

SPLASH-PROOF CEILING SPEAKER

PC-2268WP

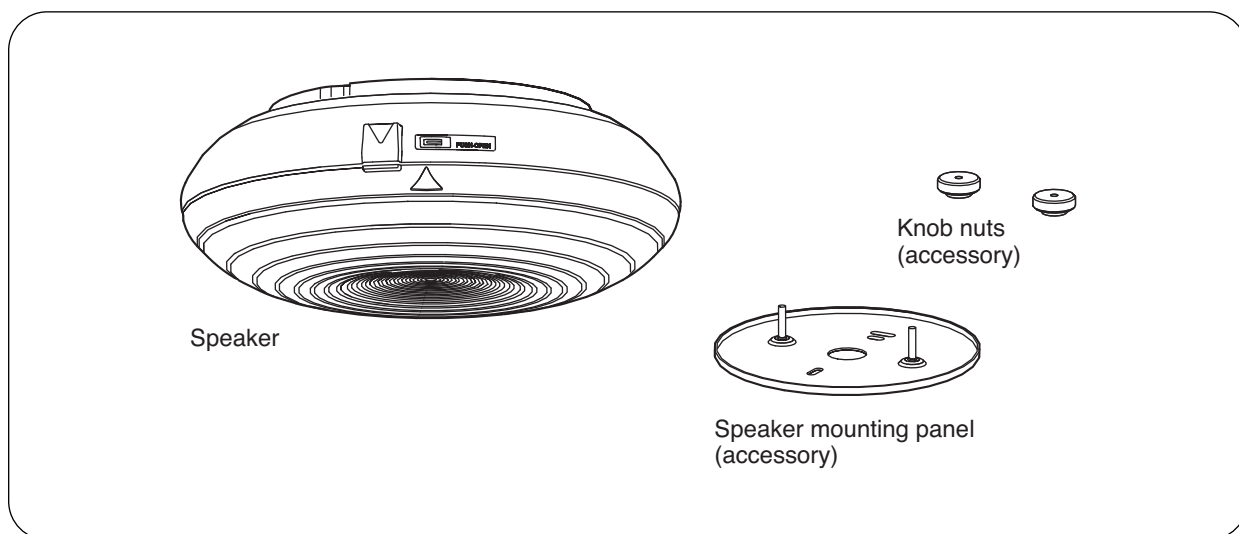


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Thank you for purchasing TOA Splash-proof Ceiling Speaker.
Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

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 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.
- 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.
- Attach the safety wire to the speaker. If not attached, the speaker could fall off, resulting in personal injury.
- Use screws that are appropriate for the ceiling'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.
- Avoid installing the speaker near seaside or in locations exposed to corrosive gas. The speaker or its parts may be subject to corrosion, that 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.
- Do not install the speaker in kitchens or such locations where grease or oily smoke is generated. Failure to follow this instruction could deteriorate the speaker mounting parts, 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

- To avoid electric shocks, be sure to switch off the amplifier's power when connecting speakers.
- The speaker front and rear cases are secured with adhesive tape (2 points) at both sides when shipped from the factory. Remove the tapes while placing the speaker on a stable surface or while supporting it with hand. Failure to do so may cause the case to fall, resulting in material damage and possible personal injury.

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

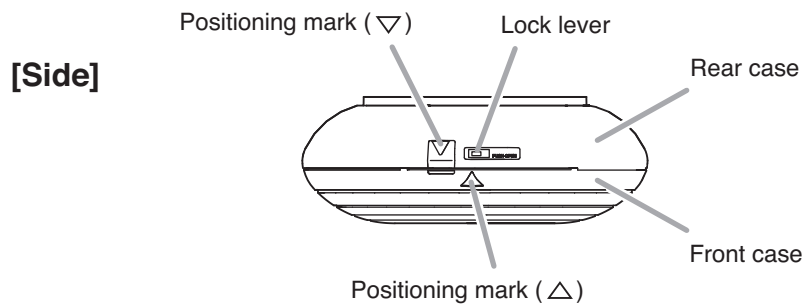
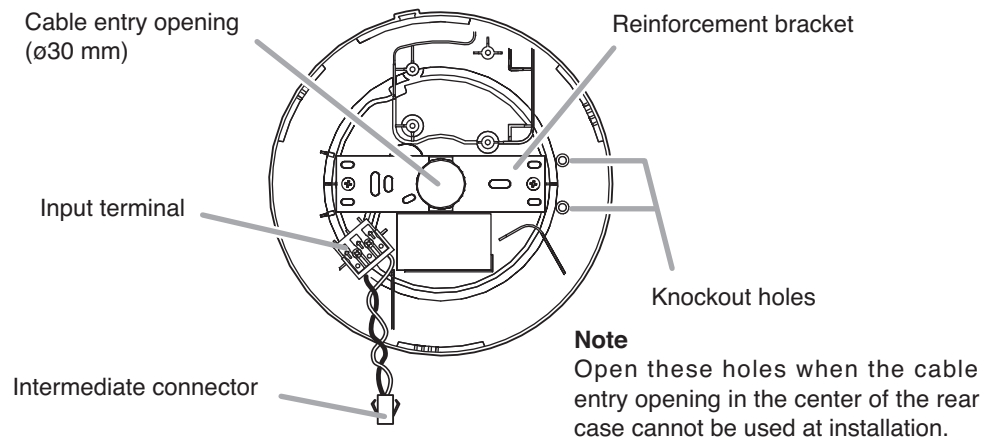
The PC-2268WP is a splash-proof surface mount ceiling speaker with rated input of 6 W (100 V line application).

