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# INSTALLATION INSTRUCTIONS

for  
SC SERIES SOUND COLUMNS



Sound columns (also known as line arrays) are speaker systems specifically engineered to meet the special acoustical characteristics of installations that have highly reflective surfaces and/or low ceilings. In these circumstances, the objective is to reduce the excessive reverberation that limits the required sound amplification being attained before acoustic feedback is encountered.

The unique coverage pattern of the columnar speaker system, shown in the idealized drawing below, reduces the undesired reverberation by concentrating the sound pressure in the listener's area and by attenuating the reflections produced from the more reflective ceiling and/or wall surfaces. Therefore, correct placement and direction of the speakers are critical for best performance.

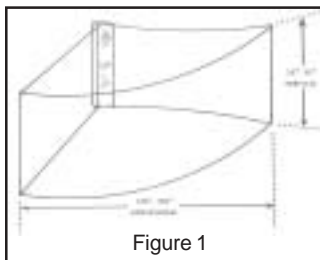


Figure 1

In the typical installation, assuming that the room is rectangular shaped, a single column should be placed in a center-front location. If the microphone position is on the long side of a rectangular room, two columns should be used that are spaced

midway between the microphone position and the side walls.

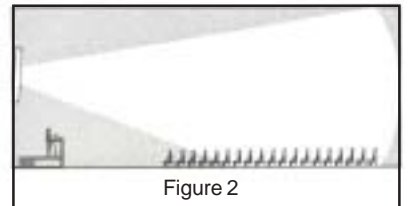


Figure 2

The minimum height should be slightly above the head of any person standing and speaking into a microphone (See Figure 2). The column should be tilted downward so that the center of the column is aimed at a point approximately two-thirds of the distance of the audience when seated. This allows the listeners who occupy the front rows to avoid excessively loud sound while permitting listeners located in the rear to hear comfortably.

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### Mounting Suggestions

The directional coverage patterns of sound columns require careful alignment. One technique is to use a carpenter's square to aim the "on-axis" beam to the desired location. Another widely used technique is to use a mirror and flashlight. Regardless of the aiming technique, a sound level meter should be used to verify the resulting coverage.



**Mounting hardware must be securely screwed into at least one wall stud using screws or bolts rated with the loadbearing capacity of the hardware supplied by the manufacturer.**

Basic mounting hardware is included with each sound column. The hardware for **models SC-30, SC-50, SC-70** and **SC-100** consists of (1) hanging bracket for surface mounting and of

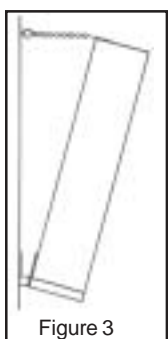


Figure 3

(2) a hinge, chain and hooks to permit forward tilting (Figure 3) for more precise beaming of the coverage pattern. If the column is being mounted in a location that requires the cabinet to be swiveled sideways as well as tilted to properly position the sound intensity, an optional mounting hardware kit (model NSC-BR) shown in Figure 4 is available.

**Model SC-408** hardware consists of a hinge, chain and hooks to permit forward tilting (Figure 3). Optional hardware kit (model SC-BR) shown in Figure 5 is available if the cabinet must be swiveled sideways for proper alignment.

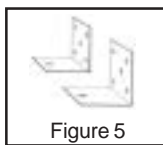


Figure 5

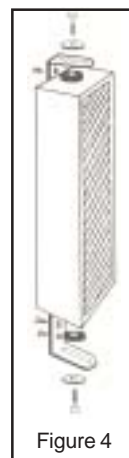


Figure 4

**Note:** Sound columns, or other loudspeakers, should never be mounted directly behind and near level with a microphone to avoid feedback.

Model	Power (watts)	Frequency Range	Impedance (ohms)	Coverage @ 1 KHz	Sensitivity (db @ 1wm)	Speakers	Size	Shipping Weight
SC-30	30	120-13,000 Hz ±5 dB	8	120° Horizontal 40° Vertical	98.5	Four 5" (DS-505)	7¾" W x 28¾" L x 5⅝" D	25 lbs.
SC-50	50	130-7,000 Hz ±5 dB	12	120° Horizontal 20° Vertical	99.7	Six 5" (DS-505)	7¾" W x 40¾" L x 5⅝" D	33 lbs.
SC-70	70	105-3,500 Hz ±5 dB	16	120° Horizontal 20° Vertical	102.0	Eight 5" (DS-505)	7¾" W x 52¾" L x 5⅝" D	44 lbs.
SC-100	100	140-8,500 Hz ±5 dB	12	120° Horizontal 20° Vertical	97.3	Six 5" (DS-510)	7¾" W x 40¾" L x 5⅝" D	34 lbs.
SC-408	50	80-9,000 Hz ±5 dB	8	120° Horizontal 40° Vertical	98.2	Four 8" (DS-810)	11" W x 36¼" L x 11¼" D	48 lbs.

### Transformer Installation

The impedance of each SC Series sound column is indicated in the table above. However, transformers may be readily added in the cutouts located at the back of the cabinets except for model SC-408 which requires internal installation. **Note:** If intended to be used in 25V or 70V installations at the time of purchase, transformers may have been installed at the factory. Therefore, the impedance of the columns should be checked before applying power from the amplifier.

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