

COMPACT SPEAKERS
**BS-1015BSB
BS-1015BSW**

Thank you for purchasing TOA's Compact Speaker.

Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

TABLE OF CONTENTS

1. SAFETY PRECAUTIONS	1	6. INSTALLATION PRECAUTIONS	4
2. GENERAL DESCRIPTION AND FEATURES	2	7. WIRING DIAGRAM	4
3. IMPEDANCE CHANGE	2	8. FREQUENCY RESPONSE (1 W, 4 m)	4
4. WIRING	3	9. DIMENSIONAL DIAGRAM	5
5. SPEAKER INSTALLATION	4	10. SPECIFICATIONS	5
		احتياطات تتعلق بنواحي السلامة	

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.

When Installing the Unit

- Refer all installation work to the dealer from whom the speaker was purchased. Installation work requires extensive technical knowledge and experience. The speaker may fall off if incorrectly installed, resulting in possible personal injury.
- Install the speaker only in a location that can structurally support the full weight of the unit and mounting bracket. Doing otherwise may result in

the speaker 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.
- Do not use other methods than specified to install the speaker. Extreme force is applied to the speaker and the speaker could fall off, possibly resulting in personal injuries.
- Use screws that are appropriate for the ceiling's or wall's material and structure. Failure to do so may cause the speaker to fall, resulting in material damage and possible personal injury.
- Ensure that all screws are securely tightened. If

Traceability Information for Europe (EMC directive 2004/108/EC)

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

Authorized representative:
TOA Electronics Europe GmbH
Suederstrasse 282, 20537 Hamburg,
Germany

they are loose after installation, the speaker could fall down, possibly resulting in personal injury.

- Do not mount the speaker in locations exposed to constant vibration. The speaker or its mounts can be damaged by excessive vibration, potentially causing the speaker 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 speaker to fall, possibly resulting in personal injury.
- Do not install the speaker in indoor swimming pools or such locations where liquid chemicals are used. The parts deteriorate if corroded, causing the speaker to fall, which could result in personal injury.

When the Unit is in Use

- If any of the following irregularities occurs, immediately switch off the amplifier's power, and inform the shop from where the speaker was purchased. Further using the speaker may result in fire or electric shock.
 - If you detect smoke or a strange smell coming from the speaker
 - If water or any metallic object gets into the speaker
 - If the speaker falls, or the speaker case breaks
- To prevent a fire or electric shock, never open nor remove the speaker case. Refer all servicing to your nearest TOA dealer.

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 speaker'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

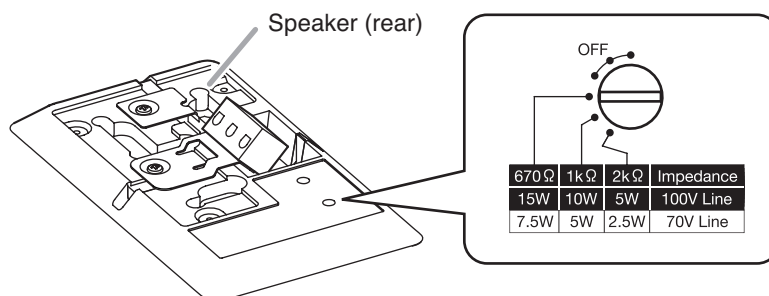
- Do not operate the speaker for an extended period of time with the sound distorting. Doing so may cause the speaker to heat, resulting in a fire.
- Do not stand or sit on, nor hang down from the speaker as this may cause it to fall down or drop, resulting in personal injury and/or property damage.
- Have the speaker checked periodically by the shop from where it was purchased. Failure to do so may result in corrosion or damage to the speaker or the mounts that could cause it to fall, possibly causing personal injury.

2. GENERAL DESCRIPTION AND FEATURES

The BS-1015BSB and BS-1015BSW are certified according to the European Standard EN 54-24: 2008, the International Standard ISO 7240-24: 2010 and compliant with the British Standard BS 5839-8: 2008. The speaker's smoothly curved surface permits it to blend in with virtually all modern buildings. A built-in matching transformer permits the speaker to be used for high-impedance applications. The impedance can be easily changed from outside the speaker.

