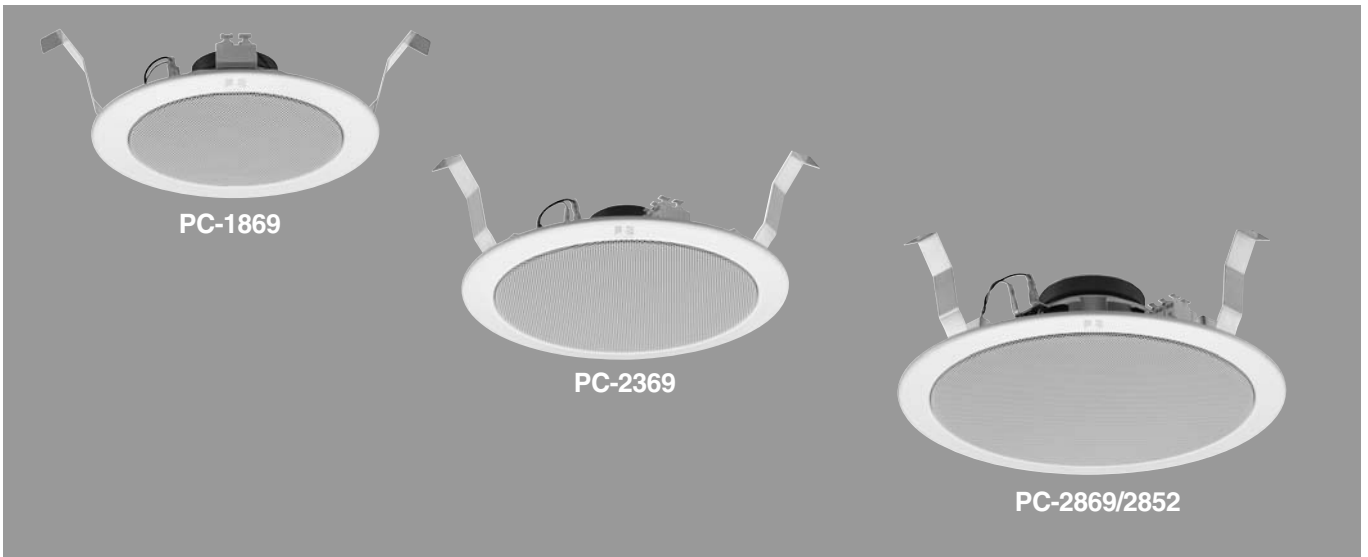


# PC-1869/2369/2869/2852 Ceiling Mount Speakers



## DESCRIPTION

The PC-1869/2369/2869/2852 are new thin-panel speaker designs that blend in unobtrusively with an application's architecture and interior décor. They are ceiling-mount cone-type all-metallic speakers that are ideal for use in a voice alarm system, when the speaker system is integrated with a panel. Mounting the speaker into the ceiling is quick and easy, thanks to a new SUS spring clamp installation method. A wide variety (5", 6" and 8" (12, 16 and 20cm)) of speaker diameters is available. A push-type input terminal allows easy cable connections and bridge wiring. Input impedance can easily be adjusted by changing the tap position of the transformer. The speakers are well-suited for BGM and announcement applications.

## FEATURES

- New speaker designs that harmonize with the venue's architecture and decor
- Quick and easy installation thanks to new SUS spring clamp installation method
- Wide frequency response
- Greater variety of ceiling speaker diameters (5", 6", 8" (12, 16, 20cm))
- Thin panel does not clash with interior design

### New SUS spring clamp installation method



Hook the speaker mounting spring(s) into the mounting hole.



Make wiring.



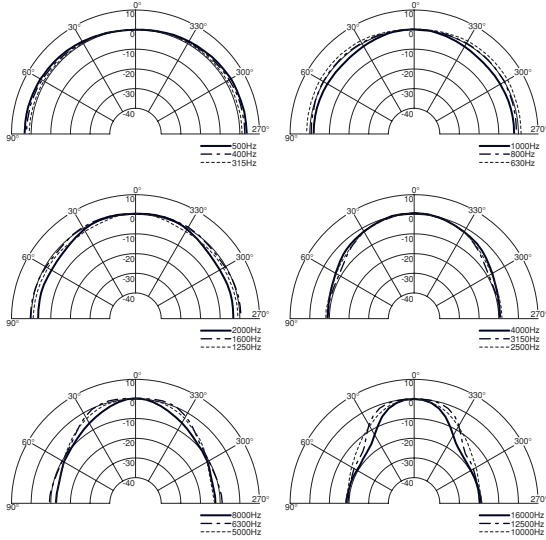
Hook the rest of spring(s).



