

DATA SHEET

SP820A CENTRAL SPEAKER SYSTEM

Recreational Facilities
Transportation Terminals
Convention Centers
Correctional Facilities
Warehouse/Factories
Community Halls
Gymnasiums
Sports Arenas
Shopping Malls
Super Stores
Restaurants
Theatres
Schools
Churches

Octasound®
S O U N D A B O V E A L L



FULL FIDELITY - FOR BOTH VOICE AND MUSIC

The KDM SP820A is a full fidelity (35 Hz to 20 kHz) Central Speaker System. The KDM SP820A tuned port enclosure contains a highly efficient 12" woofer matched to four compression horns and drivers. The frequency spectrum 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 compact central speaker system.

HIGH SENSITIVITY - 101 dB PER WATT PER METER

The KDM SP820A is extremely sensitive with a Sound Pressure Level (S.P.L.) of 101 dB per watt at 1 meter, hence very little amplifier power is required to obtain the required sound pressure levels. At maximum RMS input power the KDM SP820A can produce 125 dB S.P.L. at one meter.

HIGH POWER HANDLING - 250 WATTS RMS / 500 WATTS PEAK

The KDM SP820A can withstand input power of 250 watts RMS. The KDM SP820A also contains a built-in, self-resetting thermal protective circuit. This protects the high frequency drivers from excessive and distorted (10% T.H.D.) input levels.

WIDE COVERAGE AREA - 360° X 180°

The KDM SP820A 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 SP820A.

SMALL AND COMPACT - 12 INCHES HIGH / 60 LBS

The KDM SP820A is only 12 inches (30.5 cm) high and weighs 60 lbs (27.2 kg). The KDM SP820A can be installed in low ceiling areas and close to lights without casting shadows. The low weight permits suspension using readily available hardware such as closed link chains, wire rope etc. The combination of small dimensions and low weight permits the KDM SP820A to be shipped inexpensively via standard couriers or parcel service companies.

Technical Specifications

Frequency Response:	35 Hz to 20 kHz ± 10 dB (on axis) 45 Hz to 12 kHz ± 6 dB (on axis)
Optimum Power:	50 to 200 watts RMS total.
Power Handling:	250 watts RMS total, 500 watts peak, (Total Harmonic Distortion less than 10%)
Impedance:	8 ohms nominal.
Dispersion:	360° Horizontal, 180° Vertical. ± 6 dB Level 100 Hz to 10 kHz.
Sensitivity:	101 dB/watt/meter on axis, pink noise 100 Hz to 10 kHz. averaged.
Maximum S.P.L.:	125 dB RMS / 128 dB Peak at 1 meter.



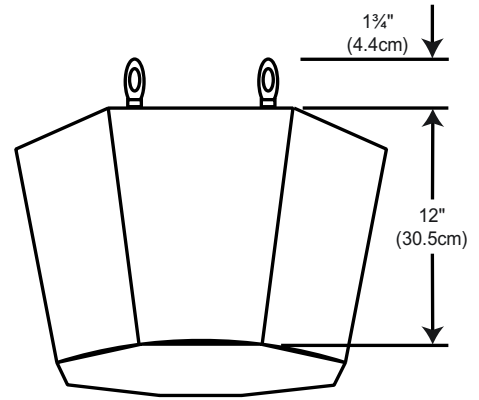
Octasound Speakers and Sound System Modules are manufactured by the award winning company KDM Electronics Inc. With over 25 years of experience, KDM can design a turn-key sound system to meet or exceed your sound requirements.

by KDM Electronics

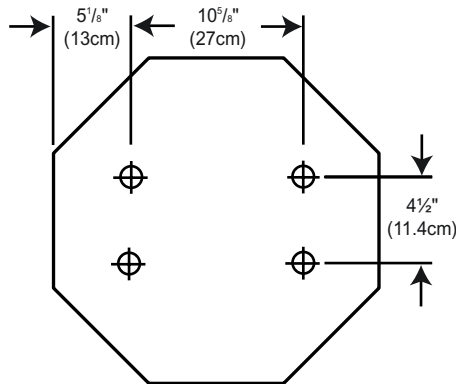
SP820A CENTRAL SPEAKER SYSTEM

Physical Specifications

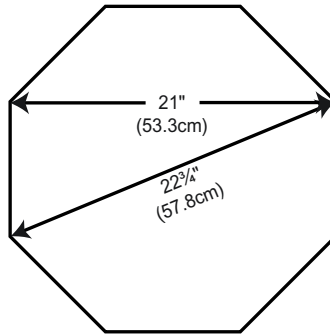
Temperature Range:	-20°C to 55°C (-4°F to 131°F)
Humidity Range:	0% to 100% Non Condensing
Dimensions:	See Diagrams (Not to Scale, Tolerance $\pm 1/4"$)
Weight:	60 lbs (27.2 kg)
Material:	Exterior Treated Wood Composite Panel
Mounting Hardware:	Four 1 1/2" Eye Nuts, 3/4" I.D. Eye 1/4 x 20 Thread
Shipping Weight:	68 lbs (30.8 kg)
Shipping Dimension:	23" (58.4 cm) Square, by 16" (40.6 cm) high



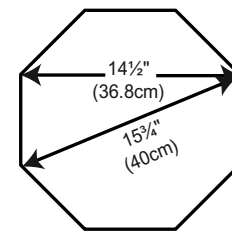
Side View



Mounting Hardware Dimensions



Top View



Bottom View

Architects and Engineers Specifications

The loudspeaker shall be an octagonal shaped speaker containing a 12" (305 mm) diameter, low frequency driver, with a 3" (76 mm), 8 ohm voice coil, and a magnet weight of 60 ounces (1.7 kg) minimum, plus, four high frequency 6" x 6" (150 mm x 150 mm) wide dispersion exponential compression horns & drivers with a 1.8" (46 mm) diameter voice coil and a barium ferrite magnet that weighs 15 ounces (429 g) minimum. The voice coil shall be manufactured of high temperature wire wound on a Titanium diaphragm and Kapton® bobbin to reduce overheating and voice coil rub. The horns and drivers shall have a 1" (25 mm) throat diameter. These components shall all be contained within a tuned port bass enclosure. The sensitivity shall be 101 dB per watt per meter. The overall speaker system shall contain one crossover network that separates the low and high frequency spectrum at a crossover point of 2 kHz $\pm 15\%$. The internal crossover shall have a built in thermal protective circuit to prevent damage from occurring at power levels up to 500 watts of peak power. The overall speaker system shall be capable of withstanding power levels up to 250 watts RMS, with a total harmonic distortion of less than 10%. The total impedance of the speaker system shall be 8 ohms nominal. The speaker shall contain a perforated metal speaker grill to protect the bass speaker. The enclosure shall be manufactured from 3/4" (19 cm) moisture resistant wood composite with all joints secured with waterproof glues. A sealant, primer and durable industrial textured finish shall be applied to the enclosure. All exposed metal must be aluminum, stainless steel, plated or painted. Four 1 1/2 inch eye nuts shall be provided for mounting. The complete speaker shall weigh a maximum of 60 lbs. (27.2 kg), with the following maximum dimensions: top width 22 3/4" (57.8 cm), bottom width 15 3/4" (40cm) and height 12" (30.5 cm) + 1 3/4" (4.4 cm) for mounting hardware.

The loudspeaker shall be KDM Electronics Incorporated Model SP820A

Ordering Information

SP820A - 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

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.



Octasound
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