3. IMPEDANCE CHANGE

Input impedance is factory preset to 670 Ω. To change the impedance, change the rear panel-mounted rotary switch position using a standard screwdriver



Notes

- Switch off the amplifier's power when changing the input power.
- This speaker is designed to be used for high impedance applications (70 V/100 V). Never connect the speaker to low impedance line as doing so may damage the speaker.
- No sound is output from the speaker when the switch is set to the OFF position.

4. WIRING

The terminal cover is not mounted to the speaker unit when shipped from the factory.

Note

To complete speaker installation, be sure to attach the terminal cover after finishing cable connections. If the unit is left without the terminal cover attached, water or moisture may get inside the speaker, causing the unit malfunction.

Step 1. Strip the speaker cable jacket.

Step 2. Run the speaker cable through the cable gland.

Step 3. Connect the speaker cable according to the polarity indication at the screw terminal.

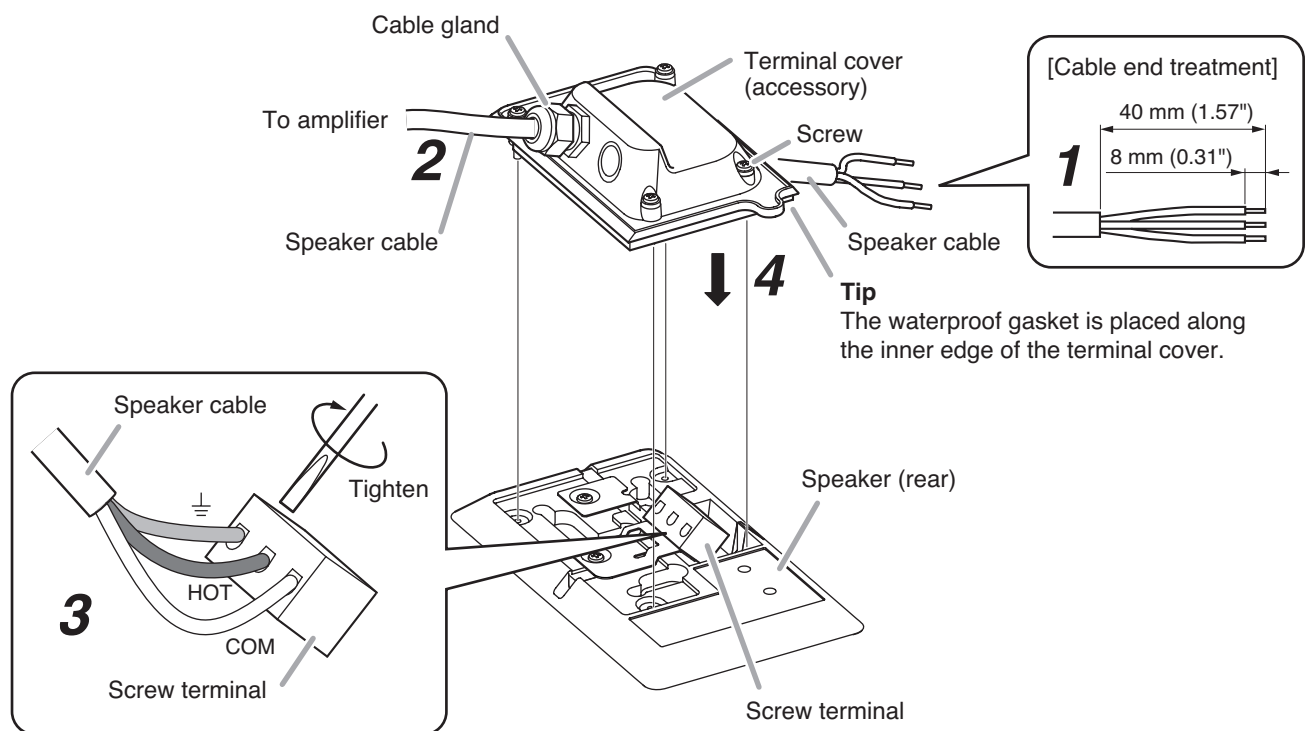
Step 4. Mount the terminal cover.