It meets IPX4 water protection requirements and can be installed in locations where it may not be directly exposed to wind and rain.

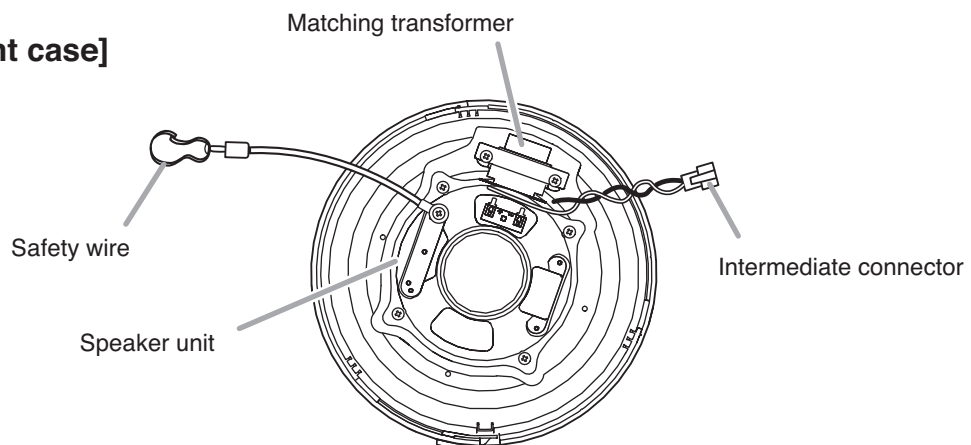
- Compact and attractive design to blend in with interior spaces.
- Rear-closed structure with a rear cover keeps performance and sound quality constant regardless of installation location.
- The push-in type input terminal provides an easy cable connection and allows bridge wiring.
- The input power change can be made easily by changing the tap position of the transformer.

3. NOMENCLATURE

[Inside the rear case]



[Inside the front case]



4. INSTALLATION

4.1. Installation Precautions

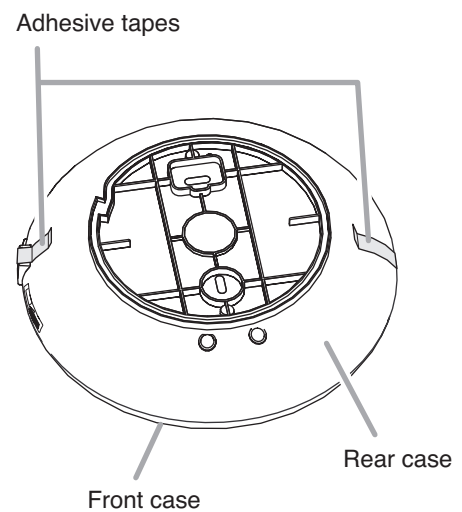
- Although the unit meets IPX4 water protection requirements, it is not completely water resistant. Avoid installing it in locations where it may be directly exposed to wind and rain. If rainwater could enter inside the unit, the aging of parts may cause the unit failure.
- Install the supplied speaker mounting panel on a flat mounting surface. If there is any gap between the mounting panel and mounting surface, rainwater could enter inside the unit through it. The aging of parts may cause the unit failure. Also, be sure to apply caulking compound over the speaker mounting panel or its mounting surface.
- Be sure to waterproof not only the unit but also the cable conduit and electrical box. Poor waterproof treatment allows rainwater to enter the unit, and the aging of parts may cause the unit failure.

4.2. Before Installation

The speaker front and rear cases are secured with adhesive tape (2 points) at both sides when shipped from the factory. Before performing installation work, remove these tapes to separate front and rear cases.

CAUTION

Remove the tapes while placing the speaker on a stable surface or while supporting it with hand. Failure to do so may cause the case to fall, resulting in material damage and possible personal injury.



4.3. Installation procedure

Step 1. Apply caulking compound correctly over the mounting surface of the speaker mounting panel (accessory) or an electrical box to ensure waterproof integrity.

1-1. When installing the speaker mounting panel directly to a ceiling (Refer to the figure below.); Be sure to follow the same waterproof treatment described below when attaching the panel to an electrical box installed behind the ceiling.

Note

When installing the speaker mounting panel to a rough surface, also apply caulking compound around the panel edge.

1-2. When installing the speaker mounting panel to an exposed electrical box (Refer to the next page.); Apply caulking compound over the mounting surface of the electrical box.

Note

Be sure to waterproof not only the unit but also the cable conduit and electrical box. Poor waterproof treatment allows rainwater to enter the unit, and the aging of parts may cause the unit failure.

Step 2. Route the speaker cables through a cable entry opening (ø22 mm) in the center of the speaker mounting panel, then secure the panel.

