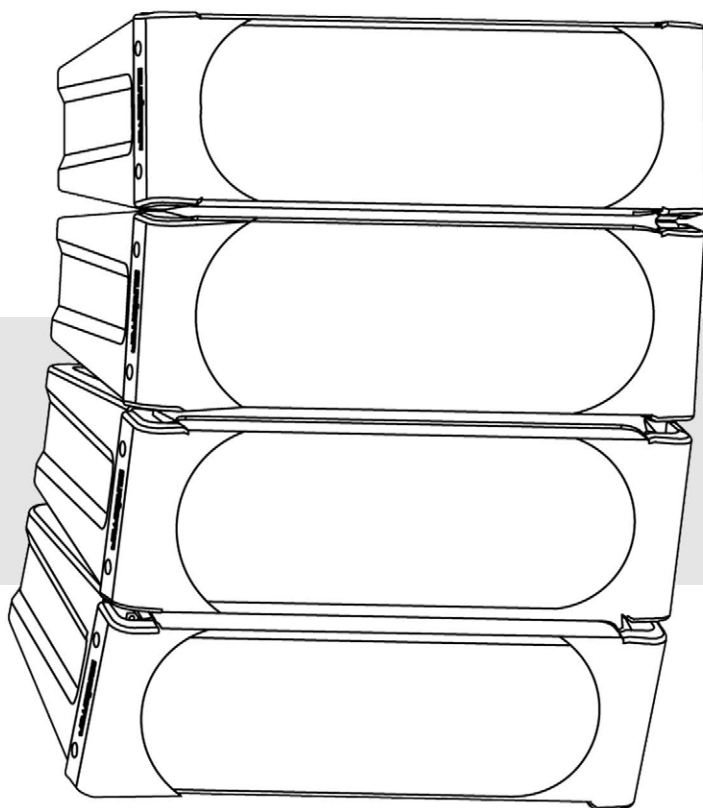


Operation Manual

Manual de Usuario



SBLA45 ABS LINE ARRAY SYSTEM

VER. 2.0

1. SAFETY PRECAUTIONS

- Before installation or use, be sure to carefully read all the instructions in this section for correct and safe operation.
- Be sure to follow all the precautionary instructions in this section, which contain important warnings and/or cautions regarding safety.
- After reading, keep this manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety hazards.



WARNING

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.

When Installing the Unit

- Refer all installation work to the dealer from whom the speaker was purchased. Installation for flying requires extensive technical knowledge and experience. The speaker may fall off if incorrectly installed, resulting in possible personal injury.
- Flying Precautions
 - Be sure to follow the instructions below. Otherwise, the suspension wires or belts may be off or snap and the speaker may fall off, causing personal injury.
 - Check to confirm that the suspension wires and belts are strong enough to withstand the speaker load.
 - The connectors of the suspension wires and belts must be securely linked with those of the speaker.
 - All parts and components (such as enclosures, metal pieces, and screws) must be free from any deformation, crack, and corrosion.
 - Be sure to use screws supplied with the optional flying hardware when installing the speaker using such hardware.
- Install the unit only in a location that can structurally support the weight of the unit and the mounting bracket. Doing otherwise may result in the unit falling down and causing personal injury and/or property damage.
- Since the unit is designed for indoor use, do not install it outdoors. If installed outdoors, the aging of parts causes the unit to fall off, resulting in personal injury.
- Owing to the unit's size and weight, be sure that at least two persons are available to install the unit. Failure to do so could result in personal injury.
- Do not use other methods than specified to mount the bracket. Extreme force is applied to the unit and the unit could fall off, possibly resulting in personal injuries.
- Use nuts and bolts that are appropriate for the ceiling's or wall's structure and composition. Failure to do so may cause the speaker to fall, resulting in material damage and possible personal injury.
- Tighten each nut and bolt securely. Ensure that the bracket has no loose joints after installation to prevent accidents that could result in personal injury.
- Do not mount the unit in locations exposed to constant vibration. The mounting bracket can be damaged by excessive vibration, potentially causing the unit to fall, which could result in personal injury.



CAUTION

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

When Installing the Unit

- Avoid touching the unit's sharp metal edge to prevent injury.
- To avoid electric shocks, be sure to switch off the unit's power when connecting speakers.

When the Unit is in Use

- Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.
- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- Do not stand or sit on, nor hang down from the unit as this may cause it to fall down or drop, resulting in personal injury and/or property damage.
- Have the unit checked periodically by the shop from where it was purchased. Failure to do so may result in corrosion or damage to the unit or its mounting bracket that could cause the unit to fall, possibly causing personal injury.

2. GENERAL DESCRIPTION

The Soundbarrier SBLA45 is a 2-way compact speaker system that permits both constant directivity control over a wide frequency range and changes in directivity. It is ideal for reproducing clear sound in spaces with long reverberation times or high background noises. The SBLA45 are designed for indoor use.

