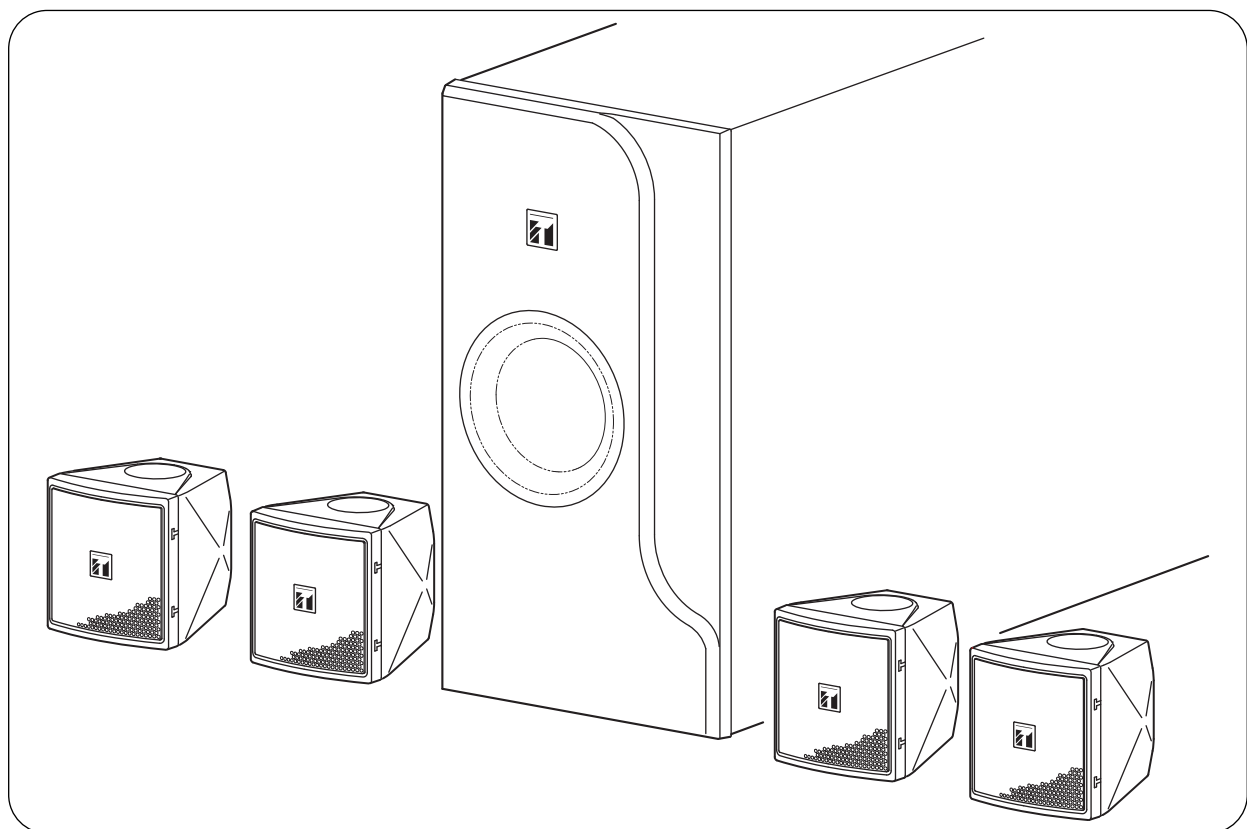


**SPEAKER SYSTEMS**

**BS-301B  
BS-301W**

Thank you for purchasing TOA's Speaker System.  
Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.



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# 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.

## **WARNING**

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

## **CAUTION**

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

## **WARNING**

### **When Installing the Unit**

- 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 in-door use, do not install it outdoors. If installed outdoors, the aging of parts causes the unit to fall off, resulting in personal injury. Also, when it gets wet with rain, there is a danger of electric shock.
- 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.
- Do not use anti-rust lubricant. If it contacts resin or rubber parts, they could deteriorate and cause the unit to fall, possibly resulting in personal injury.

## **CAUTION**

### **When Installing the Unit**

- Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.
- When unpacking or moving the unit, be sure to handle it with two or more persons. Falling or dropping the unit may cause personal injury and/or property damage.
- Avoid placing the unit in a doorway or other high traffic area as people may trip on the equipment and cords, or be injured by falling objects.
- Avoid touching the unit's sharp metal edge to prevent injury.
- To avoid electric shocks, be sure to switch off the amplifier'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. Doing so may cause the connected speakers to heat, resulting 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

Designed for indoor use, the BS-301 series is a 2-way speaker system featuring high power handling. Consisting of 4 satellite speakers and a subwoofer, this speaker system delivers a high sound pressure level over a wide frequency range of sound. It is ideal for installation in small shops and BGM applications. The supplied mounting bracket permits the speaker system to be installed at various sites and various direction angles.