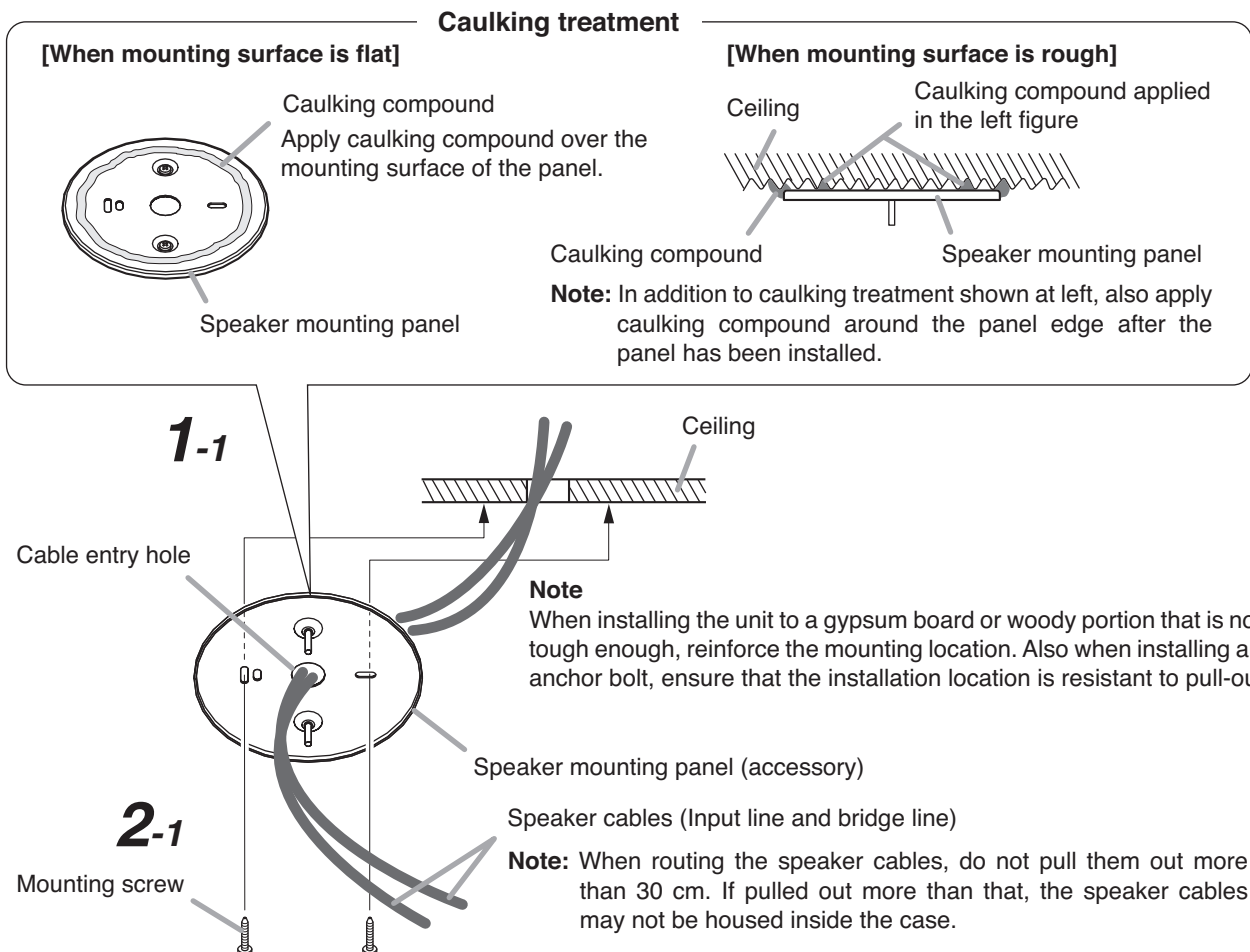
Following 2 kinds of screws are supplied with the unit. Use these screws properly depending on the intended application.

Tapping screw 4 x 35 (2 pieces): For plywood (9 mm or more thick)