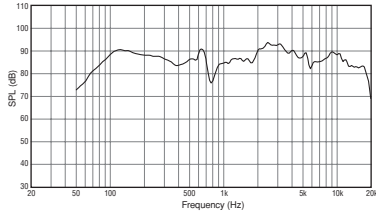
Push up the panel.

# PC-1869

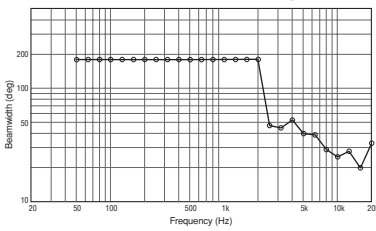
## Polar Response



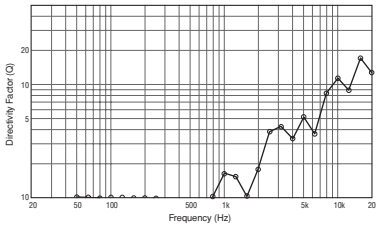
## SPL vs. Frequency



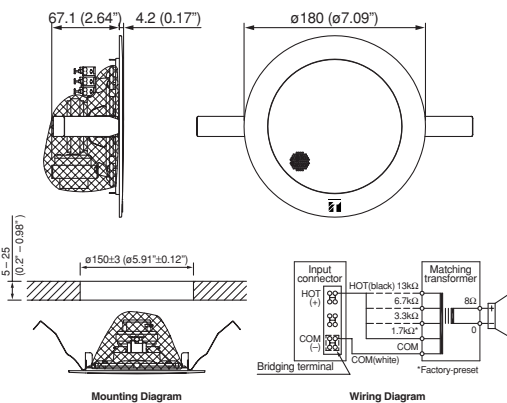
## Beamwidth vs. Frequency



## Directivity Factor vs. Frequency

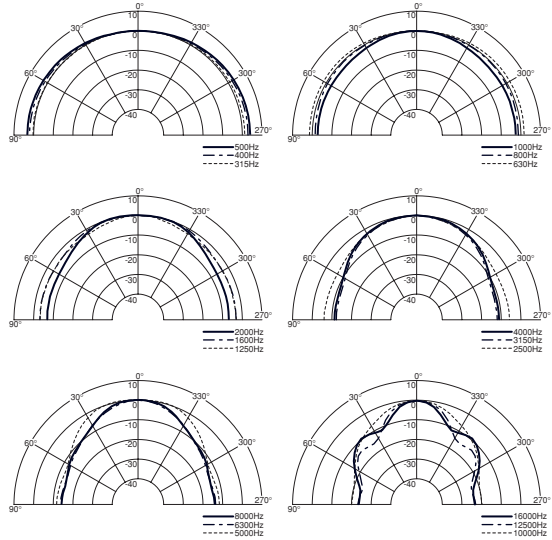


## Appearance and Dimensional Diagram

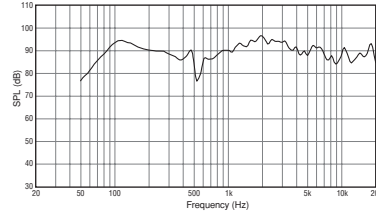


# PC-2369

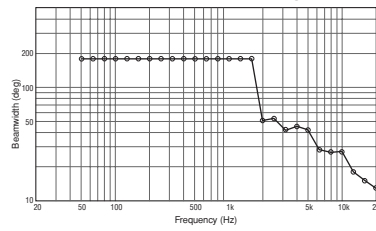
## Polar Response



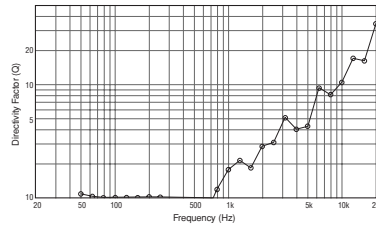
## SPL vs. Frequency



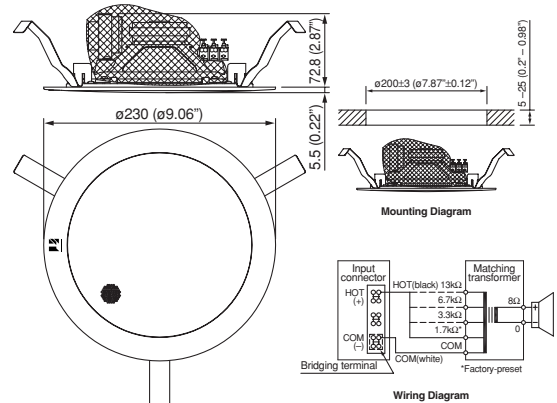
## Beamwidth vs. Frequency



## Directivity Factor vs. Frequency

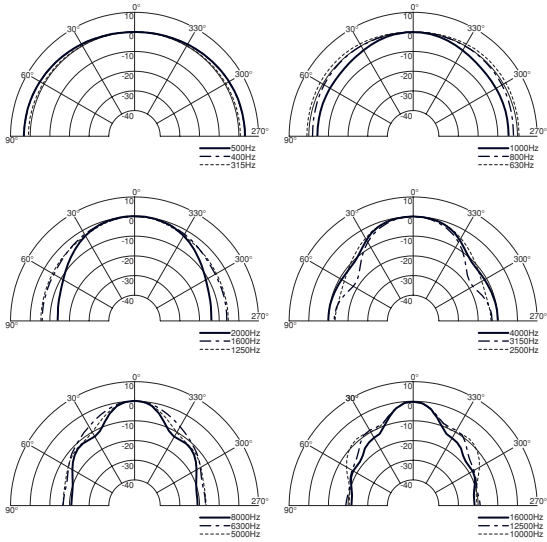


## Appearance and Dimensional Diagram

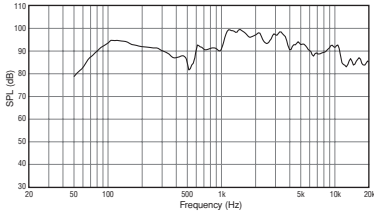


# PC-2869

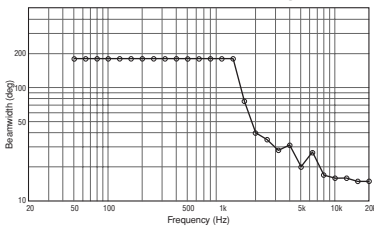
## Polar Response



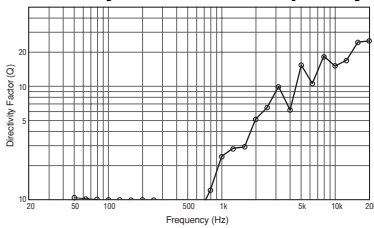
## SPL vs. Frequency



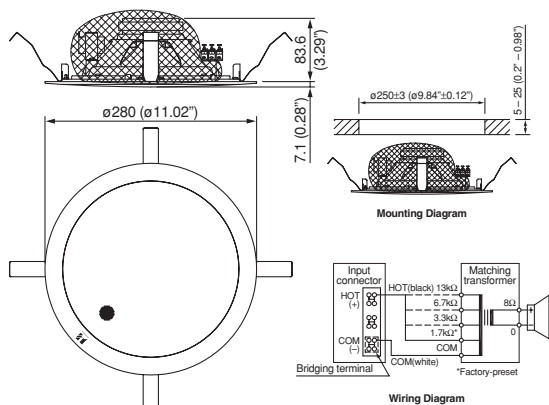
## Beamwidth vs. Frequency



## Directivity Factor vs. Frequency

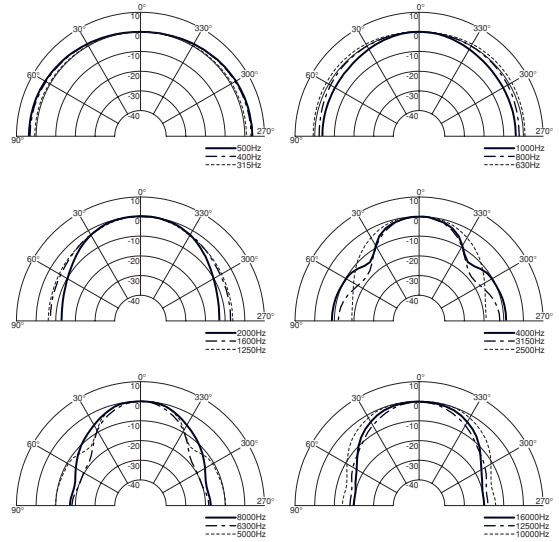


## Appearance and Dimensional Diagram

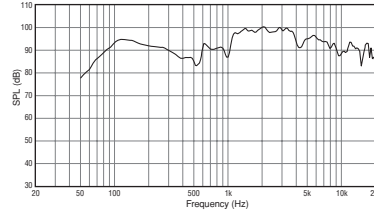