## 3. DESCRIPTION ON OVERLOAD PROTECTION

The speaker unit is equipped with an overload protection circuitry. This circuitry will protect the speaker unit from overload input which exceeds the allowed capacity.

Speaker's volume will turn lower if the input to the speaker exceeds the maximum capacity of the speaker.

In such event, please turn down the amplifier volume to the minimum level and wait for about 10 seconds. The circuitry will automatically revert to normal condition. Then, set the volume at a lower level than before.

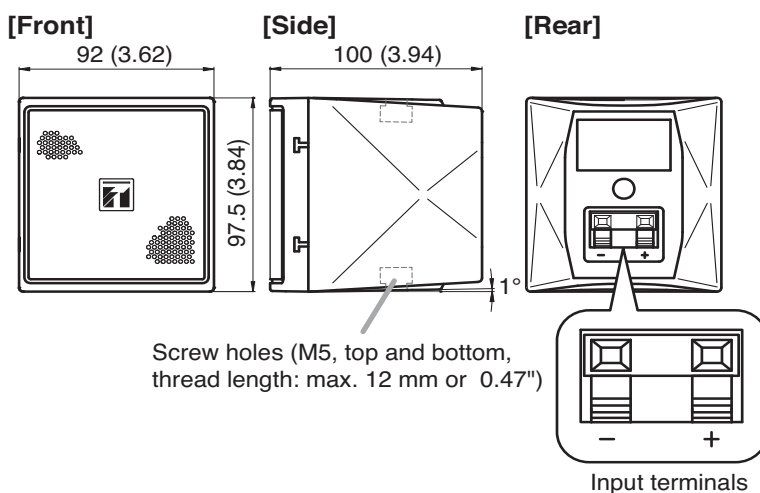
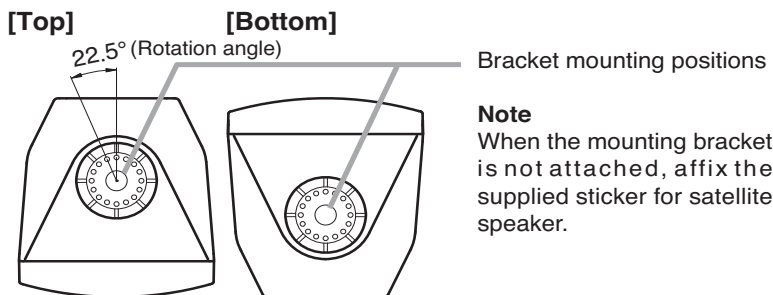
### Note

The overload protection circuitry does not completely protect the speaker unit against overload. Prolonged overload input to the speaker unit will cause the system to malfunction. As such, the overload input will flow in and damage the speaker unit.

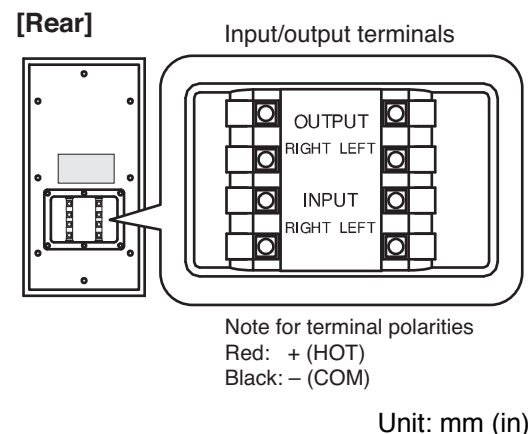
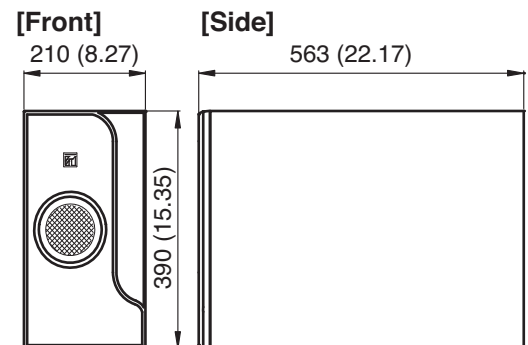
It is important to prevent prolonged overload input exceeding the maximum limit from flowing into the speaker unit.

