

WALL MOUNT SPEAKER

BS-1034EN

Thank you for purchasing TOA's Wall Mount Speaker.
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.

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.
- When installing the speaker in the snowy area, take appropriate measures to prevent snow from lying on the speaker. If the snow lies on it, the speaker may fall, causing personal injuries.
- 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 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 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.

Traceability Information for Europe

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

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

- 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.
- Avoid installing the speaker near seaside or in locations exposed to corrosive gas. The speaker or its parts may be subject to corrosion, which might cause it to fall or result 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. 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.

2. GENERAL DESCRIPTION AND FEATURES

The BS-1034EN is certified according to the European Standard EN 54-24: 2008 and the International Standard ISO 7240-24: 2010.

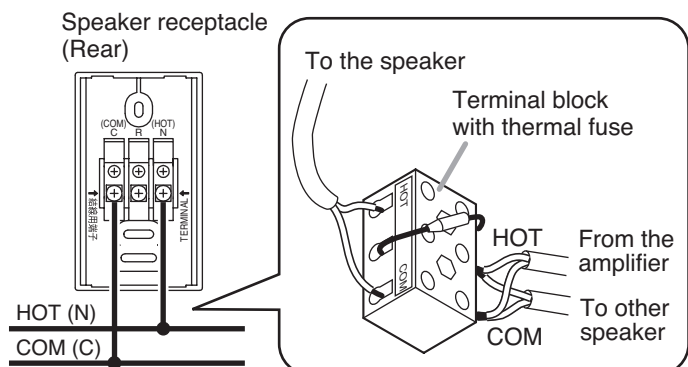
- BS-1034EN of which cabinet is made of HIPS resin, can be installed in a vertical or horizontal orientation.
- Thin type wall mount speaker with 5" cone speaker unit
- Two-way speaker system employing a balanced dome tweeter and elliptical horn for high-frequency sound reproduction in combination with a 5" cone speaker unit ensures high-quality sound.
- The speaker's smoothly curved surface in combination with its straight lines permits it to blend in with virtually all modern buildings.
- Equipped with a speaker receptacle, providing speaker cable connection and installation ease.
- Equipped with a lock mechanism, preventing the speaker from being detached easily after installation.
- In-wall wiring, exposed wiring, or bridge wiring available for speaker cable connection
- The input power (impedance) can be easily changed by the rear-mounted rotary switch.

3. CONNECTION

Connect the speaker cable to the supplied speaker receptacle.

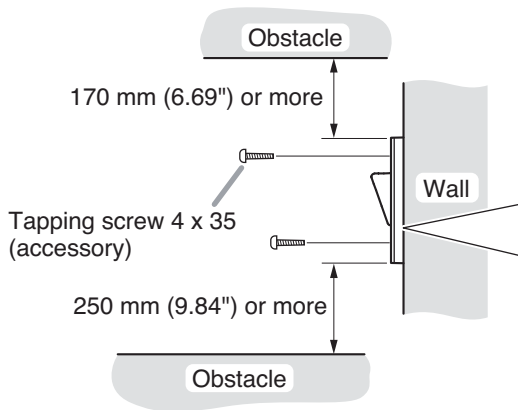
Notes

- Use the supplied terminal block only when wirings are concealed in the wall or a terminal box is installed for wirings.
- The supplied terminal block is equipped with a thermal fuse and fiberglass tube. For safety purposes, connect the terminal block between the speaker cable and the speaker receptacle as shown at right.

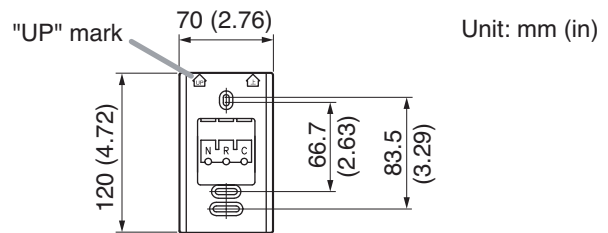


4. INSTALLATION

Step 1. Attach the speaker receptacle to a wall.



Notes on speaker receptacle mounting



- If the supplied tapping screws are not appropriate for the construction of wall, separately prepare the appropriate screws.
- Install the speaker receptacle referring to its "UP" mark.
- Position the receptacle at the specified distance away from any object above and below it for vertical speaker mounting. Keep the same distance to the right and left of the receptacle (positioned sideways) for horizontal speaker mounting.