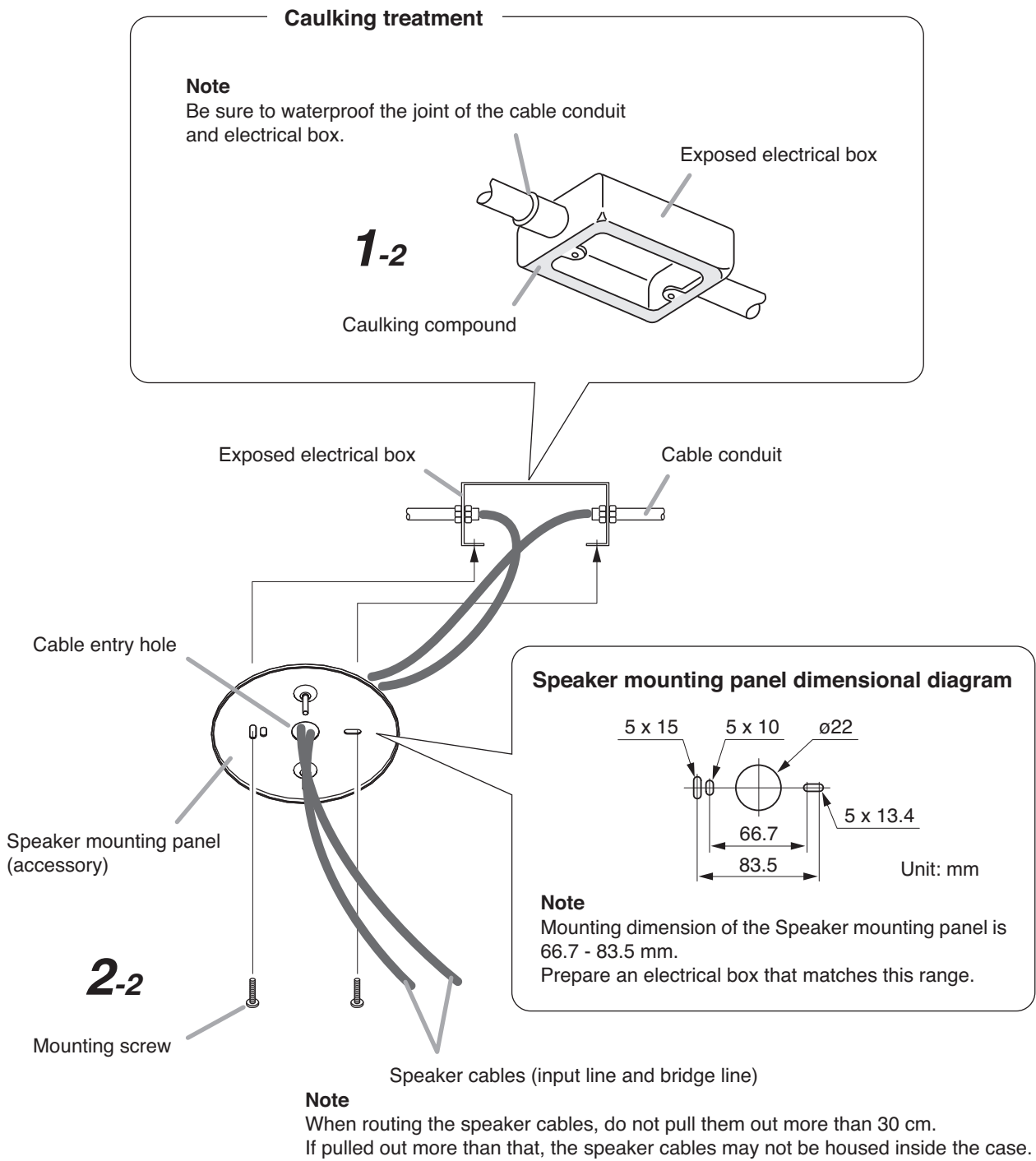
Machine screw M4 x 35 (2 pieces): For an electrical box

⚠ WARNING Use screws that are appropriate for the ceiling's material and structure. Failure to do so may cause the unit to fall, resulting in material damage and possible personal injury.

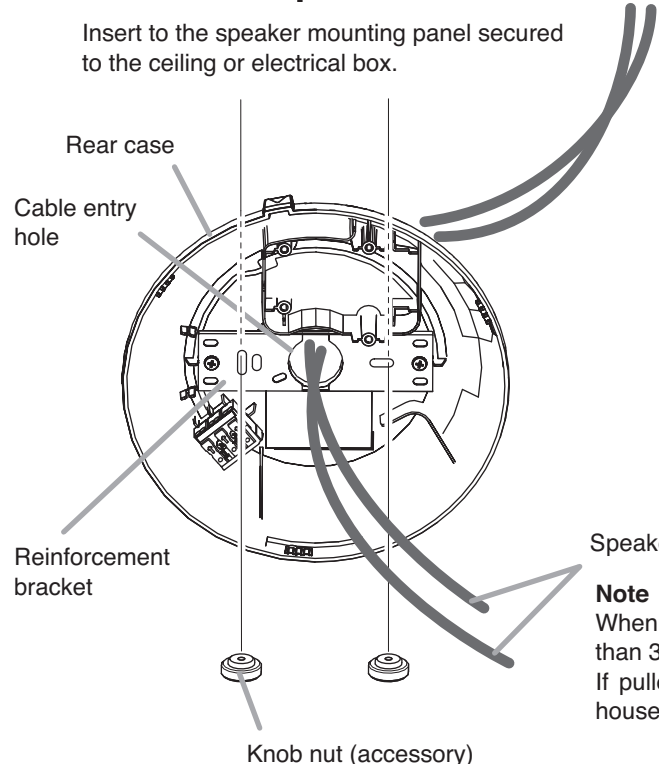
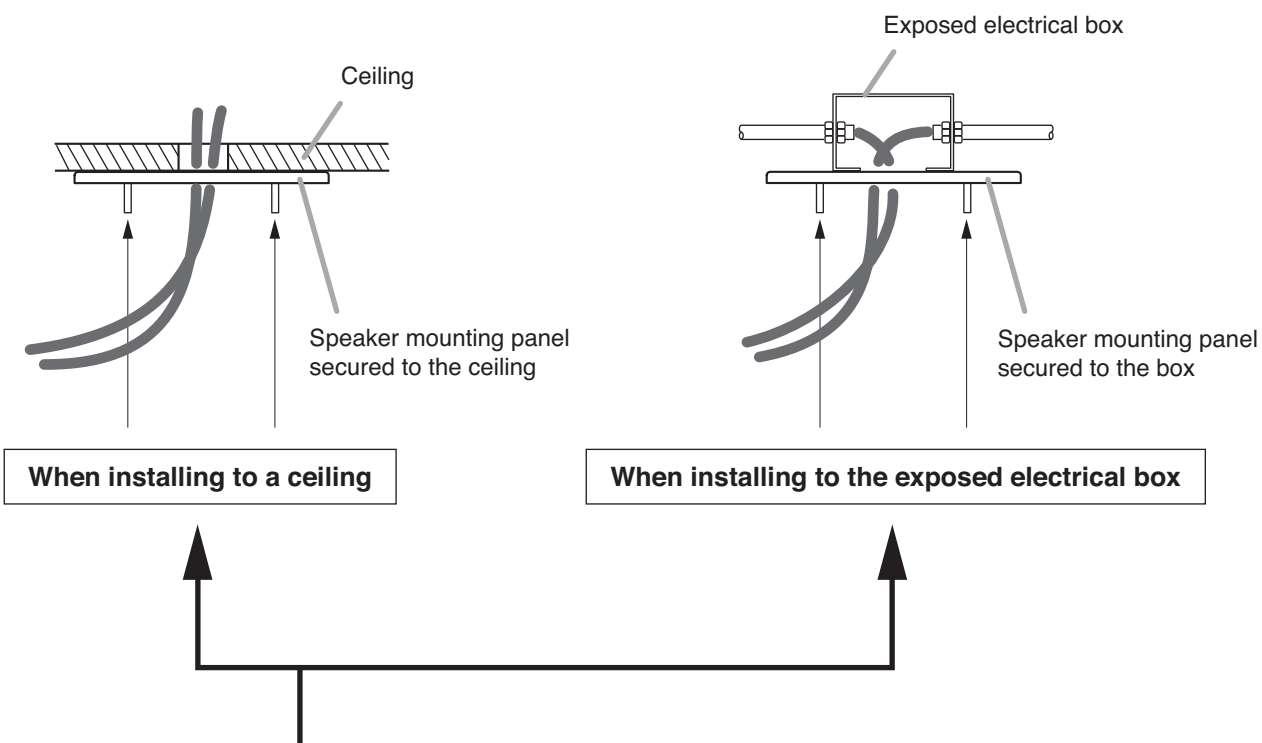
2-1. When installing the speaker mounting panel directly to a ceiling (Refer to the figure below.);