## 4. DIMENSIONAL DIAGRAMS

### 4.1. Satellite Speaker



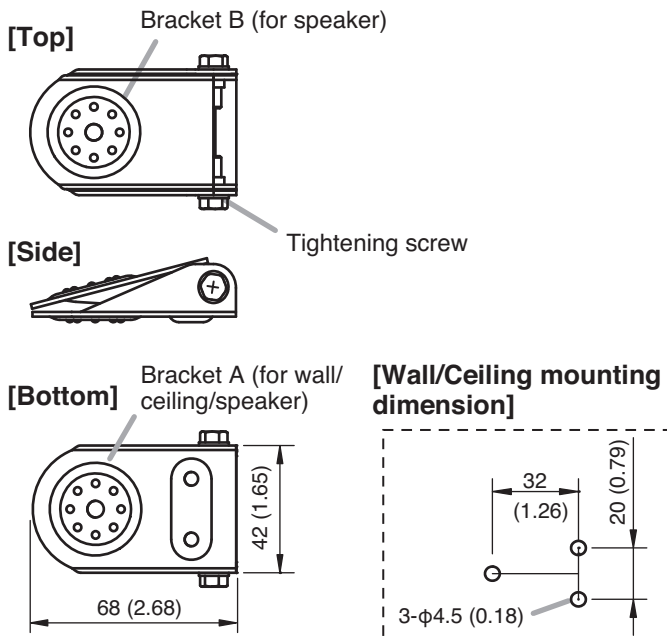
### 4.2. Subwoofer



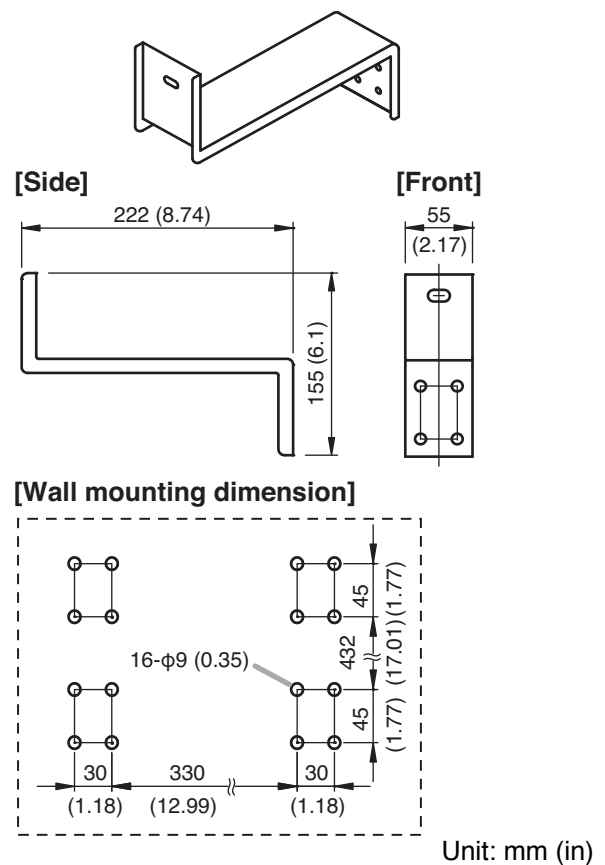
### 4.3. Mounting Brackets

#### 4.3.1. Satellite speaker mounting bracket

Loosen the tightening screws (right and left) to install the bracket to the speaker unit.



#### 4.3.2. Subwoofer mounting bracket



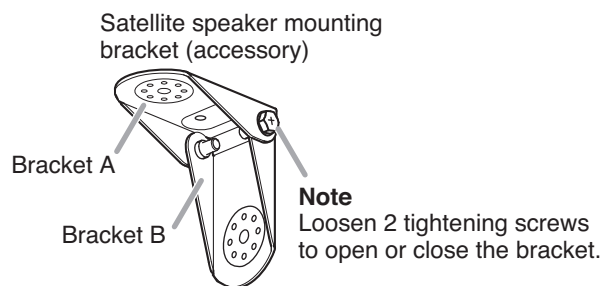
Unit: mm (in)