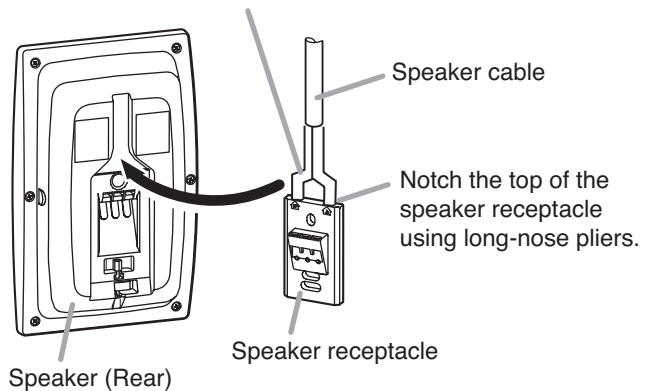
[Notes on horizontal speaker mounting]

- Even if the speaker receptacle is mounted horizontally, the speaker may be tilted due to its weight unbalance when attached to the receptacle.
- When changing the logo direction, peel off the logo carefully as it is affixed using double-faced tape. Then, re-affix it in the right orientation.

[Exposed wiring]

Notch the top of the speaker receptacle using long-nose pliers, then make connections.

Split the speaker cable into 2 branches just before it enters the speaker receptacle so that it can be routed in the cable-guide groove on the rear side of the speaker.



Step 2. Change the input power (impedance) as needed. The input power (impedance) is factory-preset to 1 k Ω for 10 W/100 V line or 5 W/70 V line. When changing this setting, use a standard screwdriver to turn the rotary switch on the speaker's rear panel to the desired position.

Note

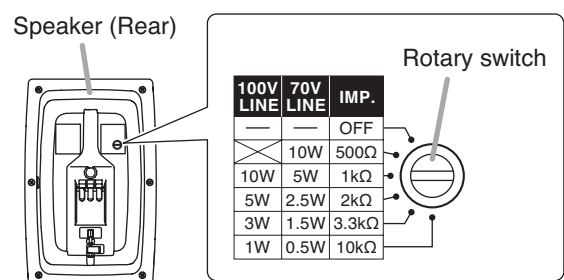
Be sure to follow the instructions below. Failure to do so may cause damage to the speaker as excessive input power is applied to it.

- Switch off the amplifier's power when changing the input power.
- Never make 500 Ω connection in a 100 V line system, as excessive input power is applied to the speaker, possibly resulting in damage.

Step 3. Hold and slide the speaker to insert its speaker plug into the speaker receptacle.

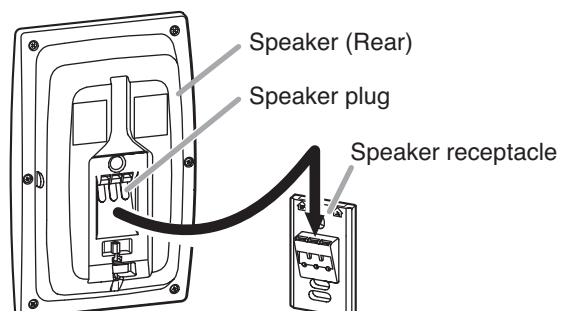
Note

In this case, force the speaker onto the speaker receptacle holding the speaker outer frame.



Impedance	500 Ω	1 kΩ	2 k Ω	3.3 k Ω	10 k Ω
100 V line	Never use this.	10 W	5 W	3 W	1 W
70 V line	10 W	5 W	2.5 W	1.5 W	0.5 W

Bold figures represent factory-preset values.

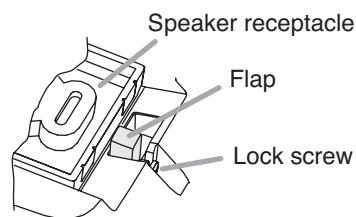


Step 4. Secure the speaker.

Turning the lock screw about 3 counterclockwise turns using a Phillips screwdriver causes the flap to rise up and stay upright.

Caution

After speaker installation, be sure to make a visual check that the flap rises to lock the speaker completely.



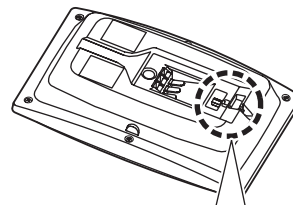
About lock mechanism

Shown below is how the lock mechanism works. It prevents the speaker from being detached easily after installation.