# PC-2852

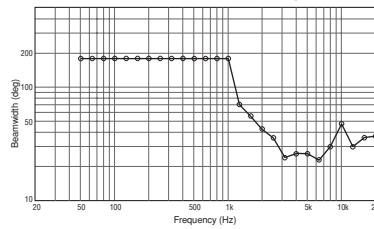
## Polar Response



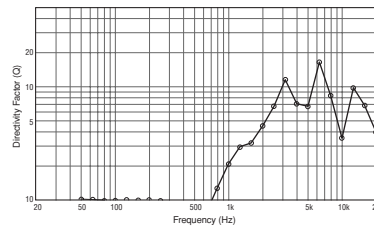
## SPL vs. Frequency



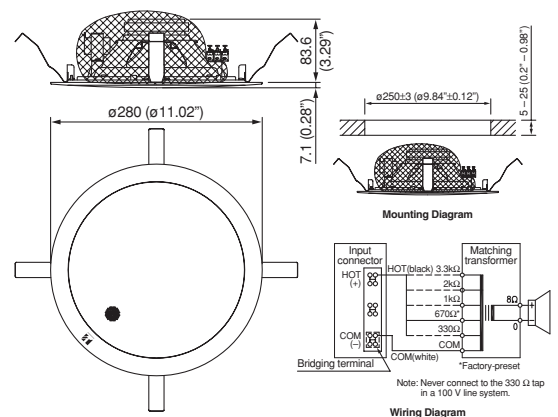
## Beamwidth vs. Frequency



## Directivity Factor vs. Frequency



## Appearance and Dimensional Diagram



## Specifications

Model No.	PC-1869	PC-2369	PC-2869	PC-2852
Rated Input	6W (100V line), 3W (70V line)			15W (100V line, 70V line)
Rated Impedance	100V line: 1.7 k $\Omega$ (6W), 3.3 k $\Omega$ (3W), 6.7 k $\Omega$ (1.5W), 13 k $\Omega$ (0.8W) 70V line: 1.7 k $\Omega$ (3W), 3.3k $\Omega$ (1.5W), 6.7 k $\Omega$ (0.8W), 13 k $\Omega$ (0.4W)			100V LINE: 670 $\Omega$ (15W), 1k $\Omega$ (10W), 2k $\Omega$ (5W), 3.3k $\Omega$ (3W) 70V LINE: 330 $\Omega$ (15W), 670 $\Omega$ (7.5W), 1k $\Omega$ (5W), 2k $\Omega$ (2.5W), 3.3k $\Omega$ (1.5W)
Sensitivity (1W, 1m)	90 dB (500 – 5,000Hz, pink noise)	93dB (500 – 5,000Hz, pink noise)	94dB (500 – 5,000Hz, pink noise)	96dB (500 – 5,000Hz, pink noise)
Frequency Response	55 – 18,000 Hz (peak -20dB)	45 – 20,000 Hz (peak -20dB)	40 – 20,000 Hz (peak -20dB)	45 – 20,000 Hz (peak -20dB)
Speaker Component	5"(12cm) cone-type	6"(16cm) double cone-type	8"(20cm) double cone-type	8"(20cm) coaxial cone-type
