

# CEILING MOUNT SPEAKER

## PC-648R PC-658R

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 speaker only in a location that can structurally support the weight of the speaker and the mounting bracket. Doing otherwise may result in the speaker falling down and causing personal injury and/or property damage.
- Since the speaker is designed for indoor use, do not install it outdoors. If installed outdoors, the aging of parts causes the speaker 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 mount the bracket. Extreme force is applied to the speaker and the speaker 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.

- 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.
- Do not operate the speaker 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. SPECIFICATIONS

Model No.	PC-648R	PC-658R
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), 10 kΩ (1 W) 70 V line: 1.7 kΩ (3 W), 3.3 kΩ (1.5 W), 10 kΩ (0.5 W)	
Sensitivity (500 Hz– 5 kHz, pink noise)	90 dB (1 W, 1 m)	
Frequency Response	100 Hz – 18 kHz (at 20 dB below peak)	65 Hz – 18 kHz (at 20 dB below peak)
Speaker Component	12 cm (5") cone type	16 cm (6") cone type
Dimensions for Fixing Hole	∅145 ±5 mm (5.71" ±0.2")	∅170 ±5 mm (6.69" ±0.2")
Ceiling Thickness for Mounting	5 – 25 mm (0.2" – 0.98")	
Speaker Mounting Method	Spring clamp	
Finish	Baffle: polypropylene resin, white (RAL 9016 equivalent) Grille: Surface-treated steel plate net, white (RAL 9016 equivalent), paint	
Dimensions	∅168 x 77 (d) mm (∅6.61" x 3.03")	∅192 x 73 (d) mm (∅7.56" x 2.87")
Weight	470 g (1.04 lb)	500 g (1.1 lb)
Accessory	Paper pattern ..... 1	

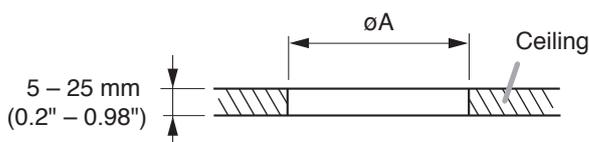
**Note:** The design and specifications are subject to change without notice for improvement.

### 3. GENERAL DESCRIPTION

Integrated with a resin panel and speaker frame, the PC-648R and PC-658R are the ceiling mount speakers with a metal grille attached. They feature spring clamp mechanism for easy speaker mounting to the ceiling. The input impedance can be easily changed by changing the tap position of the transformer.

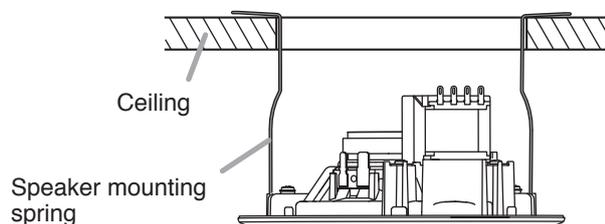
### 4. INSTALLATION

**Step 1.** Using the supplied paper pattern as a guide, open a mounting hole of the dimension specified below in the ceiling.



Model No.	$\phi A$
PC-648R	$\phi 145 \pm 5$ mm ( $\phi 5.71" \pm 0.2"$ )
PC-658R	$\phi 170 \pm 5$ mm ( $\phi 6.69" \pm 0.2"$ )

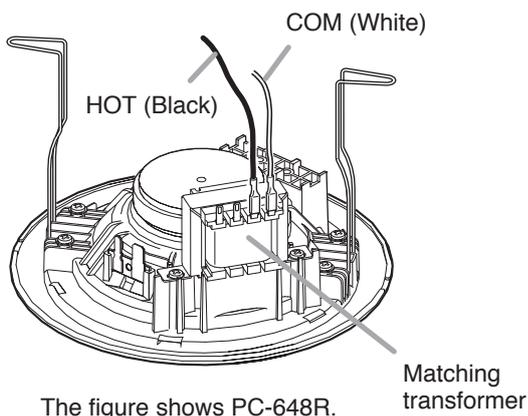
**Step 2.** Hook the speaker mounting spring into the mounting hole in the ceiling.



The figure shows PC-648R.

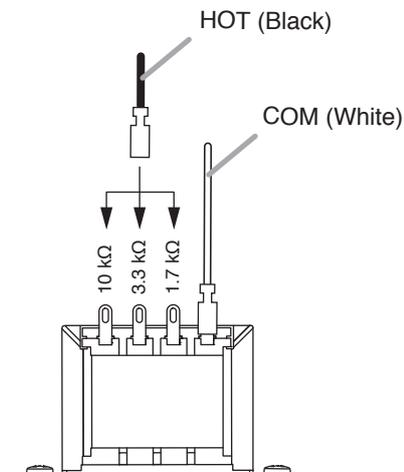
**Step 3.** Make wiring.

**3-1.** Connect the speaker cable (from the speaker) referring to the figure below. Connect its HOT line to the black lead wire, and COM line to the white one.



The figure shows PC-648R.

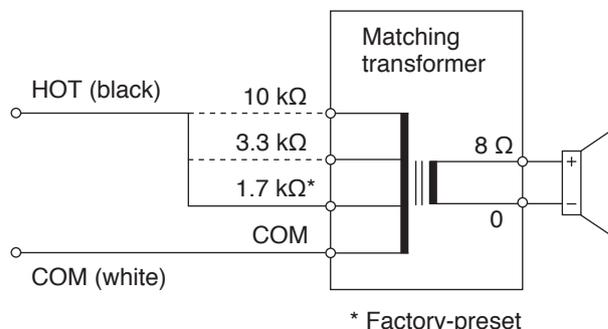
**3-2.** Change the input impedance as needed. The speaker's input is factory-preset to 1.7 k $\Omega$ . When changing the input impedance, detach the black wire connected to the matching transformer, and reinsert it into the desired input tap referring to the table below.



Impedance	1.7 k $\Omega$	3.3 k $\Omega$	10 k $\Omega$
100 V line	6 W	3 W	1 W
70 V line	3 W	1.5 W	0.5 W

**Step 4.** Push the panel surface into the mounting hole.

### 5. WIRING DIAGRAMS



\* Factory-preset

#### Traceability Information for UK

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

Authorized representative:  
TOA CORPORATION (UK) LIMITED  
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Surrey, KT22 7RD, United Kingdom

#### Traceability Information for Europe

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

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Suederstrasse 282, 20537 Hamburg, Germany

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