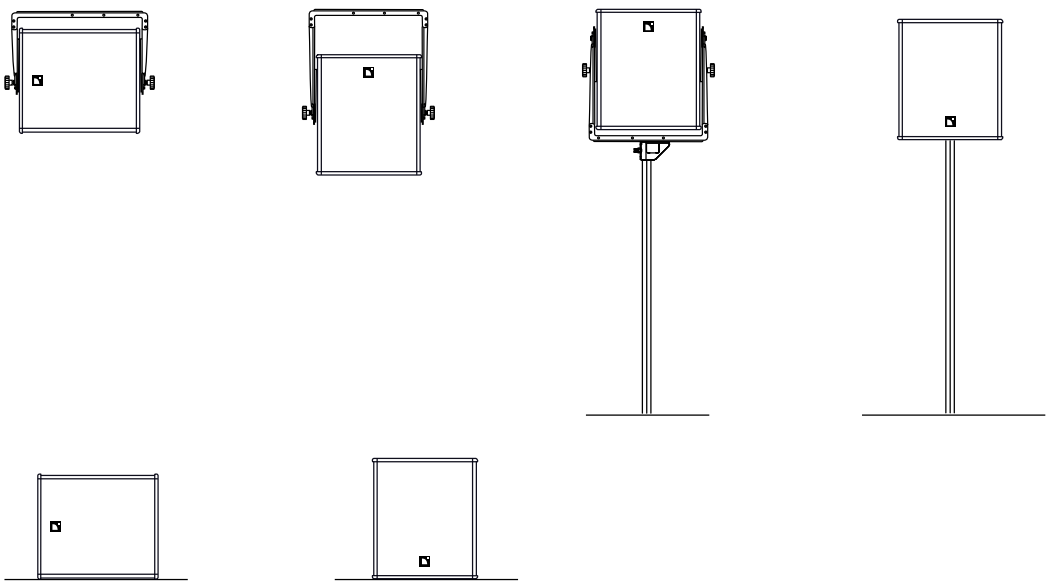
## X12 point source

Deployed as a standalone point source, an X12 system operates over the nominal bandwidth of the X12 enclosure.

The [X12] preset allows for a reference frequency response in short throw applications.

The X12 enclosure is driven by the LA4X / LA8 / LA12X amplified controllers.

**Standalone X12**



| | |
|---|---|
| Enclosure | X12 |
| Preset | [X12] |
| Frequency range (-10 dB) | 59 Hz - 20 kHz |

## X12 point source with LF

Deployed as a point source with SB15m or SB18 subwoofers, an X12 system operates with augmented LF resources.

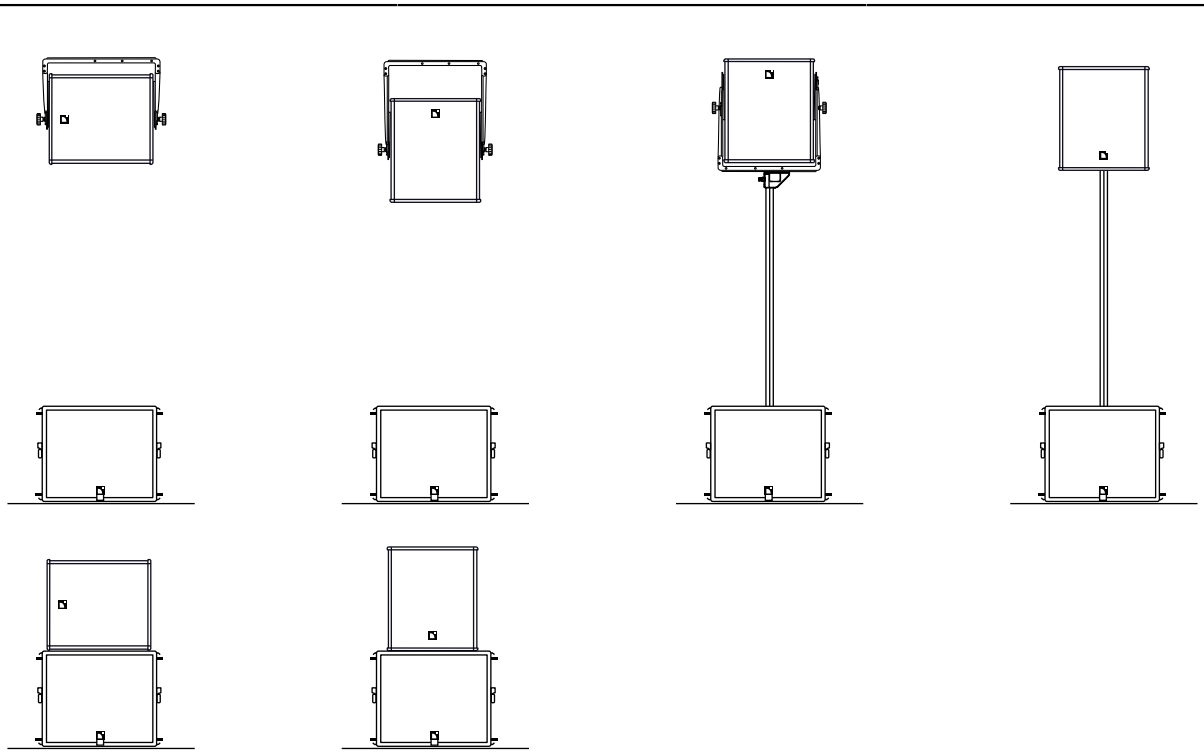
The [X12] preset allows for a reference frequency response in short throw applications.

The [SB15_100] and [SB18_100] presets provide the SB15m and SB18 with an upper frequency limit at 100 Hz for an optimal frequency coupling with the X12.

The X12, SB15m and SB18 enclosures are driven by the LA4X / LA8 / LA12X amplified controllers.

## X12 with SB15m

With SB15m, the X12 system contour is reinforced by 8 dB at 100 Hz and the system bandwidth is extended down to 40 Hz.



| | | |
|---|---|---|
| Enclosure | X12 | SB15m |
| Preset | [X12] | [SB15_100] |
| Frequency range (-10 dB) | 40 Hz - 20 kHz | |
| Enclosure ratio | 1 X12 : 1 SB15m | |