3. FEATURES

- Four speaker modules ensure high power and high quality.
- The changeable orientation of each of the four speaker modules independently allows the directivity angle of the speaker system to be adjusted.
- Built-in passive network ensures appropriate sound quality.
- Ideal for both permanent and temporary installations, including both vertical and horizontal positioning.
- Equipped with a convenient carrying handle.
- Can be mounted directly on a wall or suspended by wire, chain or shackle with no need to use optional brackets.
- Optional mounting brackets allow use in a wide variety of applications, including suspension, ceiling mounting, wall mounting, and speaker stand mounting. Mounting procedures are described in the instruction manuals enclosed with the mounting bracket or stand adapter.

4. ABOUT THE INPUT OVERLOAD PROTECTION CIRCUITRY

The speaker system features internal input overload protection circuitry. If an extremely high input level is fed to the unit, the protection circuitry automatically cuts off the signal to the tweeters.

A drastic reduction in sound volume for the high frequency range indicates that the protection circuitry has been enabled.

In such cases, simply reduce the amplifier volume. The protection circuitry will automatically reset in approximately 10 seconds. After reset, try to maintain the volume at a level slightly lower than before.

Caution

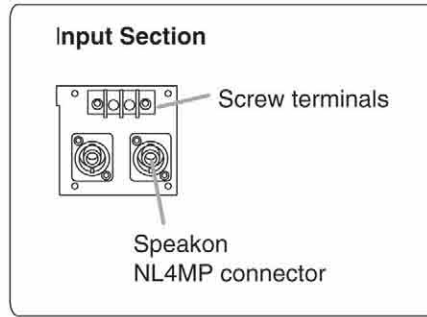
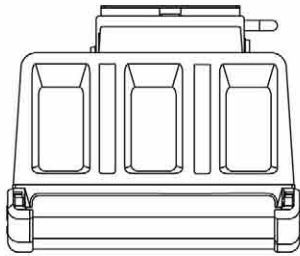
This protection circuitry does not completely protect the unit against extremely high input power levels. Depending on the type or duration of excessive power input, the protection circuitry might not be enabled, resulting in damage to the speaker element. Also, if the excessive power input continues for a long period of time, the circuitry may not be capable of resetting to its original condition.

Use the system with care so that the speakers are not exposed to excessive power input.

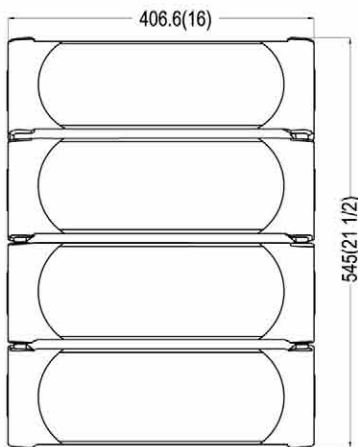
5. DIMENSIONAL DIAGRAM

Figures show the SBLA45 series speaker system with a directivity angle set to 60° mode (factory-preset).

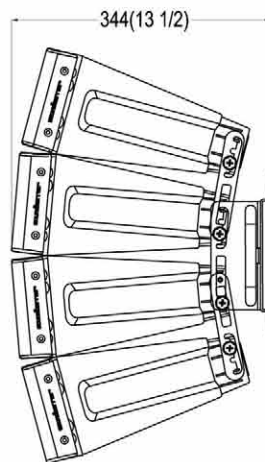
[Top]



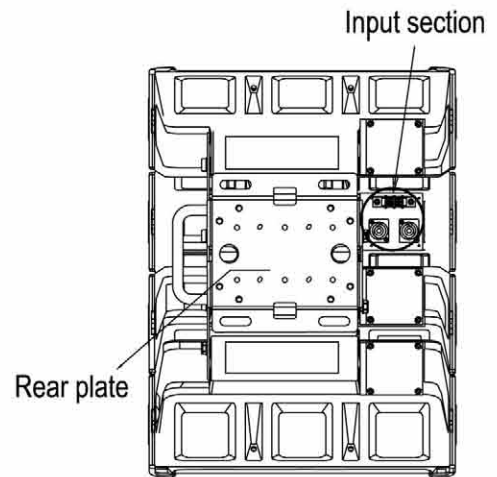
[Front]



[Side]