## 5. INSTALLATION

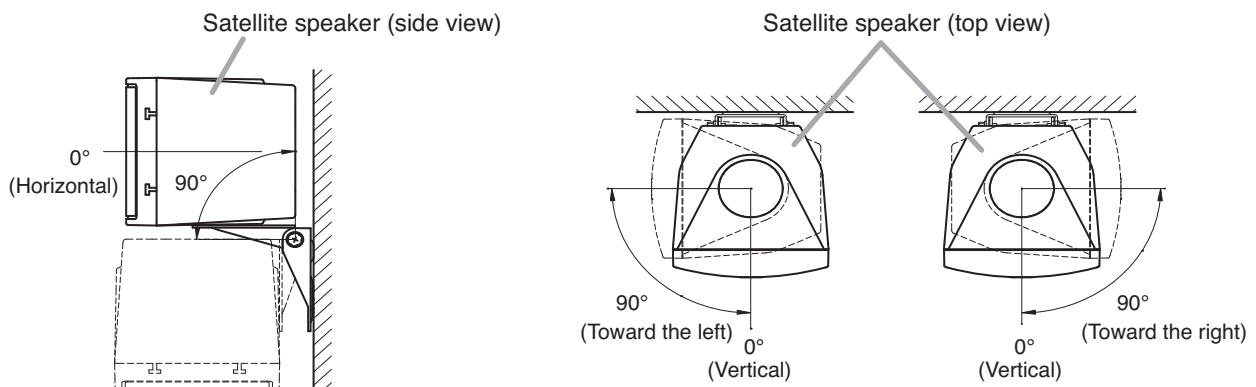
### 5.1. Satellite Speaker

#### Notes

- When mounting the satellite speaker mounting bracket to a wall or ceiling, secure the Bracket A at 3 points to the wall or ceiling. Use the Bracket B only to support the speaker.
- Screws for mounting the bracket to the wall or ceiling are not supplied. Use screws that are appropriate for the ceiling's or wall's structure and composition.



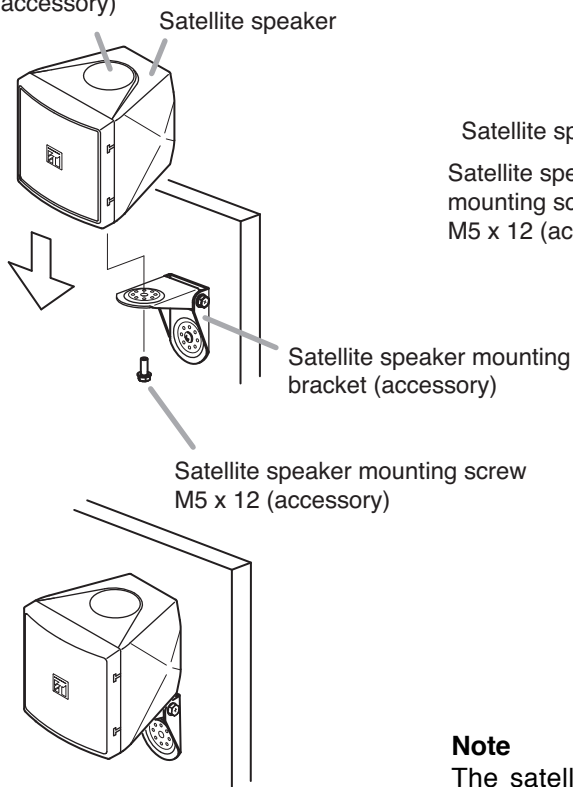
#### 5.1.1. Speaker direction angle



### 5.1.2. Wall mounting

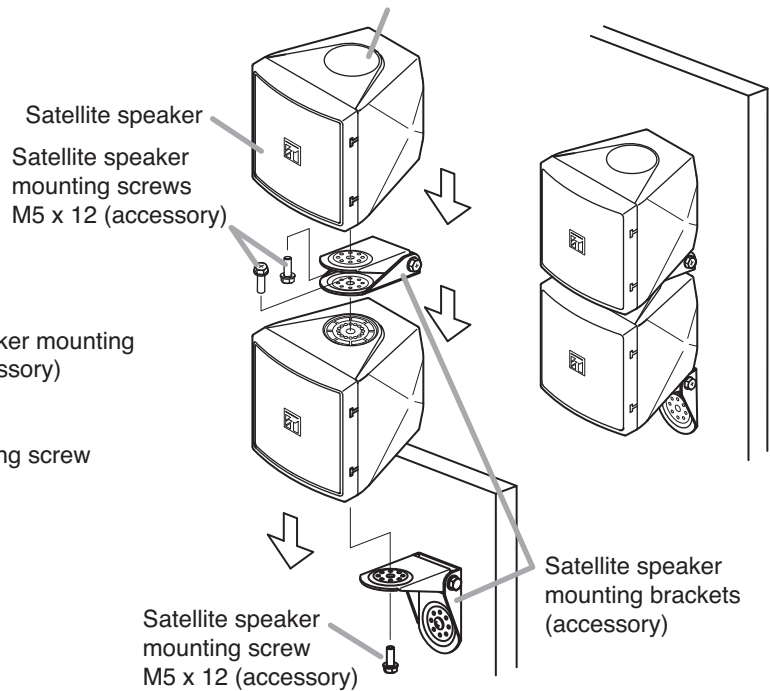
#### [Single speaker installation]

Sticker for satellite speaker (accessory)



#### [Double-stack installation]

Sticker for satellite speaker (accessory)