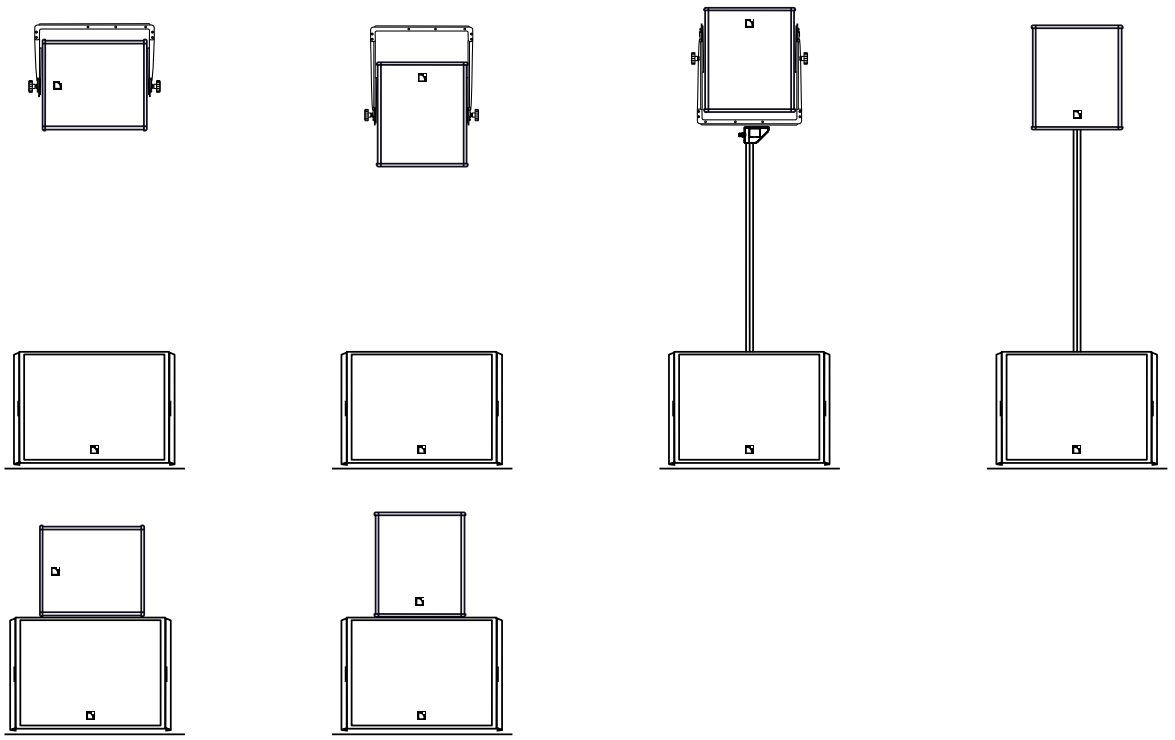
**Delay values**
Do not forget to add the pre-alignment and geometric delays depending on the configuration.

**Pre-alignment delays**

| | | |
|---|---|---|
| [X12] + [SB15_100] | X12 = 0 ms | SB15m = 2.8 ms |

## X12 with SB18

With SB18, the X12 system contour is reinforced by 8 dB at 100 Hz, and the system bandwidth is extended down to 32 Hz.



| | | |
|---|---|---|
| Enclosure | X12 | SB18 |
| Preset | [X12] | [SB18_100] |
| Frequency range (-10 dB) | 32 Hz - 20 kHz | |
| Enclosure ratio | 1 X12 : 1 SB18 | |

**Delay values**
Do not forget to add the pre-alignment and geometric delays depending on the configuration.

### Pre-alignment delays

| | | |
|---|---|---|
| [X12] + [SB18_100] | X12 = 0 ms | SB18 = 0 ms |

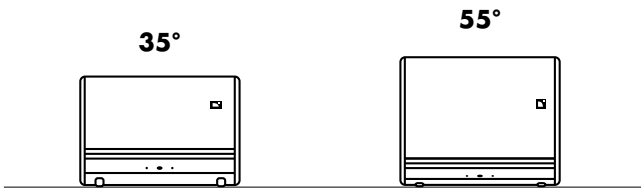
## X12 stage monitor

Deployed as a stage monitor, an X12 system operates over the nominal bandwidth of the X12 enclosure.

The [X12_MO] preset allows for a reference frequency response in stage monitoring applications.

The X12 enclosure is driven by LA4X / LA8 / LA12X.

**Standalone X12**




| | |
|---|---|
| Enclosure | X12 |
| Preset | [X12_MO] |
| Frequency range (-10 dB) | 57 Hz - 20 kHz |

## Paired X12 monitors with LFC

The Low Frequency Contour (LFC) tool implemented in LA Network Manager can compensate for coupling effects between closely operating monitors. LFC allows to adjust the frequency response curve to obtain the desired low frequency contour.

For paired X12 monitors, enter the following parameters to obtain the reference response curve of a single enclosure:

| | LF Contour | |
|---|---|---|
| FREQ/RATIO | 180 | N/A |
| GAIN | -3.0 | |

For more information about LFC, refer to the **LA Network Manager** video tutorial (module: Group Control Panel) and to the **Array Morphing** white paper, available on *www.l-acoustics.com* (Download Center).

## X12 stage monitor with LF

Deployed as a stage monitor with SB15m or SB18 subwoofers, an X12 system operates with augmented LF resources.

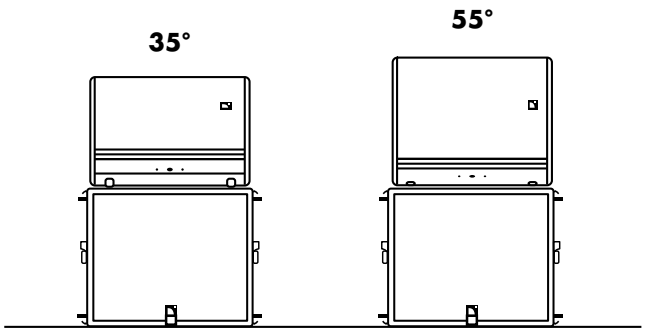
The [X12_MO] preset allows for a reference frequency response in stage monitoring applications.

The [SB15_100] and [SB18_100] presets provide the SB15m and SB18 with an upper frequency limit at 100 Hz for an optimal frequency coupling with the X12.

The X12, SB15m and SB18 enclosures are driven by the LA4X / LA8 / LA12X amplified controllers.

## X12 with SB15m

With SB15m, the X12 system contour is reinforced by 8 dB at 100 Hz and the system bandwidth is extended down to 40 Hz.




| | | |
|---|---|---|
| Enclosure | X12 | SB15m |
| Preset | [X12_MO] | [SB15_100] |
| Frequency range (-10 dB) | 40 Hz - 20 kHz | |
| Enclosure ratio | 1 X12 : 1 SB15m | |

**Delay values**

Do not forget to add the pre-alignment and geometric delays depending on the configuration.

### Pre-alignment delays

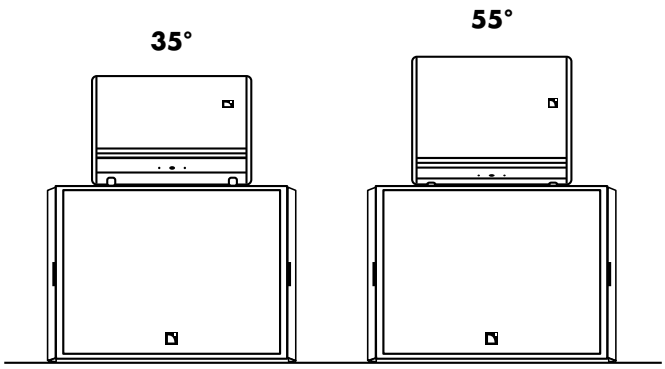
| | | |
|---|---|---|
| [X12_MO] + [SB15_100] | X12 = 0 ms | SB15m = 2.8 ms |

[xx_MO] presets for the X series use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode. To achieve this, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [xx_MO] low latency channels to align them: 2.65 ms on LA8 or 3.08 ms on LA4X and LA12X.