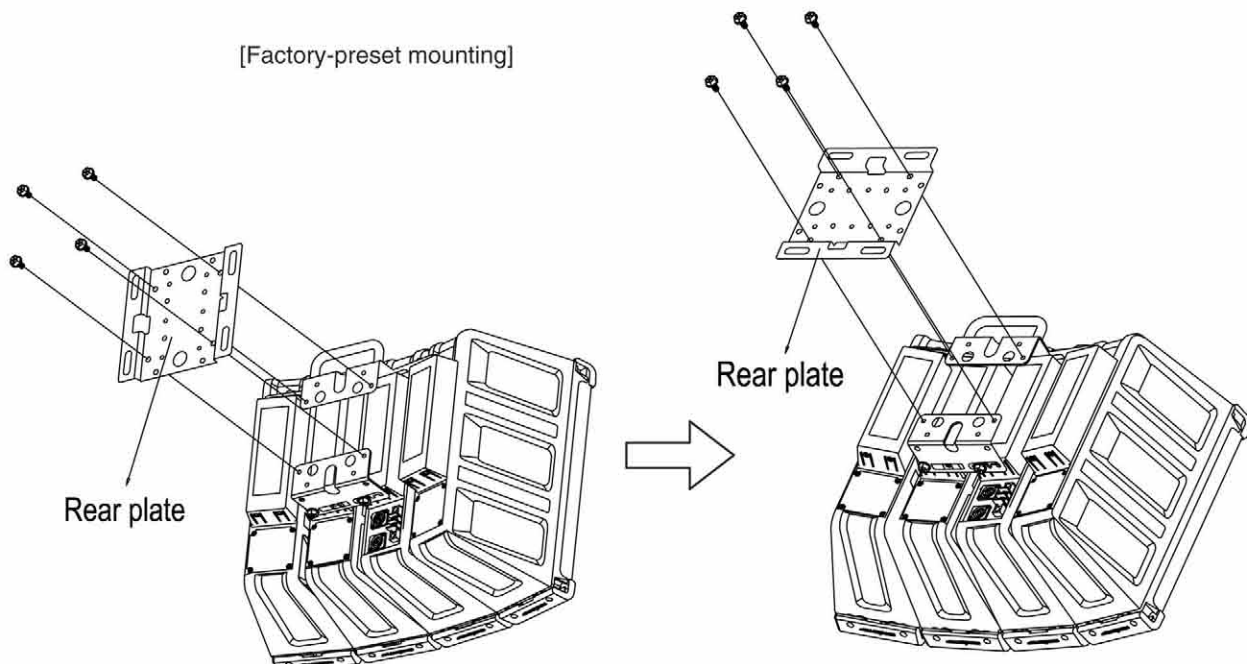
[Rear]



Unit: mm (inches)

6. CHANGING THE ORIENTATION OF REAR PLATE

The orientation of the speaker system's rear plate can be changed as follows.

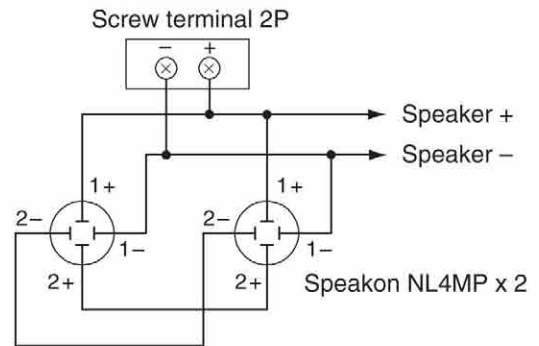


7. INPUT SECTION

- The 2 Speakon connectors are internally connected in parallel to the screw terminals; you can use either one.
- The right table shows the pin arrangement of the Speakon NL4MP connector.

| Pin No. | SBLA45 |
|---------|-----------|
| 1 + | Speaker + |
| 1 - | Speaker - |
| 2 + | — |
| 2 - | — |

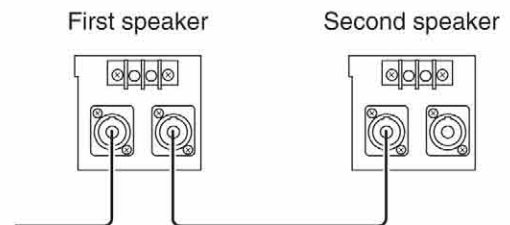
- The usable connector (on the cable end) for the Speakon NL4MP is Speakon NL4FC.
- Wiring diagram of the input connectors is shown at right.



- Two speaker systems can be operated in parallel by connecting them in a cascade configuration as shown at right.

Note

Be sure to connect the speaker system to the power amplifier's output terminal of 4 Ω or less. Connecting it to an output terminal of over 4 Ω may cause amplifier failure.

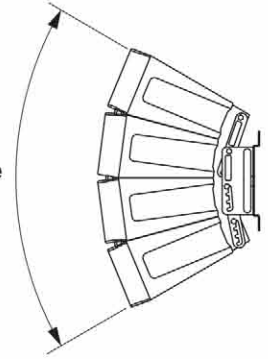


8. CHANGING THE SPEAKER'S DIRECTIVITY ANGLE

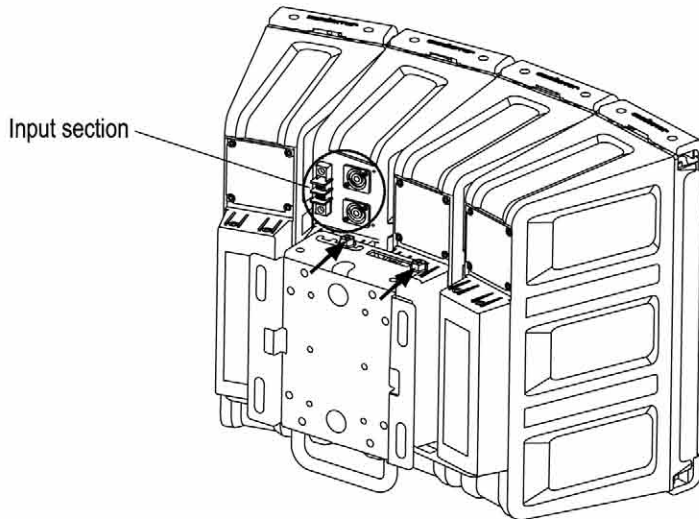
The speaker system's directivity angle mode is factory-preset to 60°, but this mode can be changed to 45°, 30°, or 15° by following the procedure described below.

