

CEILING MOUNT FIRE DOME SPEAKER

PC-1865BS

Thank you for purchasing TOA's Ceiling Mount Fire Dome 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.

- 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.
- Avoid mounting the unit in locations exposed to constant vibration. The mounting bracket can be damaged by excessive vibration, potentially causing the speaker to fall, which could result in personal injury.

WARNING

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

- Use only the specified amplifier output voltage and impedance, as exceeding the specified limits could result in fire or other failures (high-impedance applications).
- To avoid accidental air explosions, do not use the unit around gasoline, thinner or other combustibles.
- 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.
- Do not use other methods than specified to mount the unit. Extreme force is applied to the unit and the unit could fall off, possibly resulting in personal injuries.

CAUTION

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

- To avoid electric shocks, be sure to switch off the amplifier power when connecting the speaker.
- Avoid installing the unit in humid or dusty locations, or in locations exposed to heaters, solvents, acid, alkali, smoke, or steam, as excessive exposure to these factors could result in the speaker falling off, electric shock or fire.
- 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.
- Have the unit periodically checked by the shop from where it was purchased. Failure to do so could result in the speaker falling off due to damage or corrosion to the speaker or its mounts, and possible personal injury.

2. GENERAL DESCRIPTION

TOA's PC-1865BS Ceiling Mount Fire Dome Speaker features an iron-made dome that prevents the fire from spreading in the ceiling in case of fire.

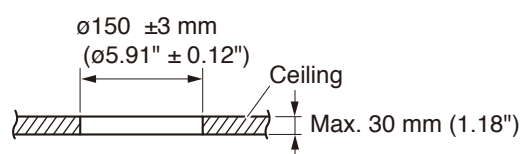
The speaker can be easily installed using the speaker mounting spring, and the dome can also be easily mounted in the speaker mounting hole in the ceiling panel.

The PC-1865BS is provided with a steatite terminal block of screw type.

The PC-1865BS is certified according to the European Standard EN 54-24: 2008 and compliant with the British Standard BS 5839-8: 2008.

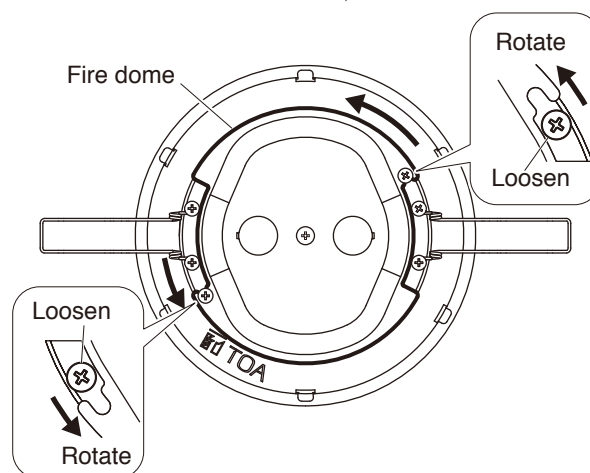
3. INSTALLATION

Step 1. Using the supplied paper pattern as a guide, open a 150 mm (5.91") ± 3 mm (0.12") mounting hole in the ceiling panel.



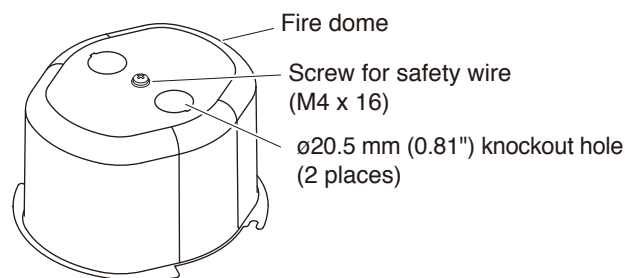
Step 2. Loosen the 2 screws and rotate the fire dome counterclockwise as shown at right to remove it.

Note: To facilitate installation work, never remove 2 screws but only loosen them.



Step 3. Punch out the knockout hole in the fire dome, then install the supplied cable entry rubber grommet in the knockout hole.

Note: The grommet's cable entry hole is covered with a thin membrane. Cut a hole in the membrane to match the size of the speaker cable used.