## X12 with SB18

With SB18, the X12 system contour is reinforced by 8 dB at 100 Hz, and the system bandwidth is extended down to 32 Hz.




| | | |
|---|---|---|
| Enclosure | X12 | SB18 |
| Preset | [X12_MO] | [SB18_100] |
| Frequency range (-10 dB) | 32 Hz - 20 kHz | |
| Enclosure ratio | 1 X12 : 1 SB18 | |

**Delay values**

Do not forget to add the pre-alignment and geometric delays depending on the configuration.

### Pre-alignment delays

| | | |
|---|---|---|
| [X12_MO] + [SB18_100] | X12 = 0 ms | SB18 = 0 ms |

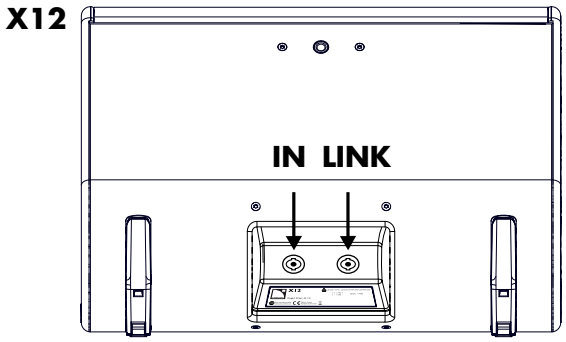
[xx_MO] presets for the X series use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode. To achieve this, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [xx_MO] low latency channels to align them: 2.65 ms on LA8 or 3.08 ms on LA4X and LA12X.

# Loudspeaker connection

## Connectors

The X12 is equipped with two 4-point speakON connectors.

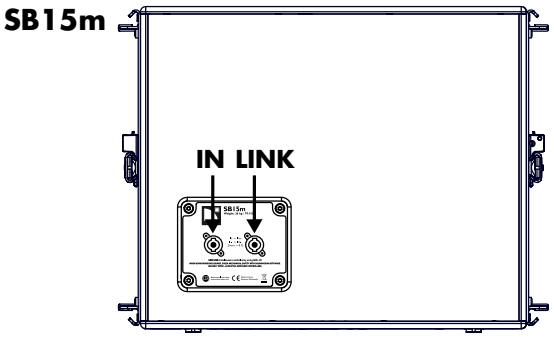


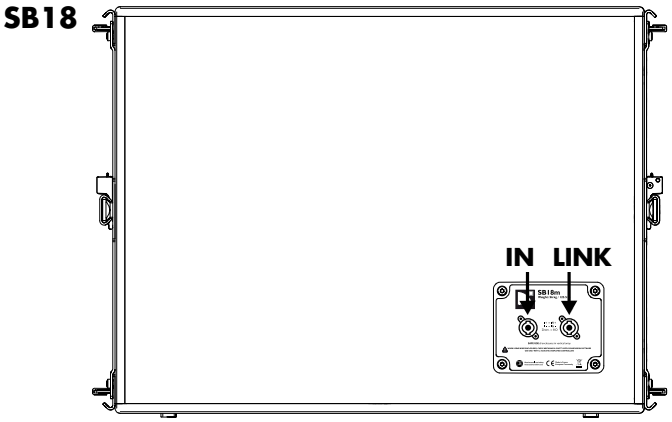

### Internal pinout for L-Acoustics 2-way passive enclosures

| | | | | |
|---|---|---|---|---|
| speakON points | 1 + | 1 - | 2 + | 2 - |
| Transducer connectors | + | - | Not linked | Not linked |

The SB15m is equipped with two 4-point speakON connectors.

The SB18 is equipped with two 4-point speakON connectors.




### Internal pinout for L-Acoustics subwoofers

| | | | | |
|---|---|---|---|---|
| speakON points | 1 + | 1 - | 2 + | 2 - |
| Transducer connectors | LF + | LF - | Not linked | Not linked |

## Connection to LA4X

## Maximum number of enclosures per LA4X

| enclosure | max enclosures in parallel | max enclosures per controller |
|---|---|---|
| X12 | 1 | 4 |
| SB15m | 1 | 4 |
| SB18 | 1 | 4 |

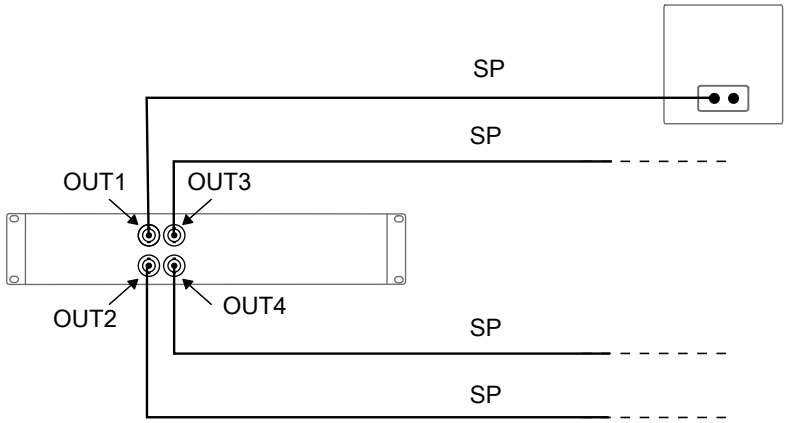
## Impedance load

X12 SB15m SB18

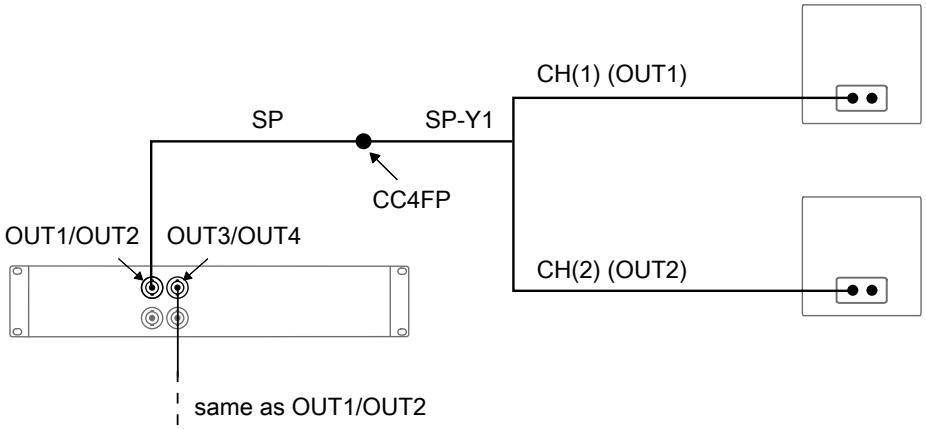
1 enclosure: 8 Ω

## Connecting 2-way passive enclosures or subwoofers

SP on speakON output




SP and SP-Y1 on speakON output



## Connection to LA8

### Maximum number of enclosures per LA8

| enclosure | max enclosures in parallel | max enclosures per controller |
|---|---|---|
| X12 | 2 | 8 |
| SB15m | 2 | 6 |
| SB18 | 2 | 8 |

**Make sure the total number of connected enclosures does not exceed the maximum number of enclosures per controller.**

LA8 can drive up to two SB15m per output, but no more than six per controller.