The figure on the right shows the speaker system in 60° mode.

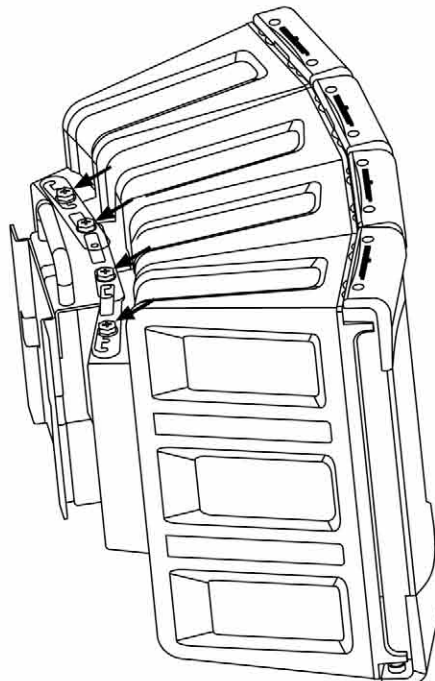
directivity angle
60°



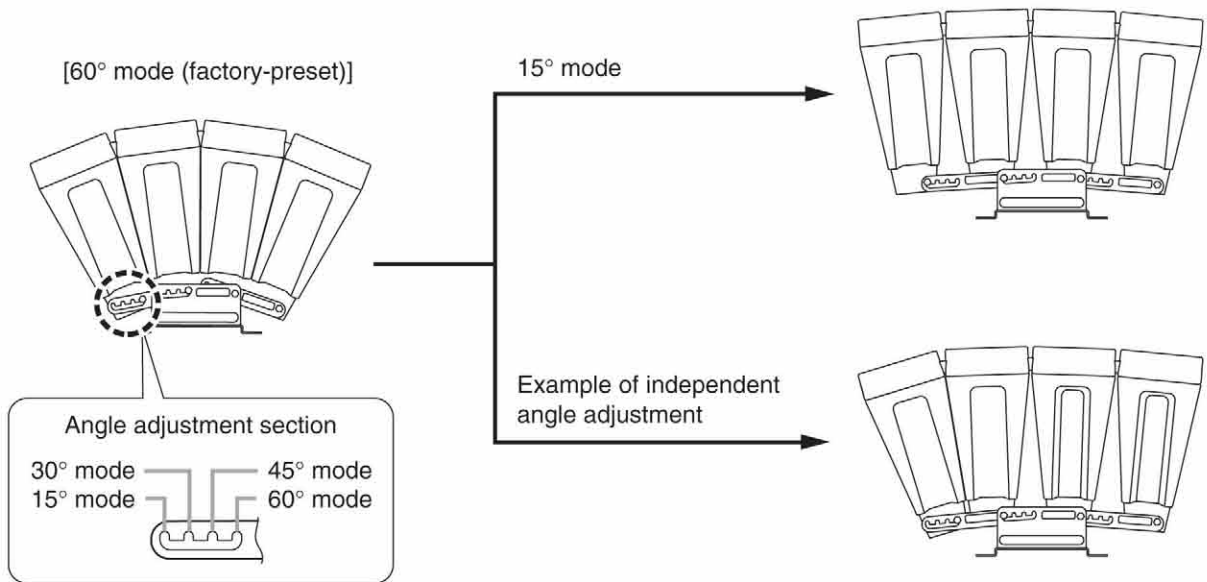
Step 1. Loosen the 2 bolts on the input section side.



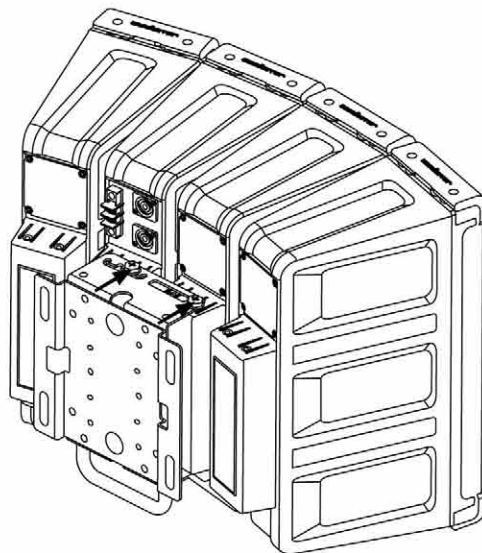
Step 2. Turn the speaker system upside down. Then, loosen the 4 bolts indicated by arrows.



Step 3. Reposition the 4 bolts to the desired directivity angle, then retighten them securely.
The sound coverage area can also be made asymmetrical by shifting the position of each bolt to different directivity angle.



Step 4. Reposition the speaker system by turning it upside down. Then, tighten the 2 bolts loosened in step 1.