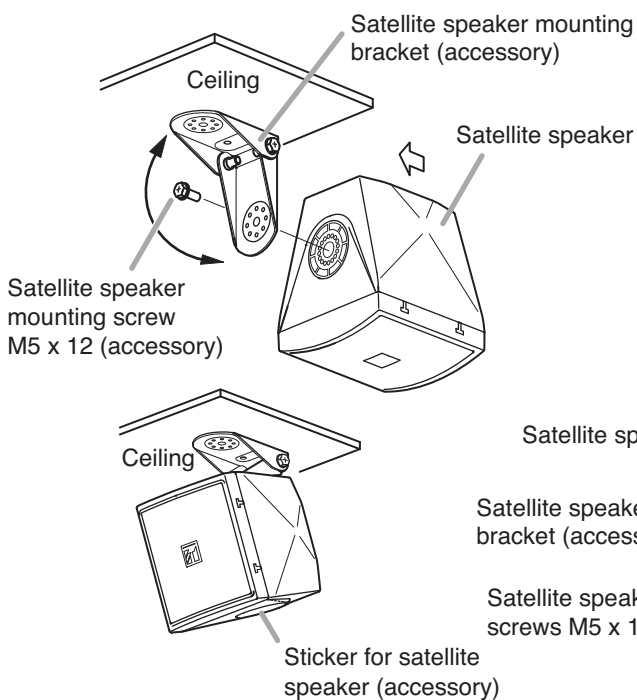


#### Note

The satellite speaker can be secured more firmly if another satellite speaker mounting bracket is added to the wall on the side of upper satellite speaker's top panel.

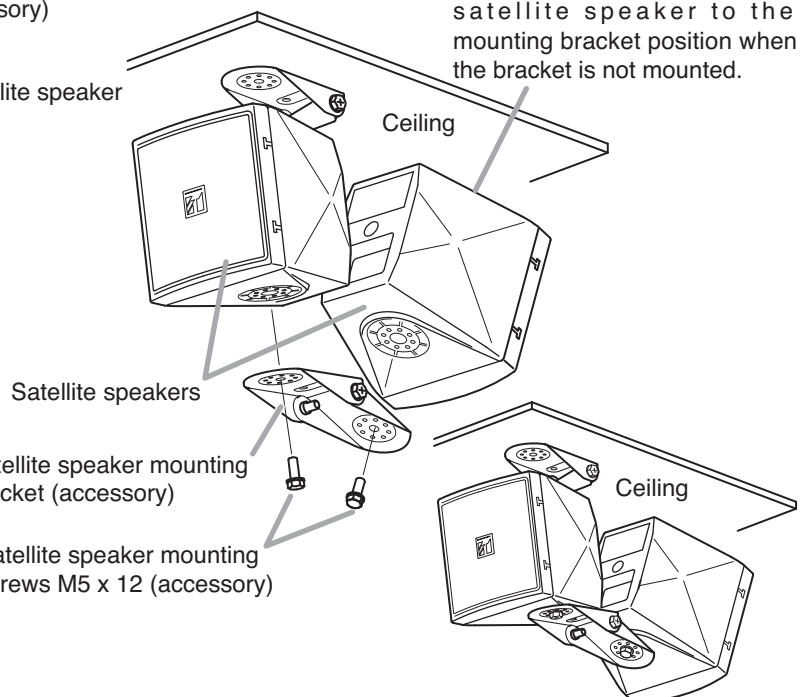
### 5.1.3. Ceiling mounting

#### [Single speaker installation]



#### [Double-stack installation]

Affix the supplied sticker for satellite speaker to the mounting bracket position when the bracket is not mounted.

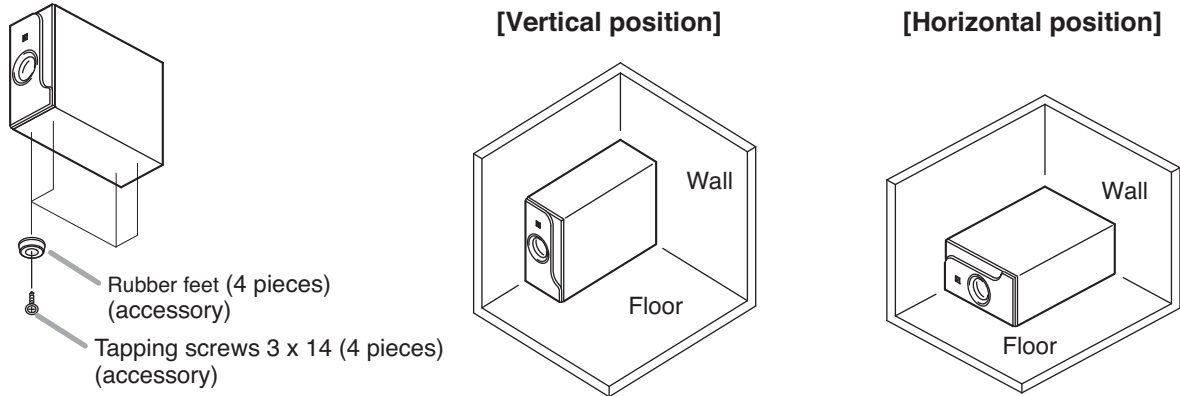


## 5.2. Subwoofer

The sound generated by the subwoofer may differ depending on the installation position. It is recommended to place the subwoofer at the corner of the room for better sound (especially bass).