### Impedance load

X12 SB15m SB18

1 enclosure: 8 Ω
2 enclosures in parallel: 4 Ω

## Connection to LA12X

### Maximum number of enclosures per LA12X

| enclosure | max enclosures in parallel | max enclosures per controller |
|---|---|---|
| X12 | 3 | 12 |
| SB15m | 3 | 12 |
| SB18 | 3 | 12 |

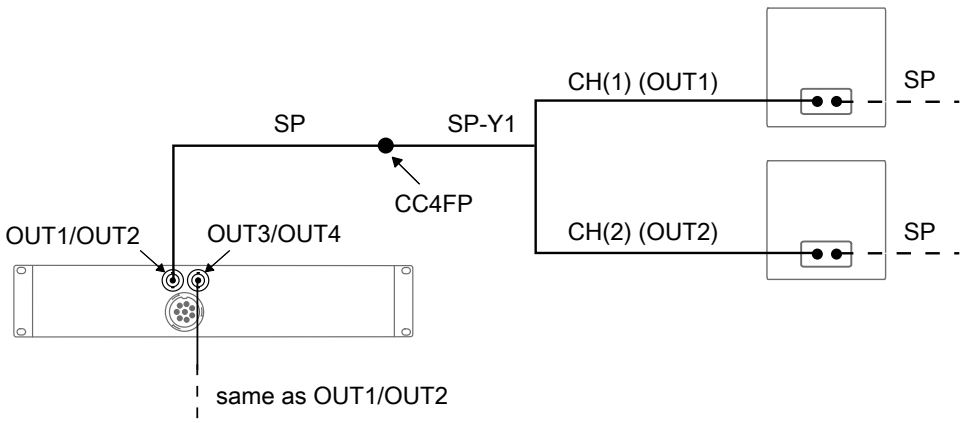
### Impedance load

X12 SB15m SB18

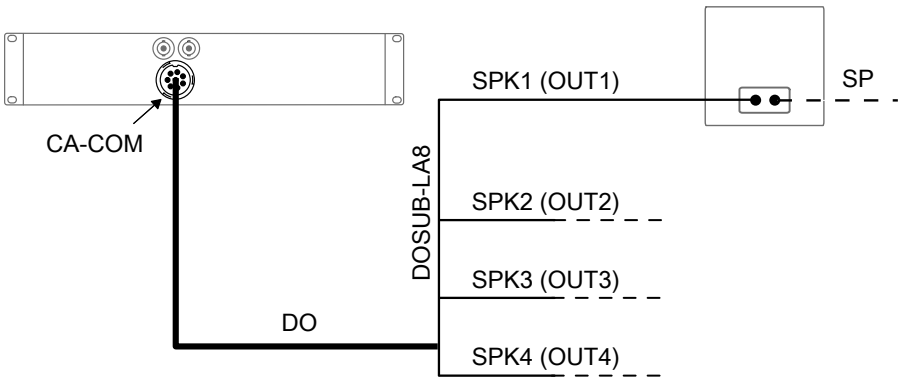
1 enclosure: 8 Ω
2 enclosures in parallel: 4 Ω
3 enclosures in parallel: 2.7 Ω

### Connecting 2-way passive enclosures or subwoofers

SP and SP-Y1 on speakON output



DO and DOSUB-LA8 on CA-COM output



# Preset description

### [X12] [X12_MO]

| outputs | channels | routing | gain | delay | polarity | mute |
|---|---|---|---|---|---|---|
| OUT 1 | PA | IN A | 0 dB | 0 ms | + | ON |
| OUT 2 | PA | IN A | 0 dB | 0 ms | + | ON |
| OUT 3 | PA | IN B | 0 dB | 0 ms | + | ON |
| OUT 4 | PA | IN B | 0 dB | 0 ms | + | ON |

### [SB18_100] [SB15_100]

| outputs | channels | routing | gain | delay | polarity | mute |
|---|---|---|---|---|---|---|
| OUT 1 | SB | IN A | 0 dB | 0 ms | + | ON |
| OUT 2 | SB | IN A | 0 dB | 0 ms | + | ON |
| OUT 3 | SB | IN A | 0 dB | 0 ms | + | ON |
| OUT 4 | SB | IN A | 0 dB | 0 ms | + | ON |

### [SB18_100_C] [SB15_100_C]

| loudspeaker elements | outputs | channels | routing | gain | delay | polarity | mute |
|---|---|---|---|---|---|---|---|
| SR | OUT 1 | SR | IN A | 0 dB | 0 ms | + | ON |
| SB | OUT 2 | SB | | | | | ON |
| SB | OUT 3 | SB | | | | | ON |
| SB | OUT 4 | SB | | | | | ON |

# Recommendation for speaker cables

Follow the recommended maximum length for loudspeaker cables to ensure minimal SPL attenuation.

**Cable quality and resistance**

Only use high-quality fully insulated speaker cables made of stranded copper wire.

Use cables with a gauge offering low resistance per unit length and keep the cables as short as possible.

The table below provides the recommended maximum length for loudspeaker cables depending on the cable gauge and on the impedance load connected to the amplifier.

| **cable gauge** | | | **recommended maximum length** | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | **8 Ω load** | | **4 Ω load** | | **2.7 Ω load** | |
| mm $^2$ | SWG | AWG | m | ft | m | ft | m | ft |
| 2.5 | 15 | 13 | 30 | 100 | 15 | 50 | 10 | 33 |
| 4 | 13 | 11 | 50 | 160 | 25 | 80 | 17 | 53 |
| 6 | 11 | 9 | 74 | 240 | 37 | 120 | 25 | 80 |