⚠ WARNING

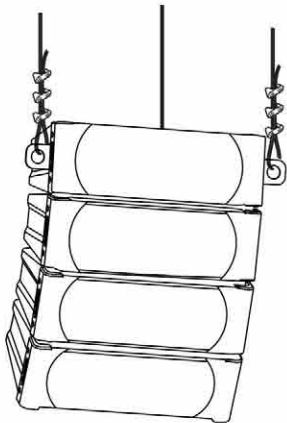
Observe the following instructions to tighten the bolts securely. Failure to do this could cause the speaker to fall, potentially resulting in damage and/or personal injury.

- Ensure that each bolt is correctly inserted into its slot before tightening it.
- Bolts can be tightened using either a Phillips screwdriver or a wrench, but be sure to finish the tightening with the wrench to ensure optimum tightness.

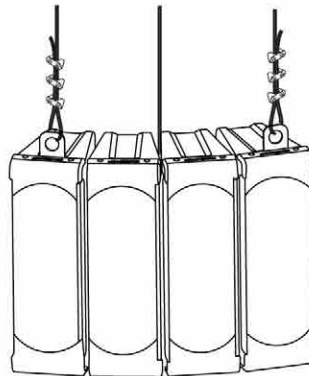
9. SUSPENDED INSTALLATION

The speaker systems may be suspended either vertically or horizontally.

[Vertical suspension]



[Horizontal suspension]

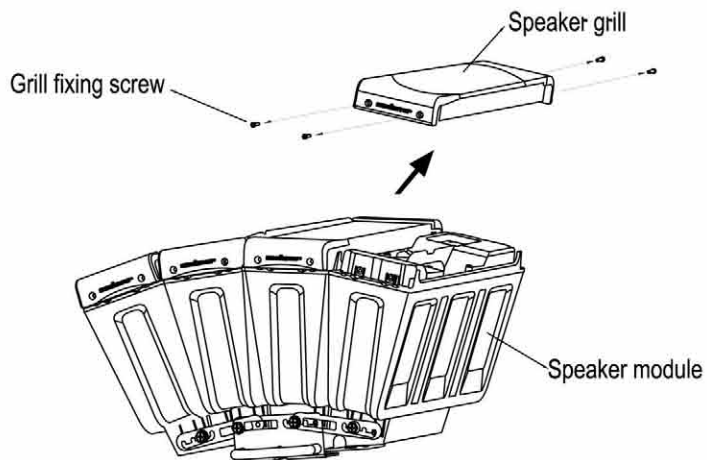


Step 1. For vertical suspension: Remove the speaker grill on the module to be suspended. (Below, upper)

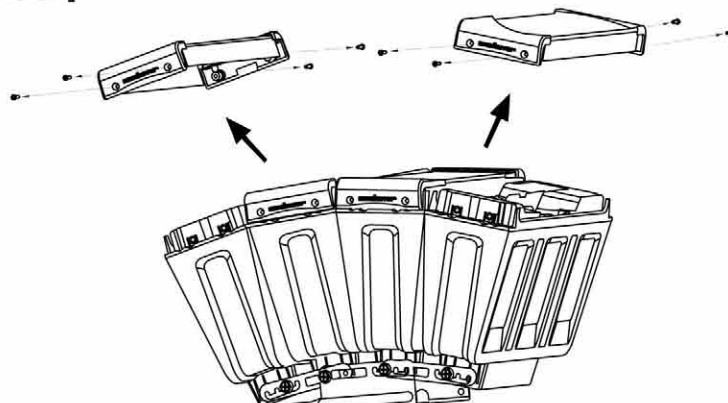
For horizontal suspension: Remove the speaker grills on the modules at both ends of the speaker system. (Below, lower)

Remove the grill fixing screws using the supplied hex head wrench.

[Vertical suspension]



[Horizontal suspension]

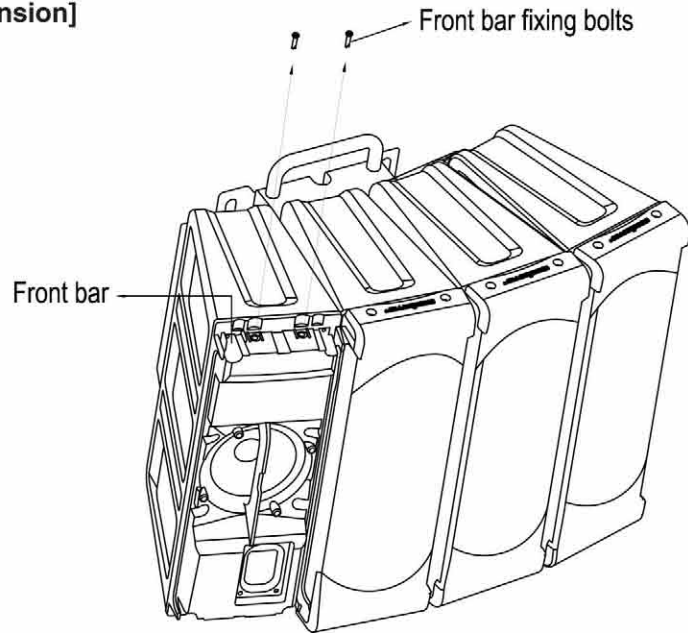


Step 2. For vertical suspension: Remove the 2 front bar fixing bolts. (Below, upper)

