

# CEILING MOUNT SPEAKER

## PC-1860S

Thank you for purchasing TOA's Ceiling Mount 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.

### WARNING

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

- 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.

### 4. SPECIFICATIONS

Rated Input	6 W (100 V line), 3 W (70 V line)
Rated Impedance	100 V line: 1.7 k $\Omega$ (6 W), 3.3 k $\Omega$ (3 W), 6.7 k $\Omega$ (1.5 W), 13 k $\Omega$ (0.8 W) 70 V line: 1.7 k $\Omega$ (3 W), 3.3 k $\Omega$ (1.5 W), 6.7 k $\Omega$ (0.8 W), 13 k $\Omega$ (0.4 W)
Sensitivity	94 dB (1 W, 1 m) (500 Hz – 5 kHz, pink noise)
Frequency Response	80 Hz – 20 kHz (peak –20 dB)
Speaker Component	12 cm (5") cone-type
Dimensions for Fixing Hole	Mounting hole: $\phi 150 \pm 3$ mm ( $\phi 5.91'' \pm 0.12''$ ) Ceiling thickness: 5 – 25 mm (0.2" – 0.98")
Dispersion (1 to 4k Hz avg.)	165° Horizontal x 175° Vertical
Speaker Mounting Method	Spring catch
Operating Temperature	–10 to +50 °C (14 to 122 °F)
Applicable Cable	Solid wire: 0.5 – 3 mm <sup>2</sup> (AWG 20 – 12)
Connection	Push wire connection (Bridging terminal-2 branch type)
Finish	Frame: Steel plate, white (RAL 9016 equivalent), paint Grille: Steel net, white (RAL 9016 equivalent), paint Mounting bracket: Steel plate, plating
Dimensions	$\phi 180 \times 5$ (exposed section) + 101 (d) mm ( $\phi 7.09'' \times 0.2'' + 3.98''$ )
Weight	750 g (1.65 lb)
Accessory	Paper pattern ..... 1

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

### CAUTION

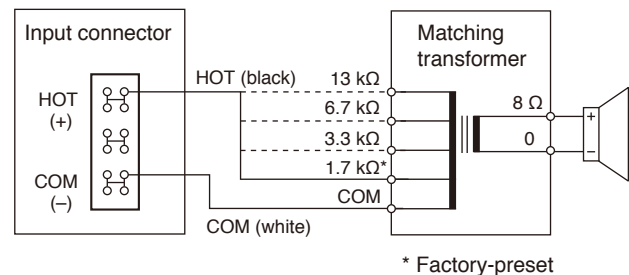
Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

- 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.
- 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.

### 2. GENERAL DESCRIPTION

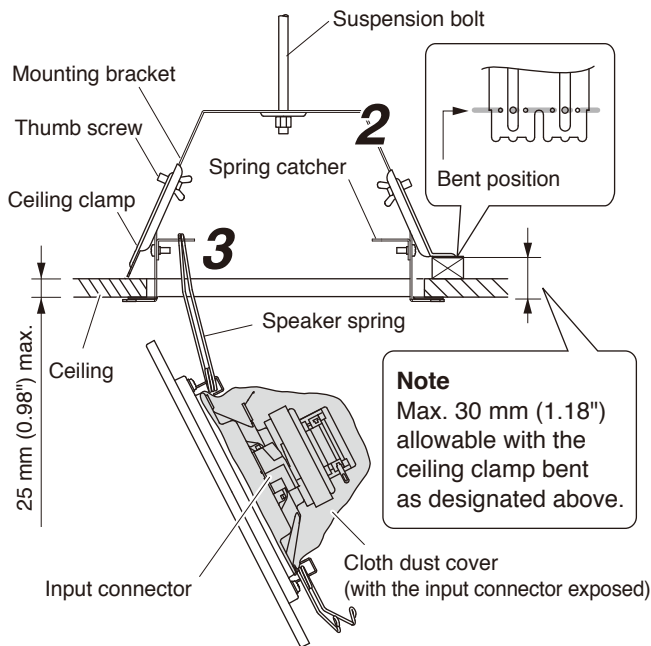
Integrated with a speaker unit and panel, the PC-1860S Ceiling Mount Speaker is of metallic construction and ideal for use in a voice alarm system. It features spring catch mechanism for easy speaker mounting to the ceiling. The input impedance can be easily changed by changing the tap position of the transformer. The push-in type input terminal block makes cable connections easy and allows bridge wiring.

### 3. WIRING DIAGRAM



## 5. INSTALLATION

**Step 1.** Make a 150 ±3 mm (5.91" ±0.12") diameter hole in the ceiling.



**Step 2.** Place the mounting bracket in the hole and secure it with the thumb screws in the two ceiling clamps.

**Note**

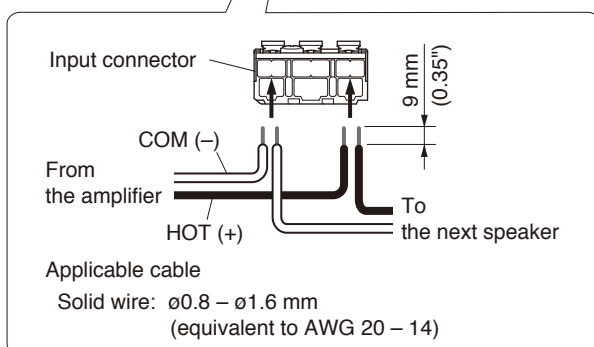
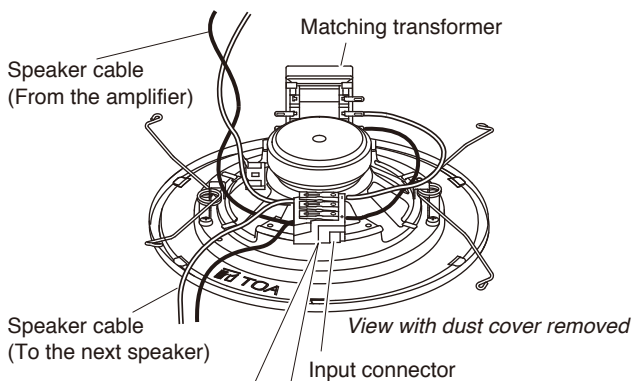
A suspension bolt may be used instead for fixing the mounting bracket.

**Step 3.** Hook one speaker spring (V-shaped spring) in the spring catcher of the bracket.

**Step 4.** Make wiring.

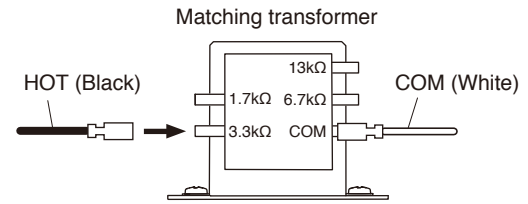
**4-1.** Insert the lead-in cables (cables from the amplifier) and lead-out cables (cables to other speakers) into the input connector.

[When making a bridge connection]



**4-2.** Change the input impedance as needed.

The speaker's input is factory-preset to 1.7 kΩ. When changing the input impedance, detach the black 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 5.** Hook another speaker spring in another catcher. Then, press the speaker assembly into the mounting bracket. Force of the springs will keep the speaker in place.



### Traceability Information for Europe

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