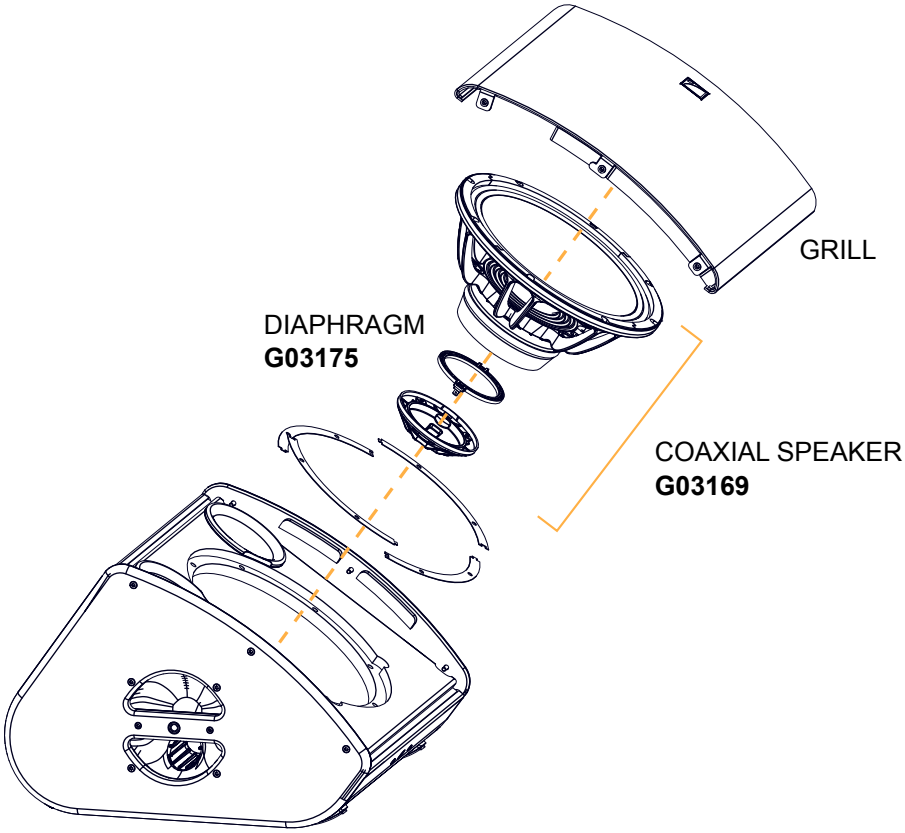
For your installation projects, you can use the more detailed L-ACOUSTICS calculation tool to evaluate cable length and gauge based on the type and number of enclosures connected. The calculation tool is available on our website:

*http://www.l-acoustics.com/installation-outils-de-calcul-137.html*

# Maintenance

## Disassembly and Reassembly procedures

In order to operate, follow the order outlined here. Each assembly refers to the corresponding D/R procedure and the necessary repair kit.



# D/R - X12 GRILL

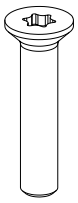
How to remove and reassemble the X12 grill.

## Tools

— torque screwdriver
— T25 Torx bit

## Repair kit

**G03169 - KR coaxial speaker X12 or**
**G03175 - KR diaphragm X12**



x6

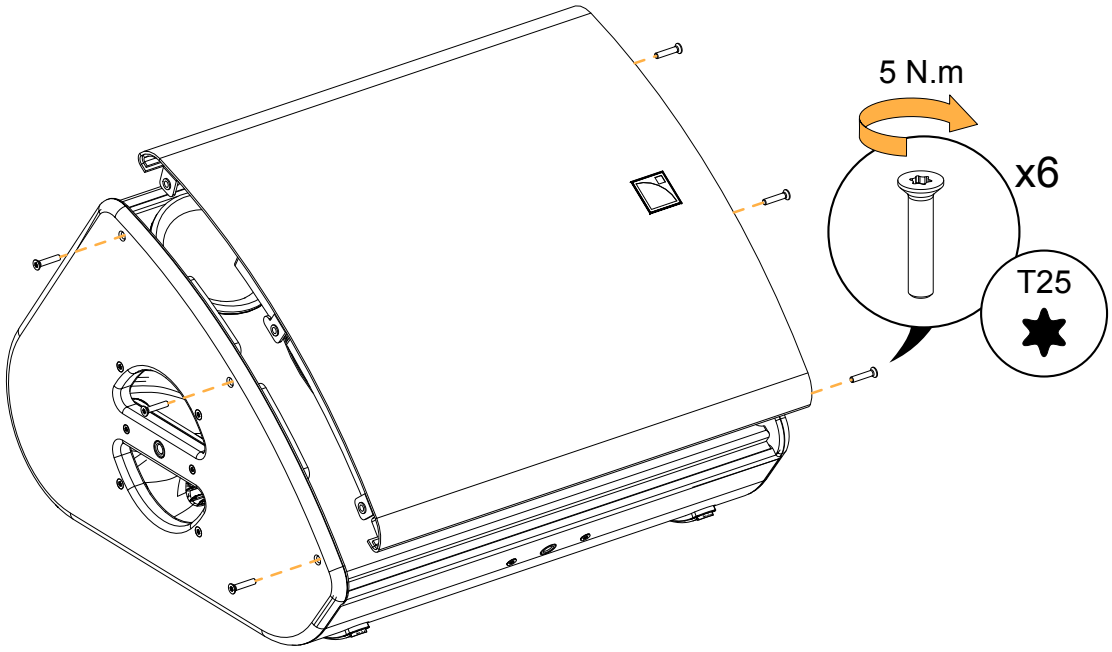
S100033

M5x25 Torx

For safety reasons, always use the new screws and spare parts provided in the KR.
If no new screws are available, use blue threadlocker.

## Exploded view

Gradually tighten the screws following a star pattern.



# D/R - X12 COAXIAL LOUDSPEAKER

How to remove and replace the X12 coaxial speaker.

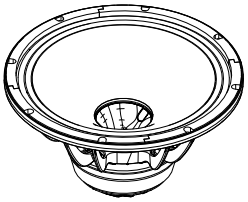
## Tools

— torque screwdriver
— 5 mm hex bit

## Repair kit

### G03169 [1]

### KR coaxial speaker X12



×1

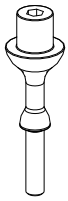
SE HPX12

12" coaxial speaker - 8 ohms

×4

S100054

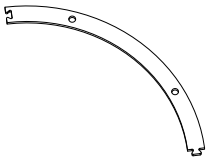
M6x30 hex



×4

100222

X12 grill stop screw



×4

1250

12" speaker gasket

[1] The screws and gaskets are also available in G03175 - KR diaphragm X12 .