2-2. When installing the speaker mounting panel to an exposed electrical box (Refer to the figure below.);



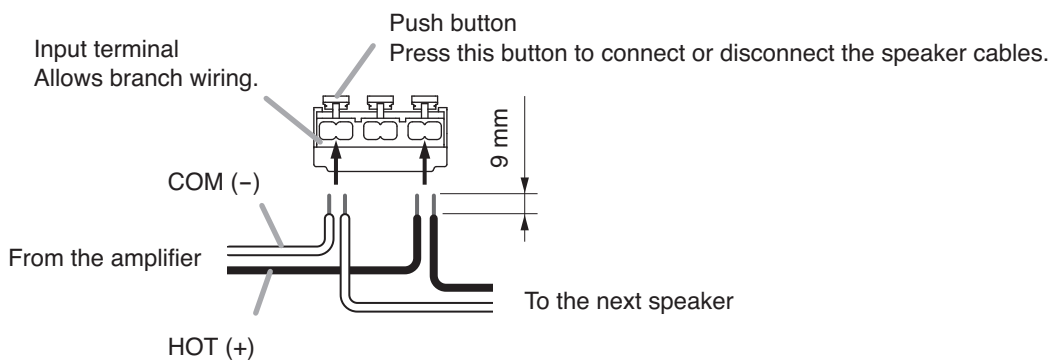
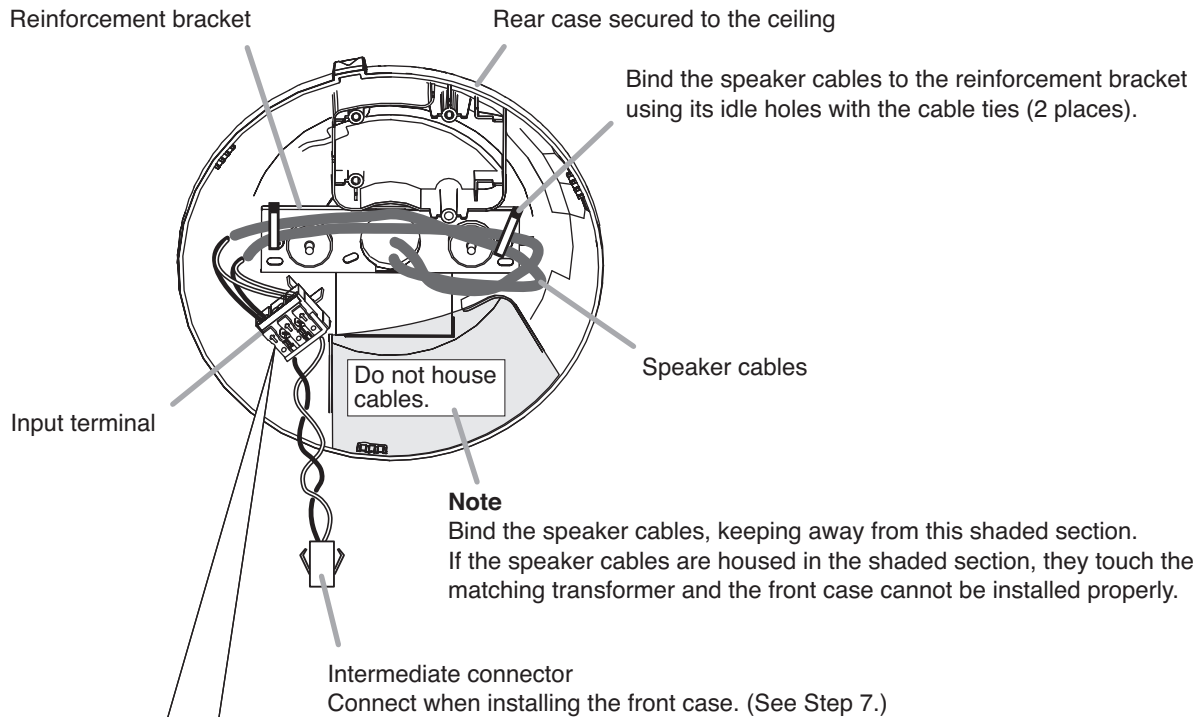
Step 3. Route the speaker cables through a cable entry opening (ø30 mm) in the rear case, then secure the rear case to the speaker mounting panel with the supplied knob nuts. The knob nut can be finger-tightened.