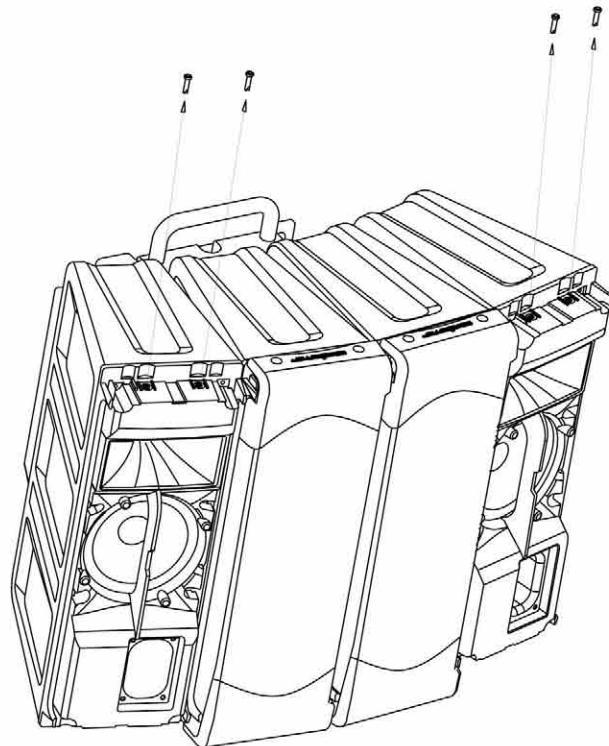
For horizontal suspension: Remove the 4 front bar fixing bolts. (Below, lower)

Place the speaker system on a workbench when doing this work.

[Vertical suspension]



[Horizontal suspension]



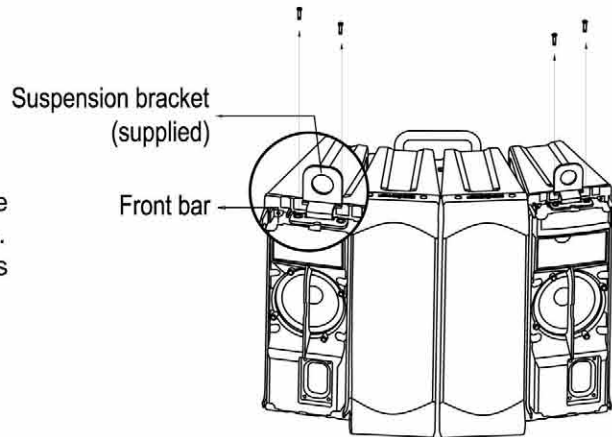
Step 3. Fix the suspension bracket and the front bar with the bolts removed in step 2.

⚠ WARNING

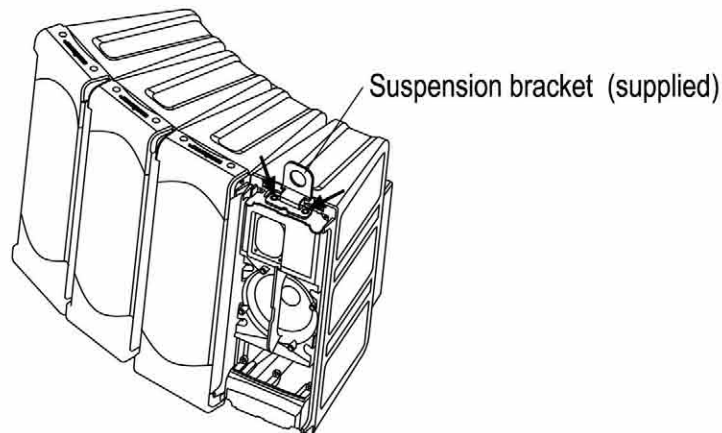
Observe the following instructions to tighten the bolts securely. Failure to do this could cause the speaker to fall, potentially resulting in damage and/or personal injury.

- Ensure that each bolt is correctly inserted into its slot before tightening it.
- Bolts can be tightened using either a Phillips screwdriver or a wrench, but be sure to finish the tightening with the wrench to ensure optimum tightness.

The figure on the right is for the horizontal suspension of speaker system. For the vertical suspension, the work is done on either module to be suspended.

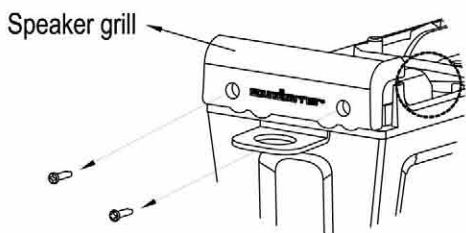


Step 4. For vertical suspension: Turn the speaker system upside down. Then, mount the suspension bracket in the same manner as described in steps 2 and 3.

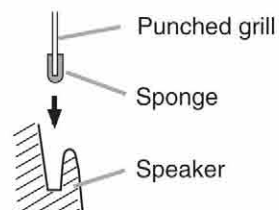


Step 5. Replace the removed speaker grill.