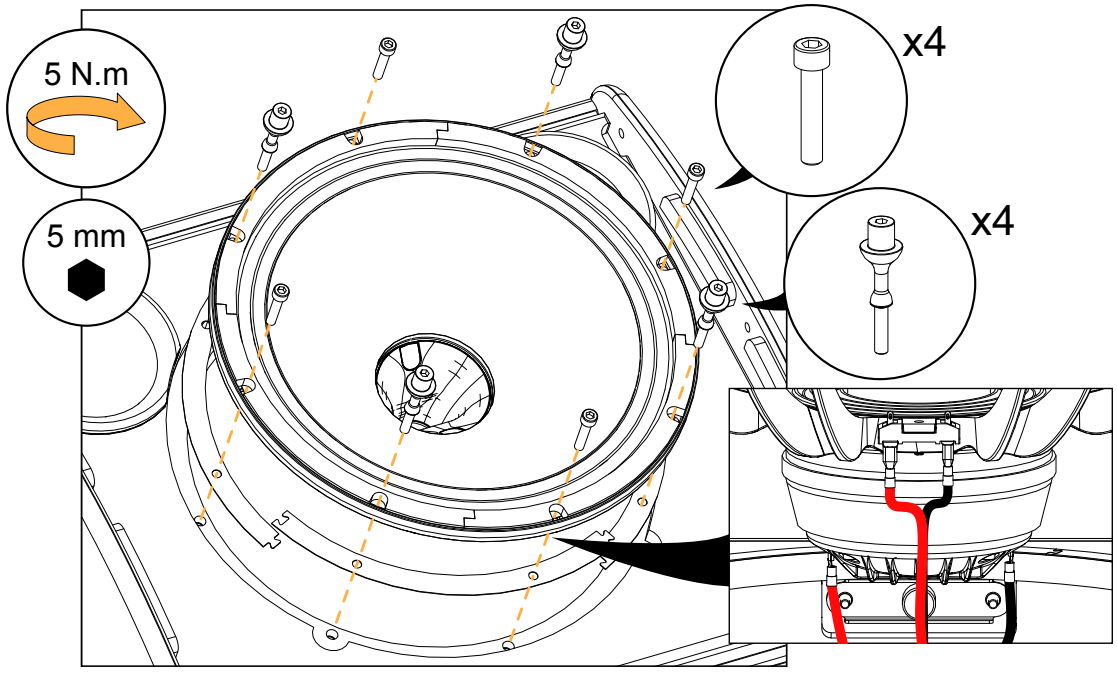
## Pre-requisite

Grill disassembled. See *X12 GRILL* (p.24).

For safety reasons, always use the new screws and spare parts provided in the KR.
If no new screws are available, use blue threadlocker.

## Exploded view

Gradually tighten the screws following a star pattern.



# D/R - X12 DIAPHRAGM

How to remove and replace the X12 speaker diaphragm.

## Tools

- torque screwdriver
- 3 mm Allen wrench
- 3 mm hex bit
- blower

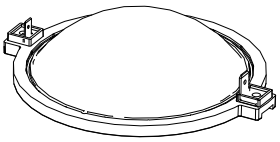
## Consumables

- double face adhesive tape

## Repair kit

**G03175**

**KR diaphragm X12**



×1

17581

diaphragm assembly (with 2 shims)

×4

S100082

M4x14 hex

## Pre-requisite

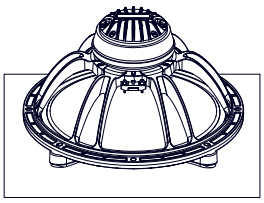
Grill disassembled.

See *X12 GRILL* (p.24).

Coaxial speaker removed.

See *X12 COAXIAL LOUDSPEAKER* (p.25).

The speaker is placed on a flat surface in a dust-free environment.



## Disassembly

1. Remove the four screws securing the cover.
   Use the 3 mm hex bit.
2. Remove the cover.
3. Carefully remove the diaphragm.
4. If there are shims on the dome, carefully remove them.
   Take note of how many and what kind of shims are present.

## Reassembly

### About this task

For safety reasons, always use the new screws and spare parts provided in the KR.
If no new screws are available, use blue threadlocker.

1. Clean the dome and the air gap.
   Use a blower or double face adhesive tape to remove any particle.

   Make sure the air gap is perfectly clean before moving to the next step.

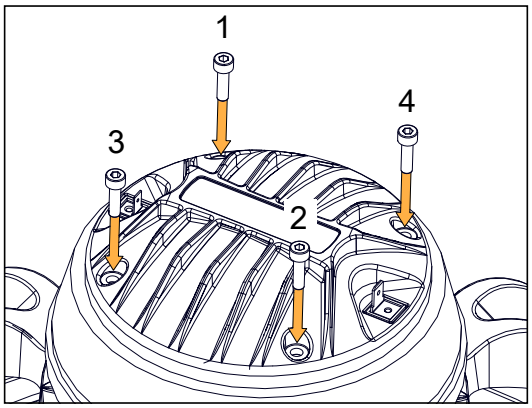
2. Place the same kind and number of shims that were initially present.

**3.** Carefully place the diaphragm.

**4.** Position the diaphragm using the cable connectors as reference points.
Facing the LF cable connectors, the small HF cable connector must be on the left, and the larger one on the right.

**5.** Secure the cover to the speaker using four S100082 screws.

a) Gradually secure each screw manually with the 3 mm Allen wrench.
Follow a cross scheme.




b) Tighten the screws in the same order with the electric screwdriver.
Use the 3 mm hex bit. Set the torque to 3.5 Nm.

### Acoustical check

### Procedure

1. Load a FLAT preset on an LA4X / LA8 / LA12X amplified controller.
2. Connect a low frequency generator to the active input of the amplified controller.
3. Connect a voltmeter to the output of the amplified controller and check the output voltage.

   **Risk of damaging the HF driver**
   The output voltage must not exceed 1 Vrms.
4. Connect the HF driver to the output of the amplified controller.

   Use ear protection to set the sound level before testing.
5. Send a test signal of 1.5 kHz at 1 Vrms for 5 seconds.
   The sound should remain pure and free of unwanted noise.

### Troubleshooting

The loudspeaker produces high-frequency harmonic distortions or strange vibrations.

### Possible causes

— There are foreign particles on the air gap.
— The number of shims is wrong.
— The screws used for reassembly are too loose.

### Procedure

1. Repeat the disassembly procedure.
2. Clean the air gap thoroughly.
3. Repeat the reassembly procedure.
   Pay close attention to the number of shims and the position of the diaphragm.
   Apply the recommended torque.
4. Repeat the acoustical check.

   If a buzzing sound is still audible, it might be necessary to add an extra shim on the air gap.