Note
 When routing the speaker cables, do not pull them out more than 30 cm.
 If pulled out more than that, the speaker cables may not be housed inside the case.

Note
 Finger-tighten the knob nuts securely.
 If not securely tightened, rainwater could enter the unit, and the aging of parts may cause the unit failure.

Step 4. Connect the speaker cables to the input terminal.
 Connect both the input line (cable from the amplifier) and bridge line (cable to the next speaker) to the input terminal.



Connections

1. Strip the cable sheath about 9 mm from the cable end.
 Use a strip gauge printed on the nameplate.
2. Insert the core wire while holding down the push button, then release the button.
 Pull on the cable lead to ensure it is securely inserted.

Disconnection

Pull out the cable lead while holding down the push button.

Applicable cable

Solid copper wire: \varnothing 0.8 - 1.6 mm (AWG 20 - 14 or equivalent)

7-core twisted copper wire: 0.75 - 1.25 mm² (AWG 18 - 16 or equivalent)

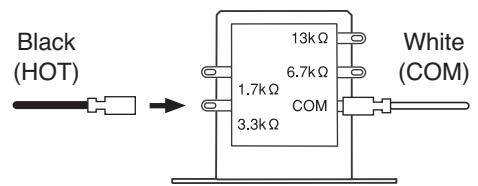
Step 5. Set the input tap.

Disconnect the black lead (HOT) connected to the matching transformer, then connect it to the desired input tap.

Matching transformer is installed inside the front case.