Be sure to use the supplied hex head wrench to tighten the fixing screws.



Ensure that the sponge is fitted in the slot.



Step 6. Suspend the speaker system using appropriate commercially obtained wires, chains, or anchor shackles.

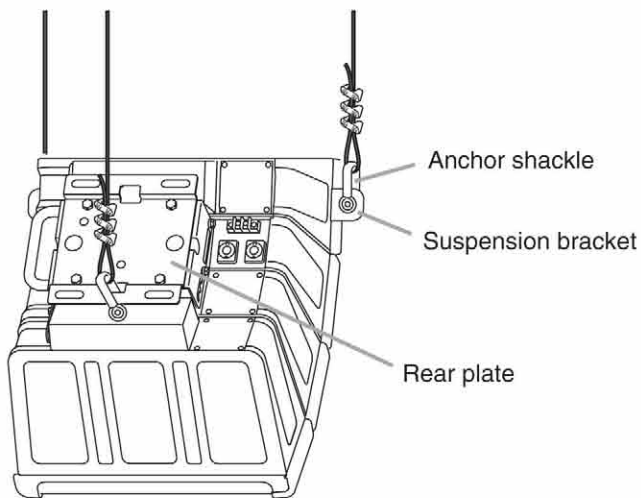
To mount the speaker system horizontally, rotate the speaker system's rear plate 90° from the factory-preset orientation. For details, refer to p. 5, Changing the orientation of rear plate.

⚠ WARNING

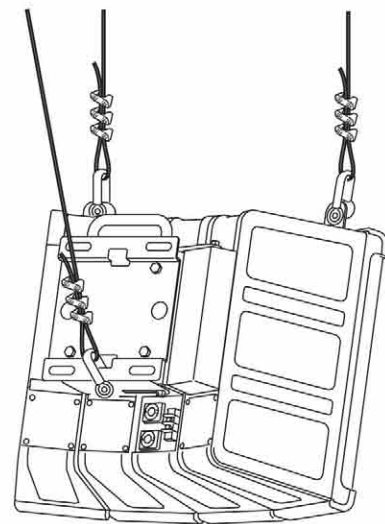
Be sure to select wires, chains, and/or anchor shackles with a safety factor appropriate to the weight of the speaker system. Incorrect selection of these suspension components may cause the speaker system to fall, potentially resulting in damage and/or personal injury.

Run the anchor shackles, etc. through the holes in the 2 suspension brackets and rear plate as shown in the figure.

[Vertical suspension]



[Horizontal suspension]



10. DIRECT WALL MOUNTING

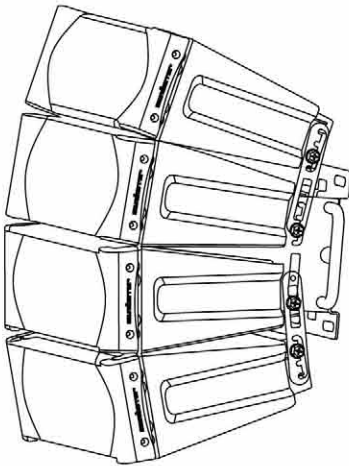
⚠ WARNING

Observe the following instructions when mounting the speakers on a wall. Doing otherwise may cause the speaker system to fall, potentially resulting in damage and/or personal injury.

- Use anchor bolts, nuts, and washers with specifications appropriate for carrying the load of the speaker system. Also ensure that the structure of the wall is robust enough to stand the weight of the speaker.
- Take measures to prevent nuts and bolts from loosening and sliding out of their positions as required.

Note: Anchor bolts, nuts, and washers are not supplied with the speaker system.

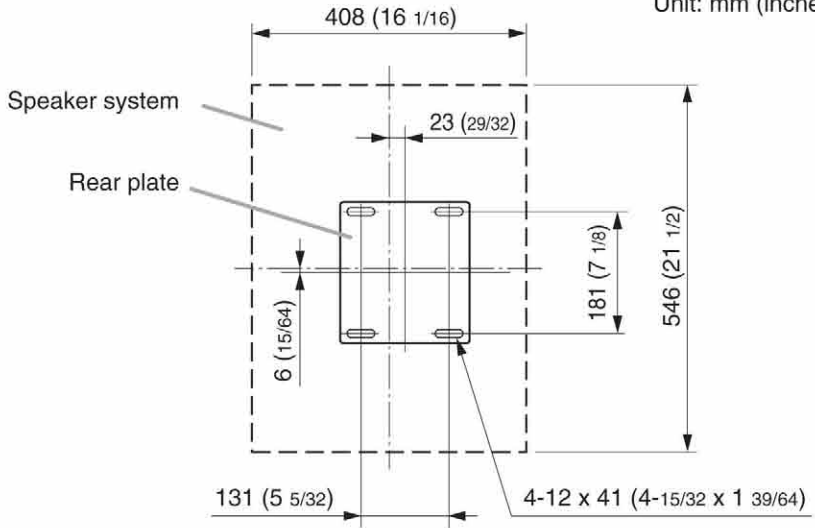
10.1. Vertical Installation



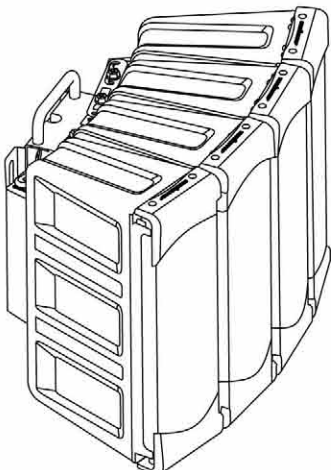
[Direct wall mounting dimensions]