Secure the terminal cover using the 4 attached screws.

In this case, take care not to pinch the wiring, and check that the waterproof gasket is secured into place.

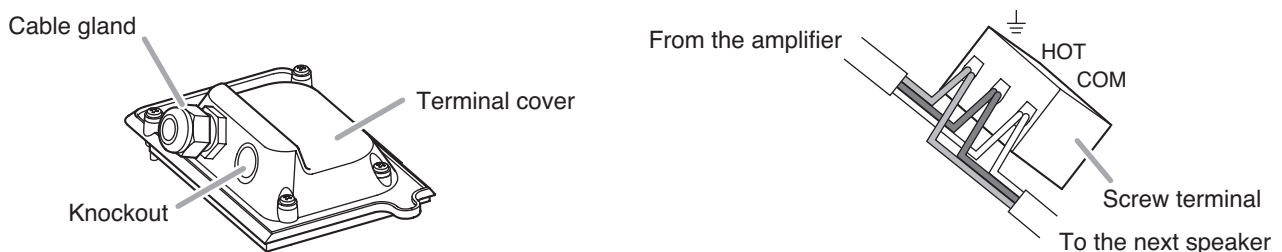
Notes

- If wiring or the waterproof gasket is pinched between the terminal cover and the unit case, this causes water or moisture to get inside the terminal cover.
- Be careful not to overtighten the screw. As a rough guide, tighten the screw until the thickness of the waterproof gasket becomes about half.



[When making a bridge connection]

Remove the knockout on the terminal cover and mount the cable gland PG 13.5 (option) there. Then, run the speaker cable through the cable gland and connect each pair of cables to the input terminal according to the polarity indication at the screw terminal.

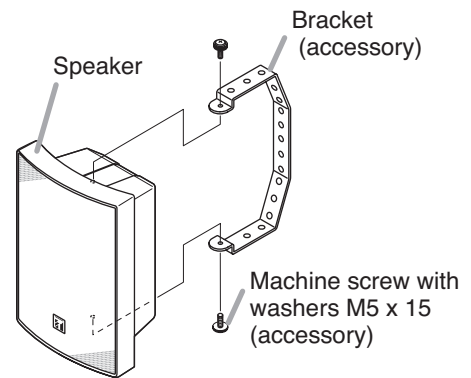


5. SPEAKER INSTALLATION

Step 1. Attach the bracket to the speaker using the supplied screws.

Step 2. Mount the speaker in the desired location using the mounting holes made in the bracket.

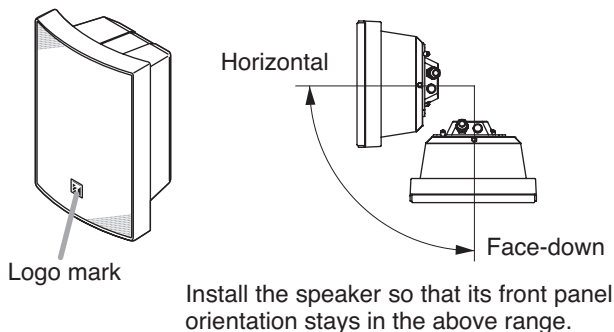
Note: Bracket mounting hardware is not supplied with the unit. Referring to the bracket's dimensional diagram, prepare the correct type of screws or bolts appropriate to the wall material.



6. INSTALLATION PRECAUTIONS

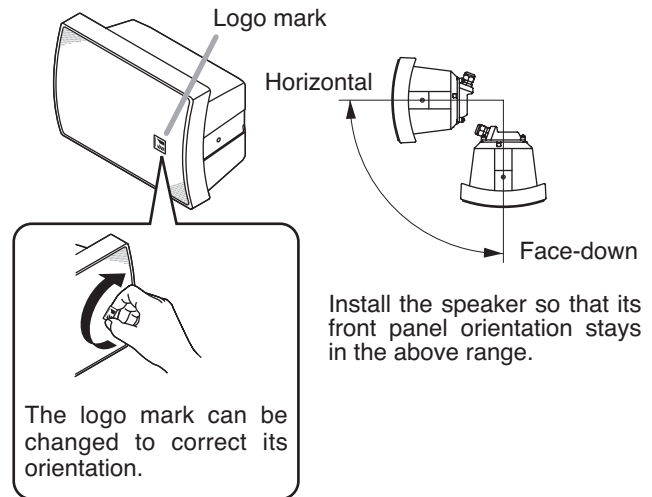
Note: The splash-proof function required by the related Standards will not work with any other installation method than those referred to below.