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

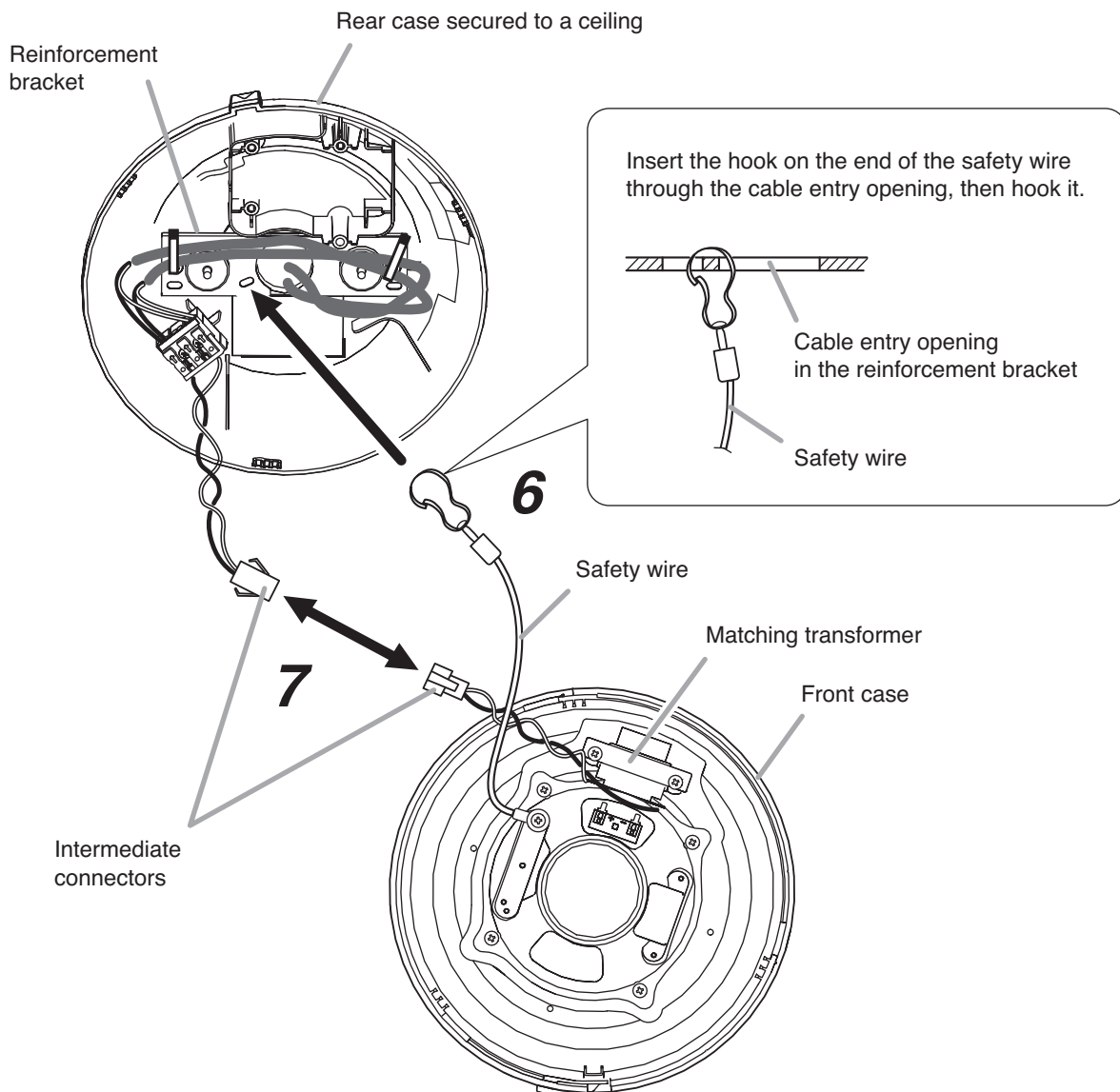
Factory-preset impedance: 1.7 kΩ



Step 6. Connect the safety wire to the rear case.

Connect the safety wire attached to the front case to the reinforcement bracket secured to the rear case.

Step 7. Connect the speaker cables via the intermediate connector.



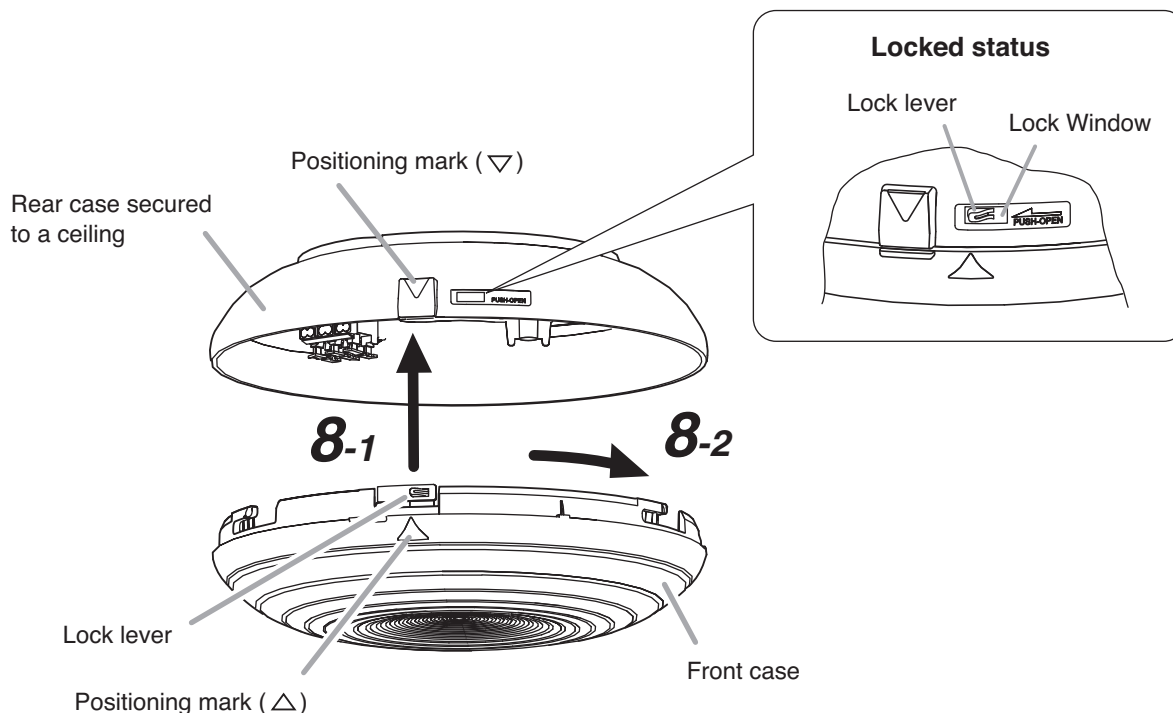
Step 8. Secure the front case to the rear case.

8-1. Align the positioning mark on the front case (\triangle) with that on the rear case, then insert the front case to the rear case.

Confirm that the cables are not pinched between the cases and that speaker cables do not touch the components inside the speaker.

8-2. Turn the front case in the arrow direction to secure it.