Dimensions for Fixing Hole	Mounting hole: $\phi$ 150 $\pm$ 3mm ( $\phi$ 5.91" $\pm$ 0.12") Ceiling thickness: 5 – 25mm (0.2" – 0.98")	Mounting hole: $\phi$ 200 $\pm$ 3mm ( $\phi$ 7.87" $\pm$ 0.12") Ceiling thickness: 5 – 25mm (0.2" – 0.98")	Mounting hole: $\phi$ 250 $\pm$ 3mm ( $\phi$ 9.84" $\pm$ 0.12") Ceiling thickness: 5 – 25mm (0.2" – 0.98")	
Speaker Mounting Method	Spring clamp			
Applicable Cable	600V vinyl-insulated cable (IV wire or HIV wire) Solid copper wire: $\phi$ 0.8 – $\phi$ 1.6mm (equivalent to AWG 20 – 14) 7-core twisted copper wire: 0.75 – 1.25mm <sup>2</sup> (equivalent to AWG 18 – 16)			
Connection	Push-in connector (bridging terminal-2 branch type)			
Finish	Baffle: Steel plate, off-white (RAL 9010 or equivalent colour), paint/Grille: Surface-treated steel plate net, off-white (RAL 9010 or equivalent colour), paint			
Dimensions	$\phi$ 180 $\times$ 72 (D)mm ( $\phi$ 7.09" $\times$ 2.83")	$\phi$ 230 $\times$ 79 (D)mm ( $\phi$ 9.06" $\times$ 3.11")	$\phi$ 280 $\times$ 92(D)mm ( $\phi$ 11.02" $\times$ 3.62")	
Weight	620g (1.37 lb)	760g (1.68 lb)	1.4kg (3.09 lb)	1.6kg (3.53 lb)
Accessory	paper pattern $\times$ 1			