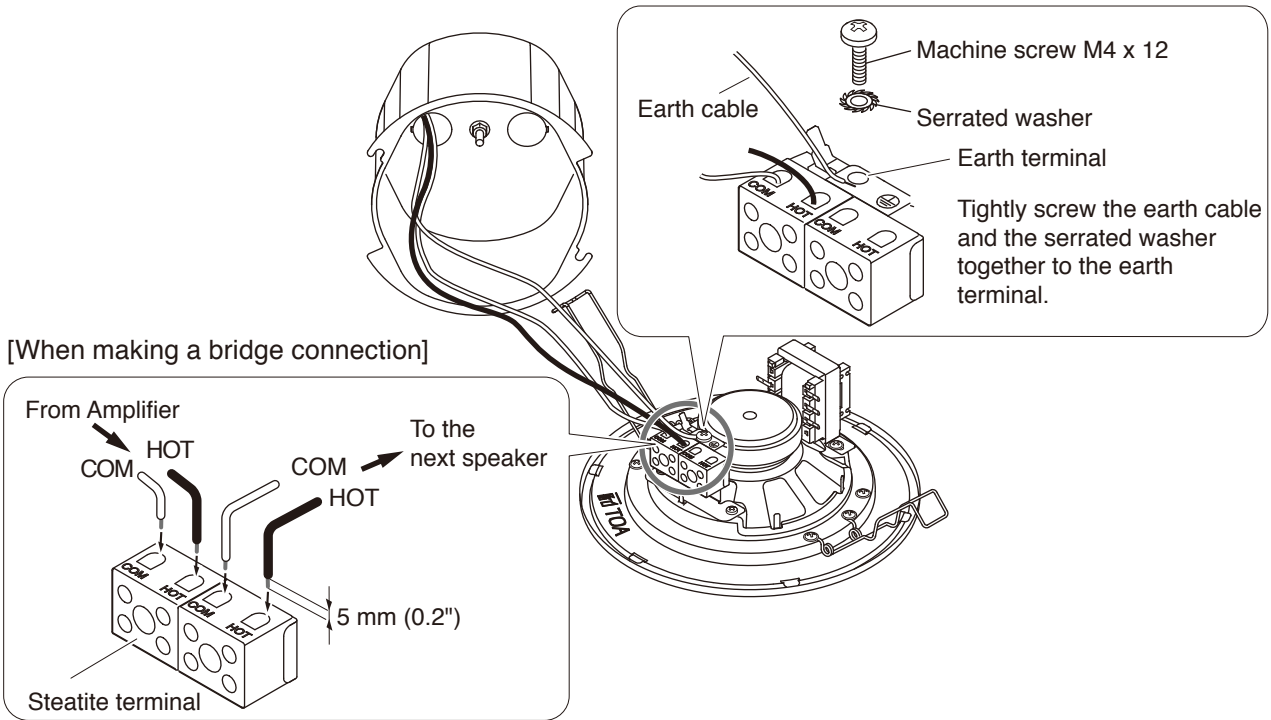


Step 4. Install the safety wire to the M4 screw on the top of the fire dome as needed.

Step 5. Feed the speaker cable through the rubber grommet into the dome interior.

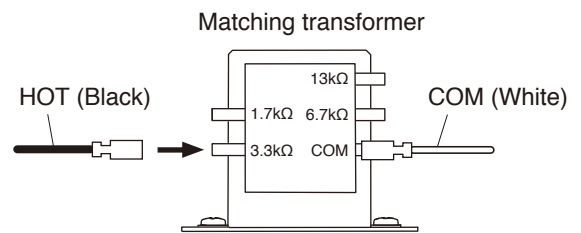
Step 6. Make wiring.

6-1. Insert the lead-in cables (cables from the amplifier) and lead-out cables (cables to other speakers) into the input connector according to the terminal indication.



6-2. Change the input impedance as needed.
The speaker's input is factory-preset to 1.7 kΩ. When changing the input impedance, detach the blank wire connected to the matching transformer, and reinsert it into the desired input tap referring to the table below.

Impedance	1.7 kΩ	3.3 kΩ	6.7 kΩ	13 kΩ
100 V line	6 W	3 W	1.5 W	0.8 W
70 V line	3 W	1.5 W	0.8 W	0.4 W

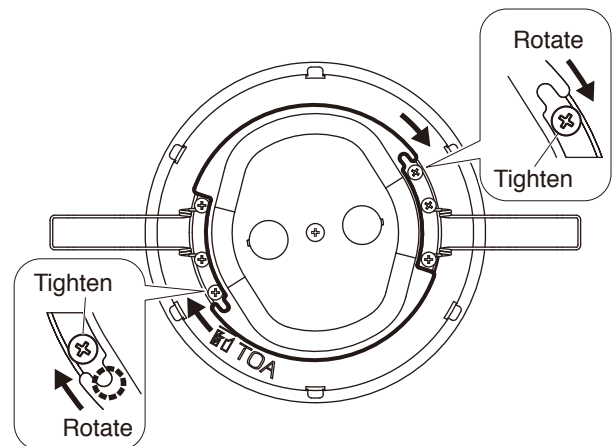


Step 7. Connect the earth cable as needed.

Step 8. Replace the fire dome.