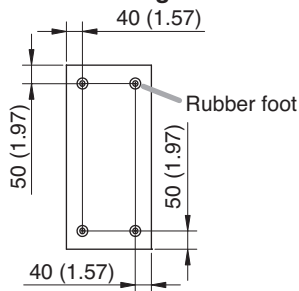
### 5.2.1. Installation on floor

Use the rubber feet to install the subwoofer on the floor. Ensure that the floor is even and flat so the subwoofer will not move. Install the rubber feet on the side facing the floor.

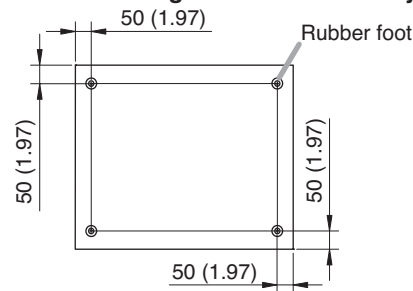


#### [Rubber feet mounting dimension]

• When installing the unit vertically

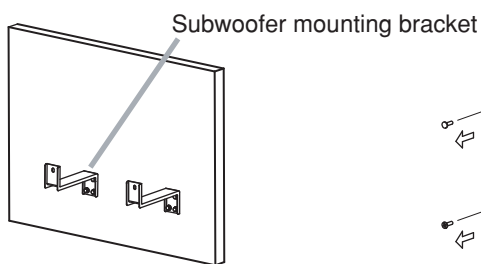


• When installing the unit horizontally

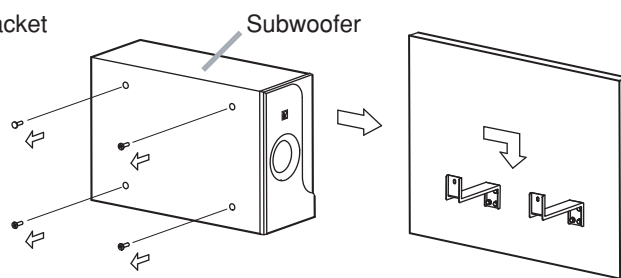


Unit: mm (in)

### 5.2.2. Wall mounting



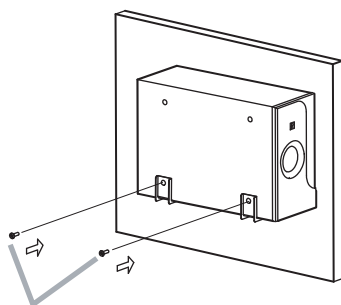
**Step 1.** Mount 2 subwoofer mounting brackets to the wall.



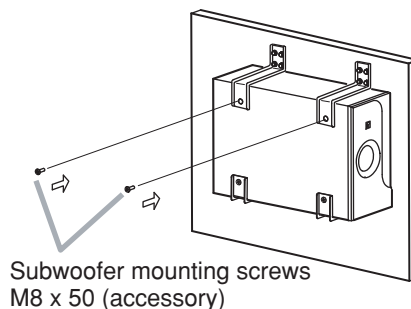
**Step 2.** Remove 4 screws on the subwoofer's side panel.