(Angle mode of 60°)

Unit: mm (inches)



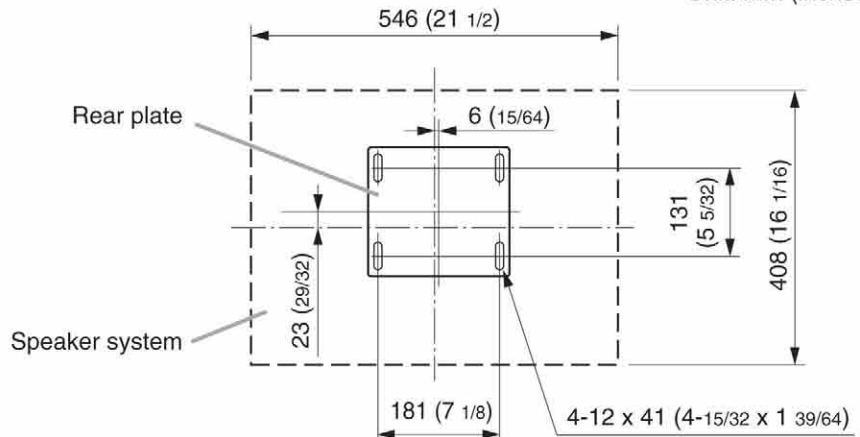
10.2. Horizontal Installation



[Direct wall mounting dimensions]

(Angle mode of 60°)

Unit: mm (inches)



11. MOUNTING BRACKET TYPES

The following mounting brackets are optional.

Consult the instruction manual enclosed with each bracket for details on their installation and use.

- **Speaker Rigging Frames SBLA45FF**

Can be used to suspend the speaker system from high ceilings.

- **Speaker Mounting Brackets SBLA45BRACKET**

Allow the speaker system to be mounted to a wall or ceiling and its angle to be adjusted vertically.

- **Speaker Stand Adapter SBLA45SSA**

Allows the speaker system to be installed on a speaker stand having a mounting pipe diameter of 35 mm.

- **Speaker Extension Brackets SBLA45EB1**

Connect 2 speaker systems to allow directivity control for lower frequencies.

12. EQUALIZATION USING A DIGITAL SIGNAL PROCESSOR

The speaker systems are to reproduce wide-band, high-efficiency sound even without the use of an equalizer. However, sound quality can be made even clearer and more dynamic with the addition of a Soundbarrier digital signal processor set as shown in the table.

[Filter characteristics for normal mode]

| Filter | Frequency | Gain | Q |
|-----------------|-----------|-------|-------|
| HPF (12 dB/oct) | 60 Hz | — | 2.053 |
| PEQ | 65 Hz | +2 dB | 1.414 |
| | 800 Hz | -3 dB | 0.7 |
| | 2.5 kHz | -4 dB | 2.997 |
| | 5 kHz | +5 dB | 0.305 |

13. SPECIFICATIONS

| | |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Model No. | |
| Enclosure | Bass-reflex type |
| Power Handling Capacity | Continuous: 300 W, Program 600W, Peak 1200W |
| Rated Impedance | 8 Ω |
| Sensitivity (1 W, 1m) | 96 dB (60° mode), 97 dB (45° mode), 98 dB (30° mode), 99 dB (15° mode) |
| Frequency Response (Deviation –10 dB) | 70 to 20,000 Hz (60° mode) 75 to 20,000 Hz (45° mode) 80 to 20,000 Hz (30° mode) 85 to 20,000 Hz (15° mode) |
| Crossover Frequency | 4 kHz |
| Directivity Angle | Horizontal: 100° (over 2,000 Hz) Vertical: 60° (over 800 Hz), 45° (over 1.2 kHz), 30° (over 1.6 kHz), 15° (over 3.2 kHz) variable |
| Speaker Component | Low frequency: 12 cm (5") cone-type x 4 High frequency: 1" Throat, 1" Voice Coil Neodymium Driver x 4 |
| Input Terminal | Speakon NL4MP x 2 and M4 screw terminal |
| Speaker Cord | |
| Water Protection | |
| Operating Temperature | |
| Finish (Enclosure) | Polypropylene Black (SBLA45B) or White (SBLA45W) |
| Dimensions | 408 (w) x 546 (h) x 342 (d) mm 16 1/16 (w) x 21 1/2 (h) x 13 15/32 (d) inches |
| Weight | 35.5 lbs / 16 kg |

* Install with the every speaker module downward.

Note: The design and specifications are subject to change without notice for improvement.



www.soundbarrier.com

All specifications for this unit, including design and appearance, are subject to change without prior notice
Todas las especificaciones estan sujetas a cambio sin previo aviso