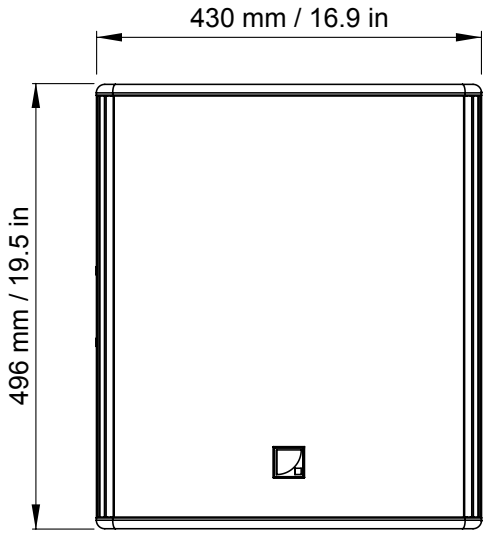
# Specifications

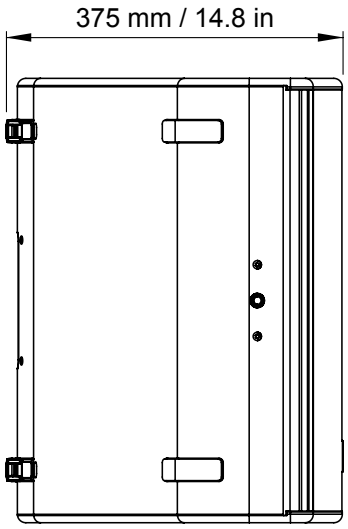
## X12 specifications

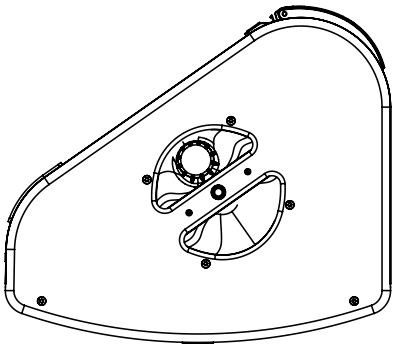
| | |
|---|---|
| **Description** | passive 2-way coaxial enclosure, amplified by LA4X / LA8 / LA12X |
| **Usable bandwidth (-10 dB)** | 59 Hz - 20 kHz ([X12]) |
| **Maximum SPL**[1] | 136 dB ([X12]) |
| **Nominal directivity** | vertical: 90° |
| | horizontal: 60° |
| **Monitoring angle** | without risers: 35° |
| | with risers: 55° |
| **Transducers** | LF: 1 x 12" |
| | HF: 1 x 3" compression driver, neodymium |
| **Acoustical load** | bass-reflex, L-Vents, ellipsoidal waveguide |
| **Nominal impedance** | 8 Ω |
| **Connectors** | IN: 4-point speakON |
| | LINK: 4-point speakON |
| **Rigging and handling** | 2 handles |
| | DIN580-compatible M8 threaded insert |
| | 4 M10 threaded inserts |
| | 2 x 35 mm pole socket |
| **Weight (net)** | 20 kg / 44.1 lb |
| **Cabinet** | first grade Baltic beech and birch plywood |
| **Front** | steel grill with anti-corrosion coating |
| | acoustically neutral 3D fabric |
| **Finish** | dark grey brown Pantone 426C |
| | pure white RAL 9010 |
| | custom RAL code on special order |
| **IP** | IP43 |

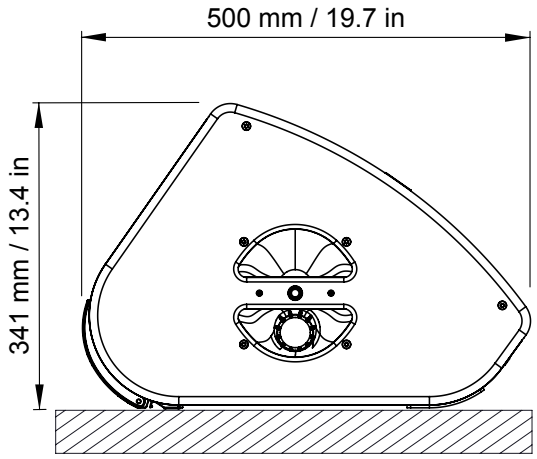
[1] Peak level measured at 1 m under free field conditions using pink noise with crest factor 4 (preset specified in brackets).