## Architect's and Engineer's Specifications

### PC-1869

The speaker shall be a 5" (12cm) cone-type speaker suitable for ceiling mounting. Ease of installation shall be insured by a SUS spring-based installation clamp mechanism. Cable connection shall be by means of a push-in connector (bridging terminal).

The speaker shall include a transformer having multiple taps (0.8W, 1.5W, 3W, 6W at 100V and 0.4W, 0.8W, 1.5W, 3W at 70V) adjustable. The output sound pressure level at a distance of 1m with a 1W input level applied shall be 90 dB SPL. The speaker shall have a frequency response of 55 – 18,000Hz (-20dB).

The speaker baffle shall be constructed of steel plate. The grille shall be surface-treated steel plate. The speaker shall be available in off-white colour. The unit shall have dimensions of  $\phi$ 180  $\times$  72 (D)mm ( $\phi$ 7.09"  $\times$  2.83"), and a weight of 620g (1.37 lb).

The speaker shall be a TOA model PC-1869.

### PC-2869

The speaker shall be a 8" (20cm) double cone-type speaker suitable for ceiling mounting. Ease of installation shall be insured by a SUS spring-based installation clamp mechanism. Cable connection shall be by means of a push-in connector (bridging terminal).

The speaker shall include a transformer having multiple taps (0.8W, 1.5W, 3W, 6W at 100V and 0.4W, 0.8W, 1.5W, 3W at 70V) adjustable. The output sound pressure level at a distance of 1m with a 1W input level applied shall be 94 dB SPL. The speaker shall have a frequency response of 40 – 20,000Hz (-20dB).

The speaker baffle shall be constructed of steel plate. The grille shall be surface-treated steel plate. The speaker shall be available in off-white colour. The unit shall have dimensions of  $\phi$ 280  $\times$  92 (D)mm ( $\phi$ 11.02"  $\times$  3.62"), and a weight of 1.4 kg (3.09 lb).

The speaker shall be a TOA model PC-2869.

### PC-2369

The speaker shall be a 6" (16cm) double cone-type speaker suitable for ceiling mounting. Ease of installation shall be insured by a SUS spring-based installation clamp mechanism. Cable connection shall be by means of a push-in connector (bridging terminal).

The speaker shall include a transformer having multiple taps (0.8W, 1.5W, 3W, 6W at 100V and 0.4W, 0.8W, 1.5W, 3W at 70V) adjustable. The output sound pressure level at a distance of 1m with a 1W input level applied shall be 93 dB SPL. The speaker shall have a frequency response of 45 – 20,000Hz (-20dB).

The speaker baffle shall be constructed of steel plate. The grille shall be surface-treated steel plate. The speaker shall be available in off-white colour. The unit shall have dimensions of  $\phi$ 230  $\times$  79 (D)mm ( $\phi$ 9.06"  $\times$  3.11"), and a weight of 760g (1.68 lb).

The speaker shall be a TOA model PC-2369.

### PC-2852

The speaker shall be a 8" (20cm) coaxial cone-type speaker suitable for ceiling mounting. Ease of installation shall be insured by a SUS spring-based installation clamp mechanism. Cable connection shall be by means of a push-in connector (bridging terminal).

The speaker shall include a transformer having multiple taps (3W, 5W, 10W, 15W at 100V and 1.5W, 2.5W, 5W, 7.5W at 70V) adjustable. The output sound pressure level at a distance of 1m with a 1W input level applied shall be 96 dB SPL. The speaker shall have a frequency response of 45 – 20,000Hz (-20dB).

The speaker baffle shall be constructed of steel plate. The grille shall be surface-treated steel plate. The speaker shall be available in off-white colour. The unit shall have dimensions of  $\phi$ 280  $\times$  92 (D)mm ( $\phi$ 11.02"  $\times$  3.62"), and a weight of 1.6 kg (3.53 lb).

The speaker shall be a TOA model PC-2852.