Note

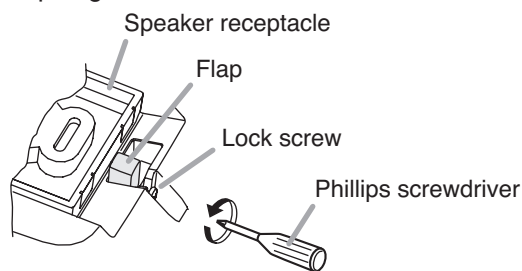
Be sure to follow the instructions below. Failure to do so may cause damage to the lock mechanism.

- Do not use an electric screwdriver when turning the lock screw.
- Do not turn the lock screw more than the specified turns.



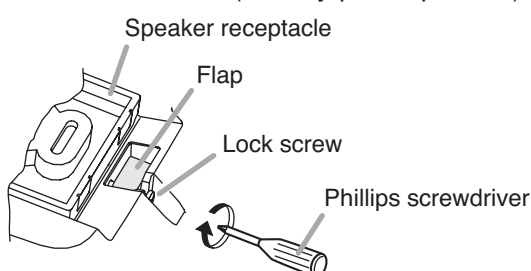
[When fixing the speaker]

Turning the lock screw counterclockwise causes the flap to rise up and move until it stops against the other side of the recess.



[When detaching the speaker]

Turning the lock screw clockwise causes the flap to lie down and move until it stops against the front side of the recess. (Factory-preset position)



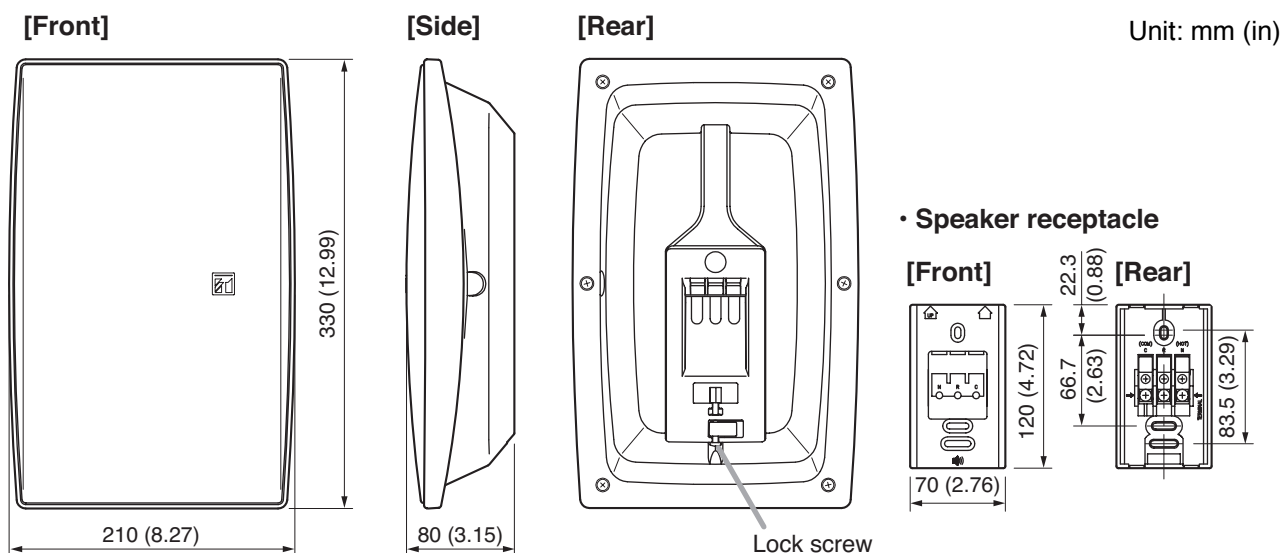
5. DETACHING THE SPEAKER

Step 1. Turn the lock screw about 3 clockwise turns.

