

## DATA SHEET

# SP80A CENTRAL CEILING SPEAKER

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### FULL FIDELITY - FOR BOTH VOICE AND MUSIC

The KDM SP80A is a full fidelity (65 Hz to 20 kHz) Central Speaker System. The KDM SP80A tuned port enclosure contains a highly efficient 6½" woofer matched to four 3" direct radiating piezo horns. The frequency response of the woofer and horns is determined by an internal network that is optimized to maximize performance. This combination ensures full fidelity reproduction from an extremely small central ceiling speaker.

### HIGH SENSITIVITY - 94 dB PER WATT PER METER

The KDM SP80A is extremely sensitive with a Sound Pressure Level (S.P.L.) of 94 dB per watt at 1 meter. As a result, very little amplifier power is required to obtain the required sound pressure levels. At maximum RMS input power the KDM SP80A can produce 112 dB S.P.L. at one meter.

### HIGH POWER HANDLING - 60 WATTS RMS / 120 WATTS PEAK

The KDM SP80A can withstand input power of 60 watts RMS. The KDM SP80A contains built-in, protective circuitry to prevent damage from excessive and distorted (10% T.H.D.) input levels.

### WIDE COVERAGE AREA - 360° X 180°

The KDM SP80A provides coverage over a 360° Horizontal and 180° Vertical plane. These wide dispersion characteristics will permit a large area to be covered by a single KDM SP80A.

### SMALL AND COMPACT - 6 INCHES HIGH / 7 LBS

The KDM SP80A is only 6 inches (15 cm) high and weighs 7 lbs (3.2 kg). The KDM SP80A can be installed in low ceiling areas and close to lights without casting shadows. The low weight permits suspension using readily available hardware. The top of the KDM SP80A is recessed and can be easily surface mounted to T-Bar acoustic tile or drywall ceilings.



## Technical Specifications

Frequency Response:	65 Hz to 20 kHz ± 12 dB (on axis) 90 Hz to 15 kHz ± 6 dB (on axis)
Optimum Power:	10 to 50 watts RMS total.
Power Handling:	60 watts RMS total, 120 watts peak, (Total Harmonic Distortion less than 10%)
Impedance:	8 ohms nominal. (25 and 70V optional)
Dispersion:	360° Horizontal, 180° Vertical. ± 9 dB Level 100 Hz to 10 kHz.
Sensitivity:	94 dB/watt/meter on axis, pink noise 100 Hz to 10 kHz. averaged.
Maximum S.P.L.:	112 dB RMS / 115 dB Peak at 1 meter.

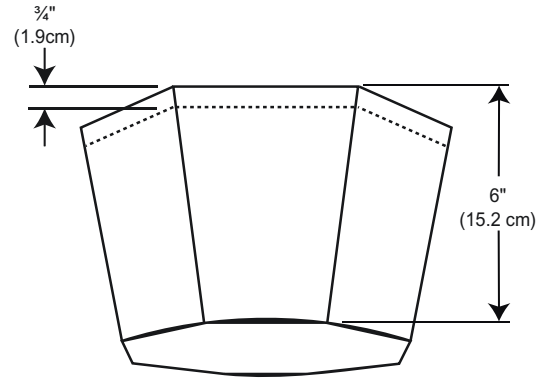
*Octasound Speakers and Sound System Modules are manufactured by the award winning company KDM Electronics Inc. With over 25 years of experience, KDM can design a turn-key sound system to meet or exceed your sound requirements.*

by KDM Electronics

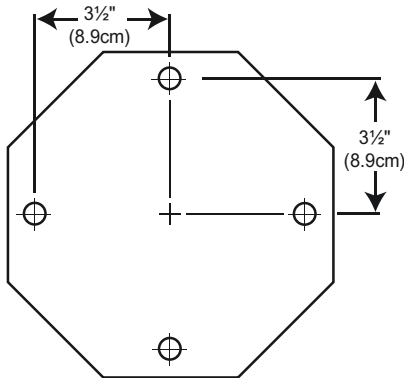
# SP80A CENTRAL CEILING SPEAKER

## Physical Specifications

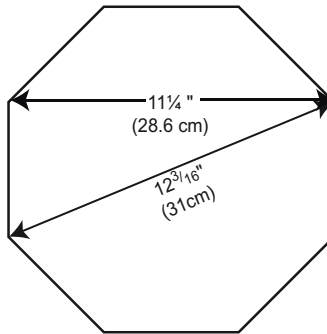
Temperature Range:	-10°C to 55°C (14°F to 131°F)
Humidity Range:	0% to 80% Non Condensing
Dimensions:	See Diagrams (Not to Scale, Tolerance $\pm 1/4''$ )
Weight:	7 lbs (3.2 kg)
Material:	Medium Density Fiber Board.
Mounting Hardware:	Two 4" Eye Bolts, $1/4$ x 20 Thread, Two #8 Screw Eyes
Shipping Weight:	10 lbs (4.5 kg)
Shipping Dimension:	14" (35.5 cm) Square, by 9" (22.9 cm) high



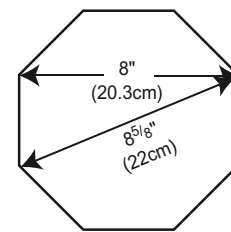
Side View



Mounting Hardware Dimensions



Top View



Bottom View

## Architects and Engineers Specifications

The loudspeaker shall be an octagonal shaped speaker containing an  $6\frac{1}{2}''$  (165 mm) diameter, bass/midrange driver with four high frequency wide dispersion  $3'' \times 3''$  (75 mm x 75 mm) piezo horns. The bass/midrange driver shall contain an 1" (25 mm), 8 ohm voice coil, with a magnet weight of 12 ounces (340 g) minimum. These components shall all be contained within a tuned port bass enclosure. The sensitivity shall be 94 dB per watt per meter. The overall speaker system shall be capable of withstanding power levels up to 60 watts RMS, with a total harmonic distortion of less than 10%. The total impedance of the speaker shall be 8 ohms nominal. The speaker shall contain a perforated metal speaker grill to protect the bass/midrange speaker, and be manufactured from medium density fiber board (MDF) painted with a durable industrial textured finish. All exposed metal must be aluminum, plated or painted. Two 4" inch eye bolts,  $1/4$  x 20 thread plus two #8 screw eyes shall be provided for mounting. The complete speaker shall weigh a maximum of 7 lbs. (3.2 kg), with the following maximum dimensions: top width  $12\frac{3}{16}''$  (31 cm), bottom width  $8\frac{5}{8}''$  (22 cm) and height 6" (15.2 cm).

**The loudspeaker shall be KDM Electronics Incorporated Model SP80A.**

## Ordering Information

**SP80A - XX** (where **XX** specifies color). **WH** = White Low Sheen Splatter Finish (Standard).

Other colors and Veneers available upon request. Example: **BK** = Black, **OV** = Oak Veneer

**SPH5A** - Optional Speaker Suspension Harness - Five 9" wire rope cables. Four with snap links to attach to SP80A and one with quick link for safety.



**Octasound**  
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