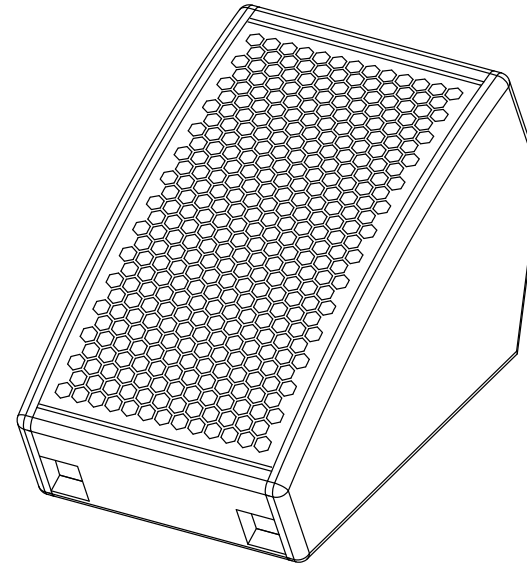
TECHNICAL SPECIFICATIONS

SM8

Product Group: Stage Monitor
System Type: 2-Way, 8" x 1.0", 80° x 50°



FEATURES AND ADVANCES

- **Rotatable Waveguide**
- **Low Stage Profile**
- **Reinforced Grill**
- **High-Damping Ported Design**
- **Rear/Side NL4 Passthrough**
- **Passive Crossover**

PRODUCT DESCRIPTION

The SM8 is a powerful two-way, full-range passive loudspeaker, designed specifically for near field monitor applications. This high output monitor features a McCauley 77045 8" cone driver, a 1.0" exit compression driver, mounted to a rotatable 80° x 50° waveguide, and integrated 24dB/Oct crossover.

The SM8 has been designed from the ground up as a Passive product, requiring only a single channel of amplification. A manufacturer supplied 1.25ms FIR filter improves the off-axis response by linearizing the phase shift introduced by the network.

The enclosure tuning and damping material have been specifically engineering for the best performance as a half-space, vocal or instrumental monitor. The system is highly over-damped, giving a smooth roll off in bass response below 85Hz. The cabinet geometry and damping material placement has been optimized to suppress low-mid resonances which can become troublesome on a crowded stage. An optimized HF waveguide pattern provides excellent nearfield coverage with minimum off-axis spurs.

APPLICATIONS

- **Houses of Worship**
- **Performing Arts Centers**
- **Small Bar / Club Stage**
- **Outdoor Mall/Theme Park**
- **Auditoriums**
- **Restaurants**

CONSTRUCTION

The SM8 enclosure is constructed of multi-ply void free birch plywood and is coated with a weather and wear resistant Pro Coat™ polyurea hybrid finish.

The SM8 enclosure features an integrated handle for easy transportation and rubber feet to keep the monitor in place on smooth surfaces. Although it is light weight, the SM8 is designed to withstand the most rugged stage conditions.

Loudspeaker components are protected by a flush mounted, perforated steel grill lined with acoustically transparent foam. An aluminum cross member supports the center of the grill and protects it from crush-in. The grill and rigging components are weather protected with a heat cured epoxy powder coat finish.

PERFORMANCE PARAMETERS

System Type	80° x 50°, 2-Way, Full Range
Transducers	(1) 77045-8 8" Cone Transducer (1) 77145-8 1.0" Exit, 1.5" Ti Diaph
Nom. Coverage Pattern	80° x 50°
Frequency Response (-10dB / ±3dB)	60Hz / 80Hz-20kHz
Min Processing	48kHz /255pt FIR Capable DSP
Min Recommended X-over	2000Hz - LR24
Nominal Impedance - LF / HF	8.0 Ω / 8.0 Ω
Sensitivity - Passive	96 dBSPL
Power (AES2) - Passive	250 W @ 8.0 Ω
Maximum SPL Passive (average / peak)	120 dBSPL / 126 dBSPL

PHYSICAL PROPERTIES

Weight	31Lbs/14kg
Dimensions (Without Casters)	INCHES 10.5 H x 10.0 W x 18.0 D CENTIMETERS 26.8 H x 24.8 W x 44.7 D
Enclosure Material	5/8" 13-ply birch laminate
Hardware	
Finish	Procoat™ Polyurea-Hybrid Weatherproofing (Black is standard, White or Custom Colors Available)
Connectors	Neutrik™ Speakon NL4 Passive 1+/1- Parallel Rear/Side Connectors
Configurations	C8 ..... Standard with Integrated Handle -X ..... Weather Proofing -C ..... Custom Color
Optional Accessories	SM8-WB..... Wall Bracket

