

## DATA SHEET

# SP800A CENTRAL CEILING SPEAKER

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**Octasound®**  
S O U N D A B O V E A L L



### FULL FIDELITY - FOR BOTH VOICE AND MUSIC

The KDM SP800A is a full fidelity (40 Hz to 20 kHz) Central Speaker System. The KDM SP800A tuned port enclosure contains a highly efficient 8" woofer matched to four dynamic horn tweeters. The frequency response of the woofer and horns is determined by an internal crossover network that is optimized to maximize performance. This combination ensures full fidelity reproduction from an extremely small central ceiling speaker.

### HIGH SENSITIVITY - 97 dB PER WATT PER METER

The KDM SP800A is extremely sensitive with a Sound Pressure Level (S.P.L.) of 97 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 SP800A can produce 115 dB S.P.L. at one meter.

### HIGH POWER HANDLING - 75 WATTS RMS / 150 WATTS PEAK

The KDM SP800A can withstand input power of 75 watts RMS. The KDM SP800A also contains a built-in, self-resetting thermal protective circuit. This protects the high frequency horn tweeters from excessive and distorted (10% T.H.D.) input levels.

### WIDE COVERAGE AREA - 360° X 180°

The KDM SP800A 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 SP800A.

### SMALL AND COMPACT - 8 INCHES HIGH / 16 LBS

The KDM SP800A is only 8 inches (20 cm) high and weighs 16 lbs (7.3 kg). The KDM SP800A 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 SP800A is recessed and can be easily surface mounted to T-Bar acoustic tile or drywall ceilings.



## Technical Specifications

Frequency Response:	40 Hz to 20 kHz $\pm$ 12 dB (on axis) 50 Hz to 15 kHz $\pm$ 6 dB (on axis)
Optimum Power:	10 to 75 watts RMS total.
Power Handling:	75 watts RMS total, 150 watts peak, (Total Harmonic Distortion less than 10%)
Impedance:	8 ohms nominal. (25 and 70V optional)
Dispersion:	360° Horizontal, 180° Vertical. $\pm$ 6 dB Level 100 Hz to 10 kHz.
Sensitivity:	97 dB/watt/meter on axis, pink noise 100 Hz to 10 kHz. averaged.
Maximum S.P.L.:	115 dB RMS / 118 dB Peak at 1 meter.

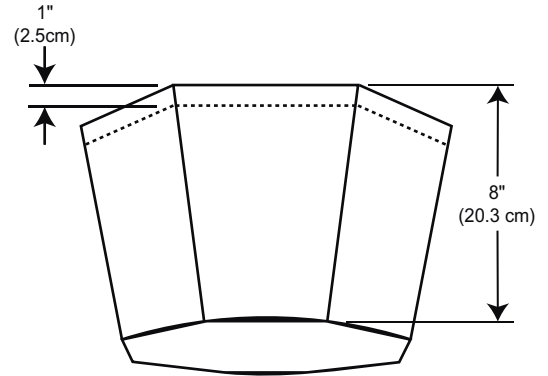
*Octasound Speakers and Sound System Modules are manufactured by the award winning company KDM Electronics Inc. With over 25 years of experience, KDM can design a turn-key sound system to meet or exceed your sound requirements.*

by KDM Electronics

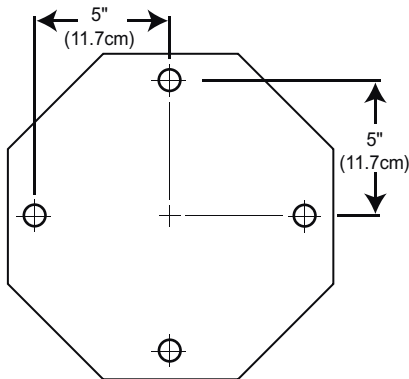
# SP800A CENTRAL CEILING SPEAKER

## Physical Specifications

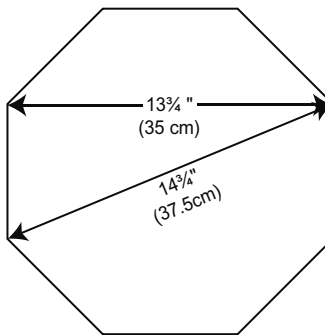
Temperature Range:	-10°C to 55°C (14°F to 131°F)
Humidity Range:	0% to 80% Non Condensing
Dimensions:	See Diagrams (Not to Scale, Tolerance $\pm 1/4''$ )
Weight:	16 lbs (7.3 kg)
Material:	Exterior Treated Wood Composite Panel
Mounting Hardware:	Two 4" Eye Bolts, $1/4$ x 20 Thread, Two #8 Screw Eyes
Shipping Weight:	19 lbs (8.6 kg)
Shipping Dimension:	16 1/2" (42 cm) Square, by 11" (30 cm) high



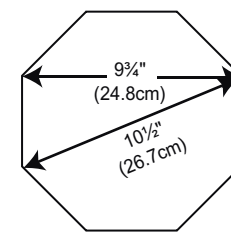
Side View



Mounting Hardware Dimensions



Top View



Bottom View

## Architects and Engineers Specifications

The loudspeaker shall be an octagonal shaped speaker containing an 8" (203 mm) diameter, bass/midrange driver with a 1 1/2" (38 mm), 8 ohm voice coil, and a magnet weight of 28 ounces (794 g) minimum, plus four high frequency 3 1/2" x 3 1/2" (89 mm x 89 mm) wide dispersion dynamic horn tweeters with a 1" (25 mm) voice coil and a magnet weight of 12 ounces (340 g) minimum. The horn tweeters shall contain ferrofluid cooling to reduce voice coil burnout and voice coil rub. These components shall all be contained within a tuned port bass enclosure. The sensitivity shall be 97 dB per watt per meter. The overall speaker system shall contain one crossover network that separates the low and high frequency spectrum at the crossover point of 3.5 kHz  $\pm 15\%$ . The internal crossover shall have a built in thermal protective circuit to prevent damage from occurring at power levels up to 150 watts of peak power. The overall speaker system shall be capable of withstanding power levels up to 75 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 16 lbs. (7.3 kg), with the following maximum dimensions: top width 14 3/4" (37.5 cm), bottom width 10 1/2" (26.7 cm) and height 8" (20.3 cm).

**The loudspeaker shall be KDM Electronics Incorporated Model SP800A.**

## Ordering Information

**SP800A - 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 SP800A and one with quick link for safety.

KDM Electronics Incorporated reserves the right at any time to make changes in product design, components and specifications, as may be warranted by progress in technology.



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