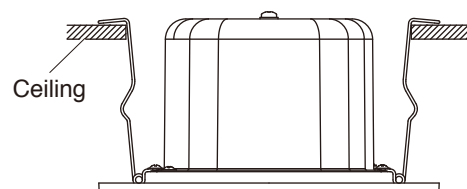
8-1. Place the fire dome on the speaker, and rotate it clockwise.

8-2. Tighten the 2 screws.

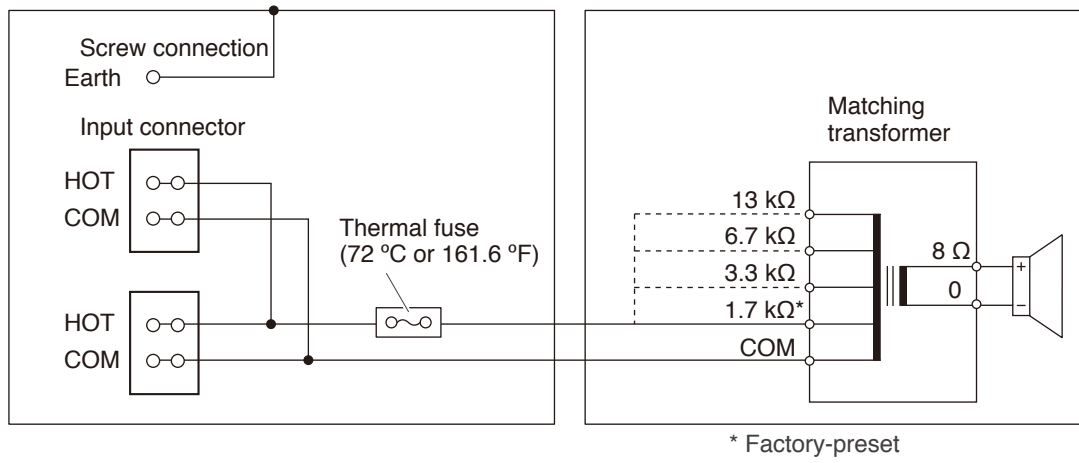


Step 9. Hook the speaker mounting spring into the mounting hole in the ceiling.


Step 10. Push the panel surface into the mounting hole.



4. WIRING DIAGRAM



5. SPECIFICATIONS

Standards	Certified to the European Standard EN 54-24: 2008 Loudspeaker for voice alarm systems for fire detection and fire alarm systems	
	In compliance with the British Standard BS-5839-8: 2008	
Rated Input	6 W (100 V line), 3 W (70 V line)	
Rated Impedance	100 V line: 1.7 kΩ (6 W), 3.3 kΩ (3 W), 6.7 kΩ (1.5 W), 13 kΩ (0.8 W) 70 V line: 1.7 kΩ (3 W), 3.3 kΩ (1.5 W), 6.7 kΩ (0.8 W), 13 kΩ (0.4 W)	
Sensitivity	95 dB (1 W, 1 m) (500 Hz – 5 kHz, pink noise) 93 dB (1 W, 1 m) (100 Hz – 10 kHz, pink noise) 81 dB (1 W, 4 m) (100 Hz – 10 kHz, pink noise)	
Maximum Sound Pressure Level	100 dB (6 W, 1 m) (100 Hz – 10 kHz, pink noise) 88 dB (6 W, 4 m) (100 Hz – 10 kHz, pink noise)	
Frequency Response	200 Hz – 20 kHz (peak –20 dB)	
Coverage Angle (–6 dB)	Horizontal and Vertical: 165° (500 Hz), 175° (1 kHz), 165° (2 kHz), 70° (4 kHz) according to EN 54-24	
Environmental type	A (indoor applications)	
Speaker Component	12 cm (5") cone-type	
Operating Temperature	–10 to +50 °C (14 to 122 °F)	
Dimensions for Fixing Hole	Mounting hole: $\varnothing 150 \pm 3$ mm ($\varnothing 5.91" \pm 0.12"$) Ceiling thickness: 5 – 25 mm (0.2" – 0.98")	
Speaker Mounting Method	Spring clamp	
Applicable Cable	Solid wire: 0.8 – 6 mm ² (AWG 18 – 10)	
Connection	2-Steatite connector (2 pole); 1 Screw connection for Earth	
Finish	Frame: Steel plate, white (RAL 9016 equivalent), paint Grille: Steel net, white (RAL 9016 equivalent), paint Fire dome: Steel plate, black, paint	
Dimensions	$\varnothing 180 \times 95.6$ (d) mm ($\varnothing 7.09" \times 3.76"$)	
Weight	860 g (1.9 lb)	

Notes

- The design and specifications are subject to change without notice for improvement.
- The Specifications data was measured in an anechoic chamber.
- 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.
- Other technical data: See the specification sheet PC-1865BS.

• Accessories

Rubber grommet	2
Paper pattern	1