**Note:** The removed screws are not used.

**Step 3.** Place the subwoofer onto the mounting brackets.



**Step 4.** Secure the subwoofer to the mounting brackets using the 2 supplied screws.

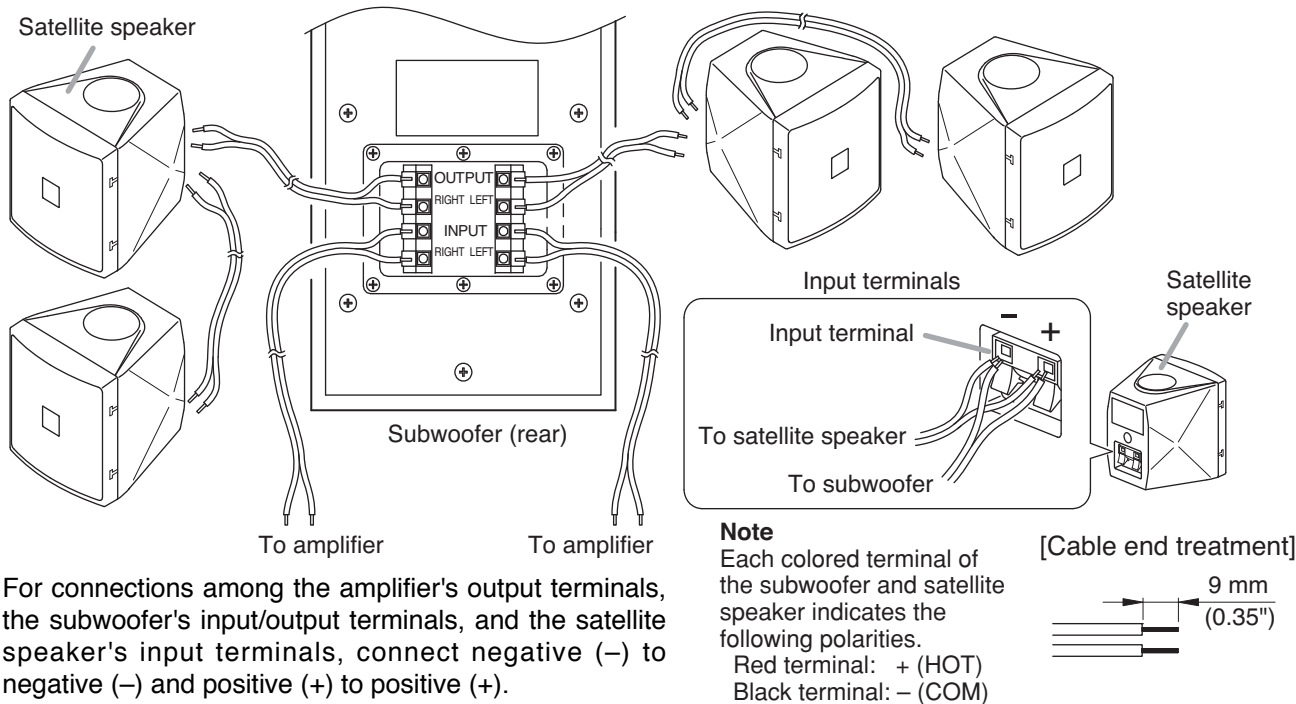


**Step 5.** Mount 2 subwoofer mounting brackets to the speaker's upper side as well.

#### **⚠ WARNING**

Screws for mounting the bracket to the wall are not supplied. Use screws that are appropriate for the wall's structure and composition. Failure to do so may cause the speaker to fall, resulting in material damage and possible personal injury.