6.1. Vertical Installation



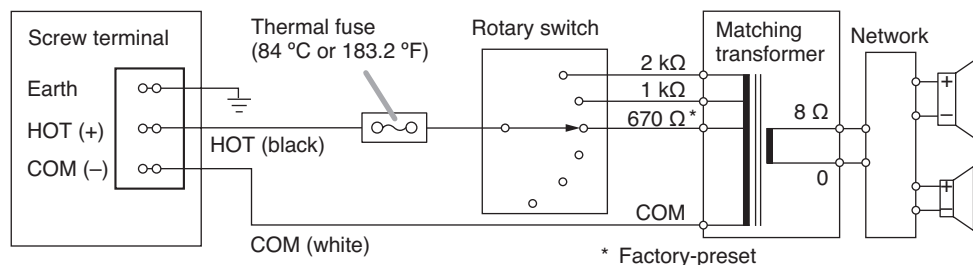
Note
Install the speaker so that the front panel logo is positioned in the lower portion as shown above.

6.2. Horizontal Installation

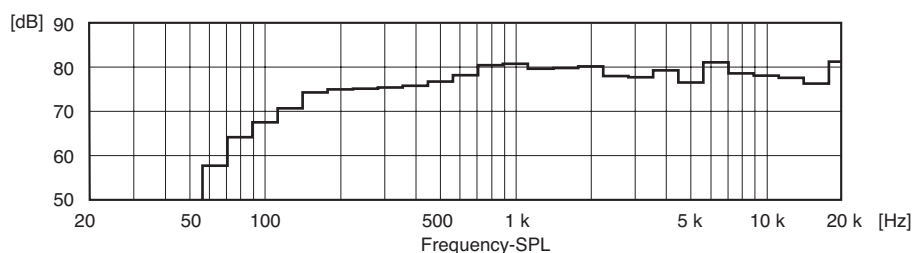


Note
Install the speaker so that the front panel logo is positioned to the right side as viewed from the speaker front.

7. WIRING DIAGRAM

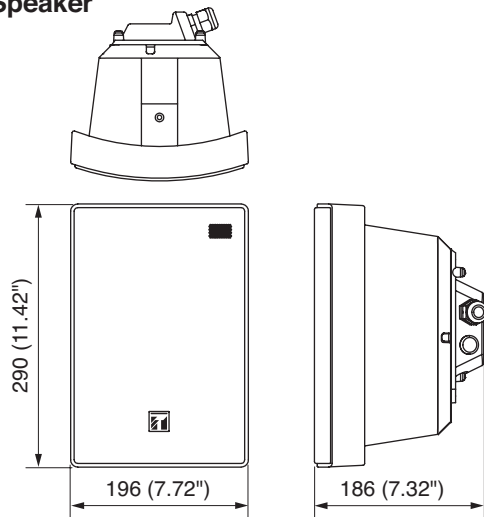


8. FREQUENCY RESPONSE (1 W, 4 m)

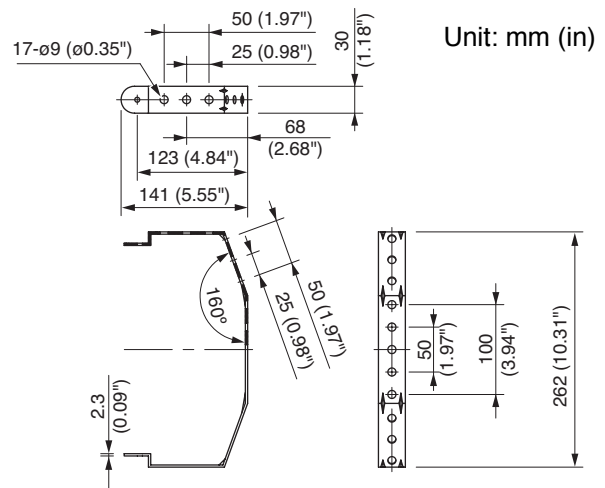


9. DIMENSIONAL DIAGRAM

• Speaker




• Bracket



Unit: mm (in)