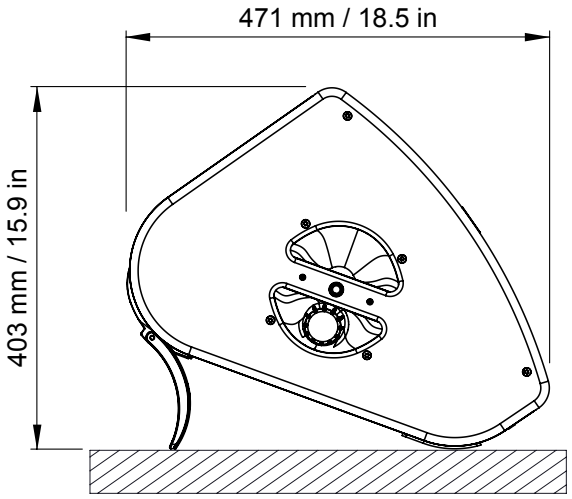
# X12 dimensions





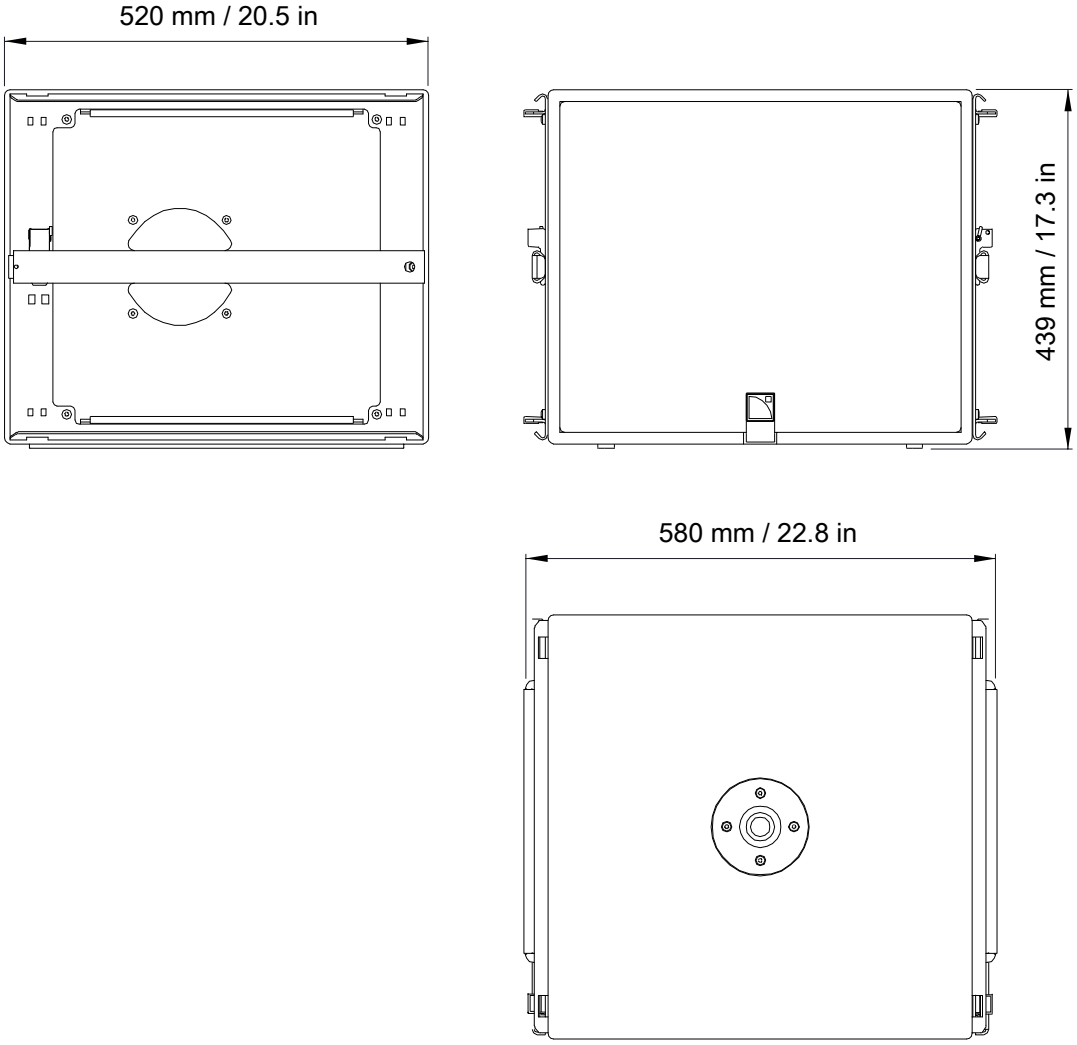



## SB15m specifications

| | |
|---|---|
| **Description** | high power compact subwoofer, amplified by LA4X / LA8 / LA12X |
| **Low frequency limit** | 40 Hz ([SB15_100]) |
| **Maximum SPL**[1] | 137 dB ([SB15_100]) |
| **Directivity** | standard or cardioid |
| **Transducers** | 1 x 15" |
| **Acoustical load** | bass-reflex enclosure, L-Vents |
| **Nominal impedance** | 8 Ω |
| **Connectors** | IN: 4-point speakON |
| | LINK: 4-point speakON |
| **Rigging and handling** | 2 handles |
| | 2 coupling bars and 2 locking tabs |
| | 1 x 35 mm pole socket |
| **Weight (net)** | 36 kg / 79.4 lb |
| **Cabinet** | first grade Baltic birch plywood |
| **Front** | steel grill with anti-corrosion coating |
| | acoustically neutral 3D fabric |
| **Rigging components** | high grade steel |
| **Finish** | dark grey brown Pantone 426C |
| | pure white RAL 9010 |
| | custom RAL code on special order |

[1] Peak level at 1 m under half space conditions using pink noise with crest factor 4 (preset specified in brackets).

# SB15m dimensions

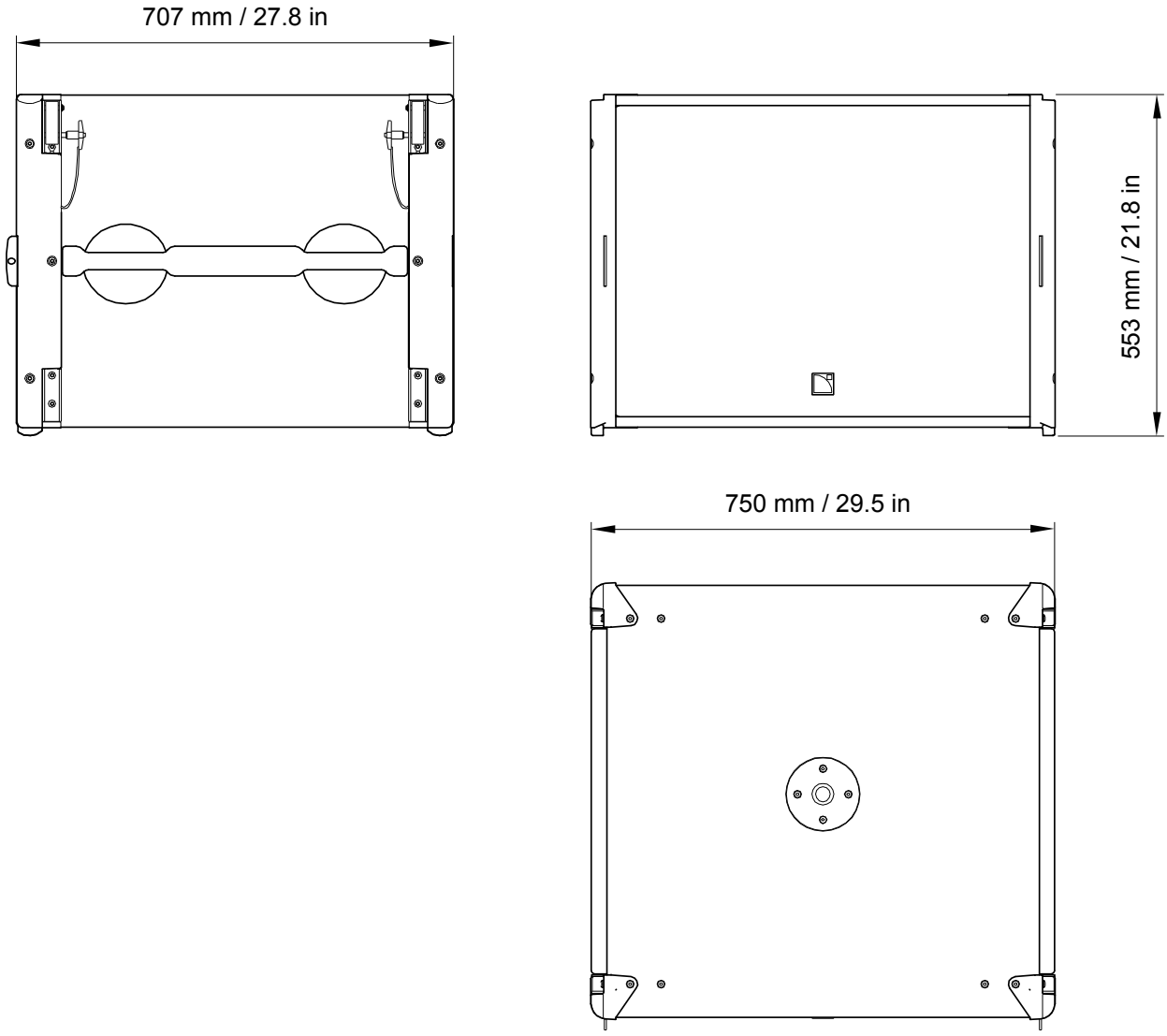


## SB18 specifications

| | |
|---|---|
| **Description** | high power compact subwoofer, amplified by LA4X / LA8 / LA12X |
| **Low frequency limit (-10 dB)** | 32 Hz ([SB18_100]) |
| **Maximum SPL**[1] | 138 dB ([SB18_100]) |
| **Directivity** | standard or cardioid |
| **Transducers** | 1 x 18" |
| **Acoustical load** | dual bass-reflex enclosure, L-Vents |
| **Nominal impedance** | 8 Ω |
| **Connectors** | IN: 4-point speakON |
| | LINK: 4-point speakON |
| **Rigging and handling** | handles integrated into the cabinet |
| | integrated rigging system |
| | 1 x 35 mm pole socket |
| **Weight (net)** | 52 kg / 115 lb |
| **Cabinet** | first grade Baltic birch plywood |
| **Front** | steel grill with anti-corrosion coating |
| | acoustically neutral 3D fabric |
| **Rigging components** | steel with anti-corrosion coating |
| **Finish** | dark grey brown Pantone 426C |
| **IP** | IP45 |

[1] Peak level at 1 m under half space conditions using pink noise with crest factor 4 (preset specified in brackets).

## SB18 dimensions

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