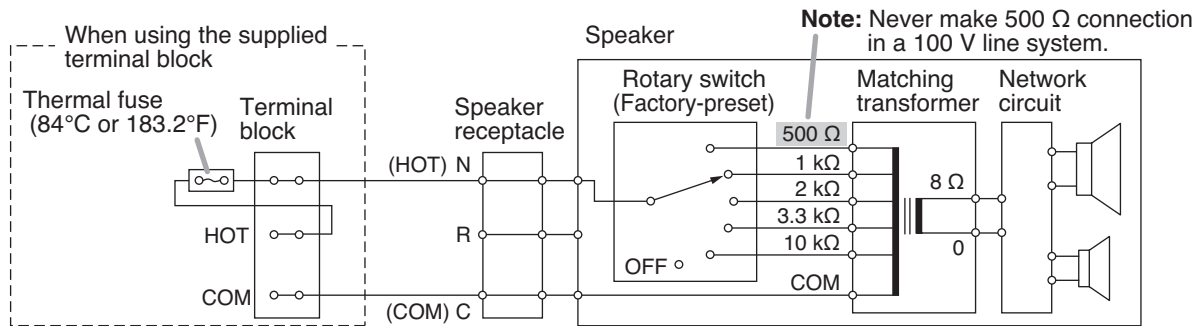
The flap lies down and stays laid. (Refer to "About lock mechanism" explained above.)

Step 2. Hold and slide the speaker to unplug it from the speaker receptacle.

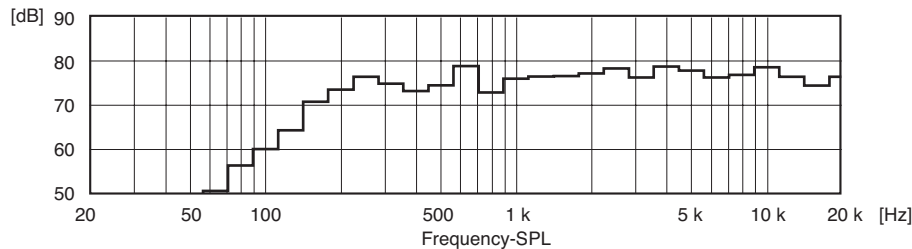
6. DIMENSIONAL DIAGRAM




7. WIRING DIAGRAM



8. FREQUENCY RESPONSE (1 W, 4 m)



9. SPECIFICATIONS

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-0102 0359
	Certified to the International Standard ISO 7240-24: 2010 Sound system loudspeakers for fire detection and fire alarm systems	
Environment Type	Type A (Indoor applications)	
Rated Noise Power	10 W (100 V line), 10 W (70 V line)	
Rated Impedance	100 V line: 1 kΩ (10 W), 2 kΩ (5 W), 3.3 kΩ (3 W), 10 kΩ (1 W) 70 V line: 500 Ω (10 W), 1 kΩ (5 W), 2 kΩ (2.5 W), 3.3 kΩ (1.5 W), 10 kΩ (0.5 W)	
Sensitivity	89 dB (1 W, 1 m, 500 Hz to 5 kHz pink noise)	
	86 dB (1 W, 1 m, 100 Hz to 10 kHz pink noise)	
	74 dB (1 W, 4 m, 100 Hz to 10 kHz pink noise)	
Max. SPL	94 dB (10 W, 1 m, 100 Hz to 10 kHz pink noise)	
	82 dB (10 W, 4 m, 100 Hz to 10 kHz pink noise)	
Frequency Response	120 Hz – 20 kHz	
Coverage Angle (–6 dB)	Horizontal: 360° (500 Hz), 150° (1 kHz), 115° (2 kHz), 100° (4 kHz)	
	Vertical: 300° (500 Hz), 130° (1 kHz), 160° (2 kHz), 80° (4 kHz)	
Speaker Component	12 cm (5") cone (woofer), 2.5 cm (1") balanced dome (tweeter)	
Operating Temperature	–10 °C to +50 °C (14 °F to 122 °F)	
Cable Connection	Screw terminal, can be bridge-connected	
Applicable Cable Size	Outer diameter: Max. ø9 mm (for exposed wiring), ø6.5 – ø12.5 mm (for in-wall wiring)	
	Conductor: Solid wire or 7-core wire 0.8 – 2 mm ² (AWG 18 – 14) for solid wire, 0.8 – 1.5 mm ² (AWG 18 – 15) for 7-core wire	
Finish	Case: HIPS resin (fire resistant grade UL94 V-0), off-white (RAL 9010 or equivalent color)	
	Grille: Steel plate, off-white (RAL 9010 or equivalent color), paint	
Dimensions	210 (w) x 330 (h) x 80 (d) mm (8.27" x 12.99" x 3.15")	
Weight	1.4 kg (3.09 lb)	
Accessories	Terminal block (with thermal fuse) 1, Speaker receptacle 1, Tapping screw 4 x 35 2	

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 grille surface and perpendicular to the grille surface.
- Reference plane: Plane is on the grille surface and perpendicular to the reference axis.
- Horizontal plane: Plane is containing the reference axis and perpendicular to the reference plane.