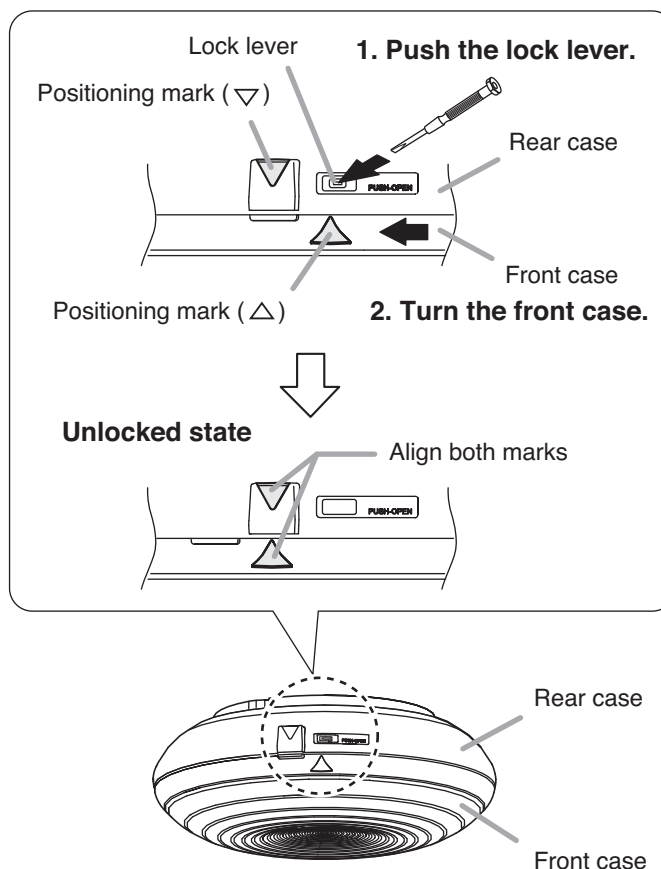
Ensure that the lock lever is locked at the edge of the Lock window.



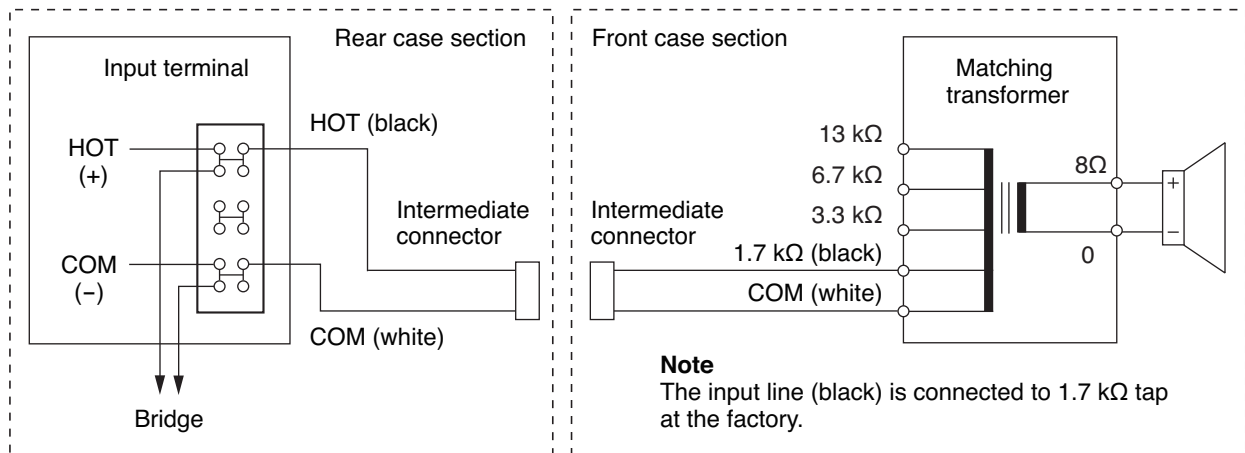
4.4. Removing the Front Case

Turn the front case in the arrow direction while pushing the lock lever with a small standard screwdriver tip.

Rotate the front case to align the positioning mark (\triangle) on the front case with that on the rear case.



5. WIRING DIAGRAM



6. SPECIFICATIONS

Rated Input	6 W (for 100 V line), 3 W (for 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	90 dB (1 W, 1 m, 330 – 3300 Hz, pink noise)
Frequency Response	160 – 16000 Hz (20 dB below peak)
Speaker Component	12 cm cone-type
Applicable Cable	600 V vinyl-insulated cable (IV wire or HIV wire) Solid copper wire: $\phi 0.8 - 1.6$ mm (equivalent to AWG 20 – 14) 7-core twisted copper wire: $0.75 - 1.25$ mm ² (equivalent to AWG 18 – 16)
Connection	Push-in connector (bridging terminal)
Operating Temperature	-10°C to +50°C
Water Protection	IPX4
Finish	Front case, Rear case: Fire-resistant HIPS resin (resin material grade: UL-94 V-0), light gray Speaker mounting panel: Surface-treated steel plate, Off-white, powder coating
Dimensions	$\phi 220 \times 80.5$ (d) mm (unit only, projections excluded) $\phi 150 \times 5$ (d) mm (Speaker mounting panel)
Weight	890 g (unit only), 180 g (Speaker mounting panel)

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

• Accessories

Speaker mounting panel	1
Knob nut	2
Tapping screw (4 x 35)	2
Machine screw (M4 x 35)	2