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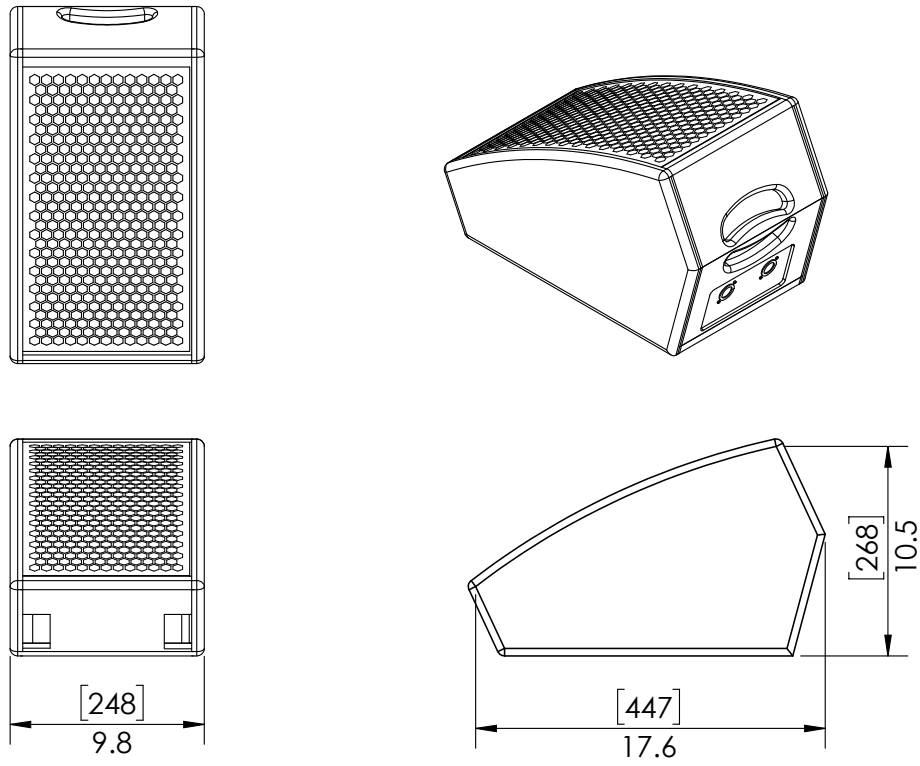
DIMENSIONAL ILLUSTRATIONS



ARCHITECTS AND ENGINEERS SPECIFICATIONS

The two-way full range loudspeaker system shall incorporate one (1) McCauley 77045-8, 2" (51 mm) voice coil, 8" (200 mm) diameter LF transducer, and one (1), 77145-8, 1.0" (25 mm) exit, 1.5" (38 mm) diaphragm compression driver HF transducer. The LF driver shall be mounted in an vented enclosure tuned for an over-damped low frequency response, and with vent area of such size that distortion is minimized at the rated continuous power. The high frequency transducer shall be mounted to a constant directivity acoustic horn with a nominal horizontal coverage pattern of 80°. The vertical coverage pattern of the horn shall be 50° and shall also provide constant directivity. The HF horn shall feature a square mounting flange, allowing the horn to be rotated by 90°.

The system frequency response shall vary no more than ±3 dB from 80 Hz to 20 kHz measured on axis. The low frequency transducer shall produce a Sound Pressure Level (SPL) of 94 dBSPL at a distance of 1 meter with an electrical power input of 2.83 Vrms, and shall be capable of producing a maximum peak output of 124 dBSPL on axis at 1 meter. The high frequency transducer shall produce a SPL of 105 dBSPL on axis at 1 meter with an electrical power input of 2.83 Vrms, and shall be capable of producing a peak output of 126 dBSPL on axis at 1 meter.

The low frequency transducer shall handle 200W of amplifier power (per AES ref Standard AES2-2012) and shall have a nominal impedance of 8.0 Ohms. The high frequency transducer shall handle 30W of amplifier power (per AES ref Standard AES2-2012) and shall have a nominal impedance of 8.0 Ohms.

The loudspeaker enclosure shall have a maximum weight of 31 lbs.(14 kg) and shall measure 11" (279 mm) wide at front, 5.5" (140 mm) in width at rear, 19.2" (487 mm) in height, and 11.5"(293 mm) in depth. The enclosure sides shall taper at 15° from a maximum frontal width, narrowing to the rear. The structure of the enclosure shall be constructed of multi-ply void-free birch hardwood plywood, and shall have a weather and wear resistant ProCoat(tm) polyurea hybrid finish.

Input connectors shall be four (4) locking Neutrik NL4 (two rear, one each side), wired in parallel with 16 AWG wire. The connectors shall have a contact resistance of less than 3 mΩ, insulation rating of at least 250 VRMS. The lifetime of the connectors shall be at least 5000 mating cycles. The connectors shall meet or exceed UL 94 HB flammability standards. The passive network input shall be wired to pins 1+/1- and the contacts 2+/2- shall be open.

Components in the front of the enclosure are to be protected by a curved, flush mounted grill made from perforated steel that is coated with heat cured epoxy powder, and lined with acoustically transparent foam. The grill shall be reinforced to with structural cross members to prevent damage during use.

The 2-way full range loudspeaker shall be the McCauley Sound model SM8.