10. SPECIFICATIONS

Model	BS-1015BSB	BS-1015BSW	
Standards	Certified to the European Standard EN 54-24: 2008 Loudspeaker for voice alarm systems for fire detection and fire alarm systems	 EN 54-24 11 0359-CPD-0104 0359	
	Certified to the International Standard ISO 7240-24: 2010 Sound-system loudspeaker for fire detection and fire alarm systems In compliance with the British Standard BS-5839-8: 2008 14.8		
Environment Type	Type A		
Rated Noise Power	15 W (100 V line), 7.5 W (70 V line)		
Rated Impedance	100 V line: 670 Ω (15 W), 1 kΩ (10 W), 2 kΩ (5 W) 70 V line: 670 Ω (7.5 W), 1 kΩ (5 W), 2 kΩ (2.5 W)		
Sensitivity	90 dB (1 W, 1 m, 500 Hz to 5 kHz pink noise) 87 dB (1 W, 1 m, 100 Hz to 10 kHz pink noise) 75 dB (1 W, 4 m, 100 Hz to 10 kHz pink noise)		
Max. SPL	98 dB (15 W, 1 m, 100 Hz to 10 kHz pink noise) 86 dB (15 W, 4 m, 100 Hz to 10 kHz pink noise)		
Frequency Response	80 Hz – 20 kHz		
Coverage Angle (–6 dB)	Horizontal: 220° (500 Hz), 150° (1 kHz), 120° (2 kHz), 90° (4 kHz) Vertical: 330° (500 Hz), 160° (1 kHz), 120° (2 kHz), 70° (4 kHz)		
Speaker Component	12 cm (5") cone-type, 2.5 cm (1") balanced dome tweeter		
Cable Gland	Size: PG 13.5 One cable gland is factory-installed. For bridge connection, one cable gland can be added.*		
Cable Connection	Screw terminal (steatite)		
Applicable Cable Size	Outer diameter: ø6.5 – ø12.5 mm Conductor: Solid wire or 7-core wire No bridge connection: 0.8 – 10 mm ² (AWG 18 – 7) for solid wire 0.8 – 8 mm ² (AWG 18 – 8) for 7-core wire Bridge connection: 0.8 – 2.5 mm ² (AWG 18 – 13) for solid wire 0.8 – 1.5 mm ² (AWG 18 – 15) for 7-core wire		
Finish	Enclosure	ABS resin, black (RAL 9011 or equivalent color), paint	ABS resin, white (RAL 9010 or equivalent color), paint
	Grill	Surface-treated steel plate net, black (RAL 9011 or equivalent color), powder coating	Surface-treated steel plate net, white (RAL 9010 or equivalent color), powder coating
	Bracket	Steel plate, black (RAL 9011 or equivalent color), powder coating	Steel plate, white (RAL 9010 or equivalent color), powder coating
	Terminal Cover	ABS resin, black (RAL 9011 or equivalent color)	ABS resin, white (RAL 9010 or equivalent color)
Dimensions	196 (w) x 290 (h) x 186 (d) mm (7.72" x 11.42" x 7.32")		
Weight	2.4 kg (5.29 lb)		
Accessories	Bracket 1, Machine screw with washers M5 x 15 2, Terminal cover 1		

Notes

- The design and specifications are subject to change without notice for improvement.
- The Specifications data was measured in an anechoic chamber, according to EN 54-24.
- Reference axis: Axis is on the center of grill surface and perpendicular to the grill surface.
- Reference plane: Plane is on the grill surface and perpendicular to the reference axis.
- Horizontal plane: Plane is containing the reference axis and perpendicular to the reference plane.

* Suppliable cable gland's part code and name: 525-52-011-70 Cable gland AVC PGB13.5-12 (GRY)