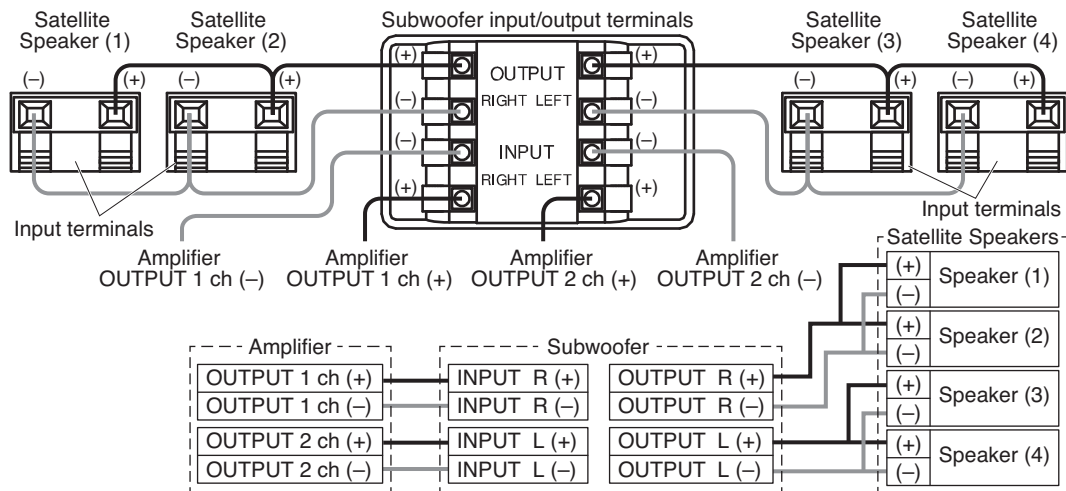
## 6. CONNECTION



## 7. AMPLIFIER OPERATIONS

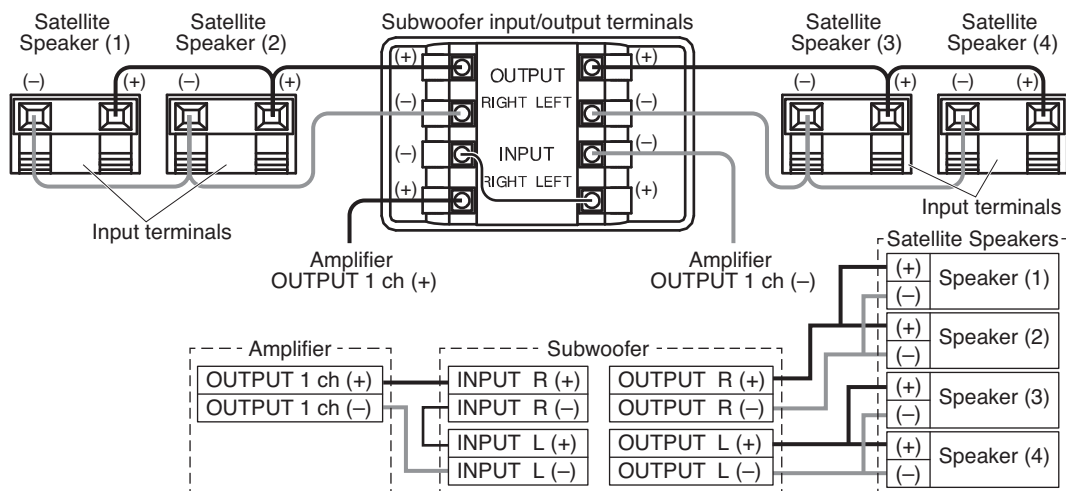
### 7.1. Stereo Amplifier Operation [2 inputs – 2 outputs] (Recommended)

[Wiring diagram]



### 7.2. Monaural Amplifier Operation [1 input – 2 outputs]

[Wiring diagram]



**Note**

When operating the speaker as in the diagram above (amplifier output of 1 channel), the rated impedance is 8 Ω.

## 8. SPECIFICATIONS

Model No.	BS-301B	BS-301W
Power Handling Capacity	Continuous program: 160 W* x 2 channels Continuous pink noise: 80 W* x 2 channels	
Rated Impedance	4 Ω* x 2 channels	
Sensitivity	81 dB (1 W, 1 m)* x 2 channels	
Frequency Response	40 Hz – 20 kHz* x 2 channels	
Total Weight	13.9 kg or 30.64 lb (excluding the supplied brackets)	
Subwoofer		
Rated Impedance	6 Ω x 2 channels	
Speaker Component	16 cm (6.5") cone type x 2 channels	
Finish	Front panel: ABS resin, black Enclosure: Wood Speaker bracket: Steel plate, black, paint	Front panel: ABS resin, white Enclosure: Wood Speaker bracket: Steel plate, white, paint
Dimensions	210 (w) x 390 (h) x 563 (d) or 8.27" x 15.35" x 22.17"	
Weight	11.5 kg or 25.35 lb (excluding the supplied brackets)	
Satellite Speaker		
Rated Impedance	8 Ω	
Speaker Component	8 cm (3") cone type	
Finish	Enclosure, front panel: HIPS resin, black Speaker bracket: Steel plate, black, paint	Enclosure, front panel: HIPS resin, white Speaker bracket: Steel plate, white, paint
Dimensions	92 (w) x 97.5 (h) x 100 (d) mm (3.62" x 3.84" x 3.94")	
Weight	600 g or 1.32 lb (excluding the supplied brackets)	
Components	Subwoofer ... 1, Satellite speaker ... 4	
Accessories	Subwoofer mounting bracket (black) ..... 4 Rubber foot ..... 4 Tapping screw 3 x 4 ..... 4 Subwoofer mounting screw M8 x 50 ..... 4 Satellite speaker mounting bracket (black) ..... 6 Satellite speaker mounting screw M5 x 12 ..... 8 Sticker for satellite speaker (black) ..... 8	Subwoofer mounting bracket (white) ..... 4 Rubber foot ..... 4 Tapping screw 3 x 4 ..... 4 Subwoofer mounting screw M8 x 50 ..... 4 Satellite speaker mounting bracket (white) ..... 6 Satellite speaker mounting screw M5 x 12 ..... 8 Sticker for satellite speaker (white) ..... 8

\* Overall characteristics measured in a set configuration of a subwoofer (L or R channel) and 2 satellite speakers.

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

### Traceability Information for Europe

Manufacturer:  
TOA Corporation  
7-2-1, Minatojima-Nakamachi, Chuo-ku, Kobe, Hyogo,  
Japan

Authorized representative:  
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Suederstrasse 282, 20537 Hamburg,  
Germany



TOA Corporation

URL: <http://www.toa.jp/>