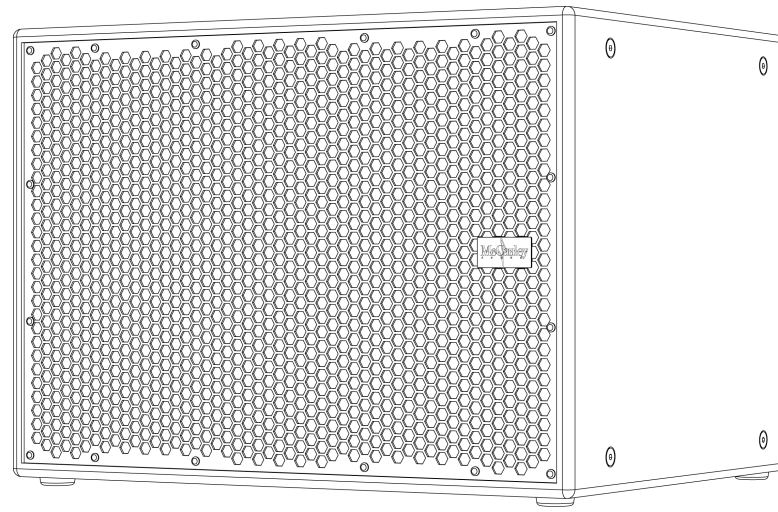
TECHNICAL SPECIFICATIONS

M82i

Product Group: Installation Class
System Type: Subwoofer, Single 18"



PRODUCT DESCRIPTION

The M82i is a high efficiency, high power handling sub-bass loudspeaker designed specifically for permanent installations. The M82i features one McCauley 8251 18" cone driver mounted in a mechanically and acoustically optimized bass reflex cabinet. To reduce port turbulence and minimize distortion at high power levels, the M82i enclosure features a new large, flared, symmetric vent design.

The 8251 incorporates McCauley Sound's latest long excursion neodymium motor with an industry first hybrid paper composite cone. The 8251 motor has an FEA optimized BI vs. displacement profile to improve linearity and reduce distortion, a large aluminum heat sink, and 4" aluminum voice coil to improve power handling. The new cone body balances high stiffness with the internal damping that is inherent to paper cone loudspeakers, leading to a low distortion punchy sound even at high power levels.

The M82i enclosure was designed with installation in mind. It features 24 integrated fly points and optional array frames that allow for mounting to ceilings and the creation of traditional and cardioid flown arrays.

FEATURES AND ADVANCES

- High Output, High Performance
- Light Weight Neodymium Motor Loudspeakers
- Heavy Duty Tour-Grade Construction
- Integrated Locking Feet
- Weather and Wear Resistant

APPLICATIONS

- Stadiums and Arenas
- Night Clubs and Concert Halls
- Theme Parks
- Theatrical Sound Reinforcement
- House of Worship

CONSTRUCTION

The enclosure is constructed of multi-ply void-free birch hardwood plywood and is coated with a weather and wear resistant ProCoat™ polyurea hybrid finish. All rigging components are weather protected with a heat cured epoxy powder coat finish. Components in the front of the enclosure are protected by a flat grill made from perforated steel that is coated with heat cured epoxy powder, and lined with acoustically transparent foam.

PERFORMANCE PARAMETERS

System Type	Subwoofer, Single 18"
Transducers	(1) 8251-8 18" Cone Transducers
Frequency Response	
-10dB	28Hz
+/- 3dB	35Hz - 120Hz
Sensitivity	
LF	100dBSPL 2.5V@100Hz 1W/1m
	(average / peak) measured 1m ground plane
Maximum SPL	
LF	130dBSPL / 136dBSPL
Power Ratings	(AES / Program)
LF Individual AES2-2012	1012w / 2025w @ 90Vrms/8.0 Ω
LF Individual AES2-1984(r2003)	1350w / 2700w @ 90Vrms/Zmin=6.0 Ω
Connectors	Phoenix PC_4-4-ST-7.62 4-Position
	Accepts up to 10AWG Bare or Dual 12AWG Feruled
	Optional Neutrik™ Speakon NL4
	LF1 1+/1- LF2 2+/2-

PHYSICAL PROPERTIES

Weight	110Lbs/49.8kg
Dimensions	
inches	20.4 H x 28.0 W x 27.5 D
centimeters	51.8 H x 71.1 W x 69.9 D
Enclosure Material	5/8" 13 ply birch laminate
Hardware	24 3/8-16 reinforced hang points
	Standard with Rubber Feet on Bottom
	Optional Flown Rigging Systems for Conventional and Cardioid Arrays
Finish	Procoat™ Polyurea-Hybrid Weatherproofing
	(Black is standard, White and / or Custom Colors Available)
Options	X- Extreme Weather Resistance
	W- White Finish
	C- Custom Color
	4- Dual NL4 Jack Panel
Optional Accessories	

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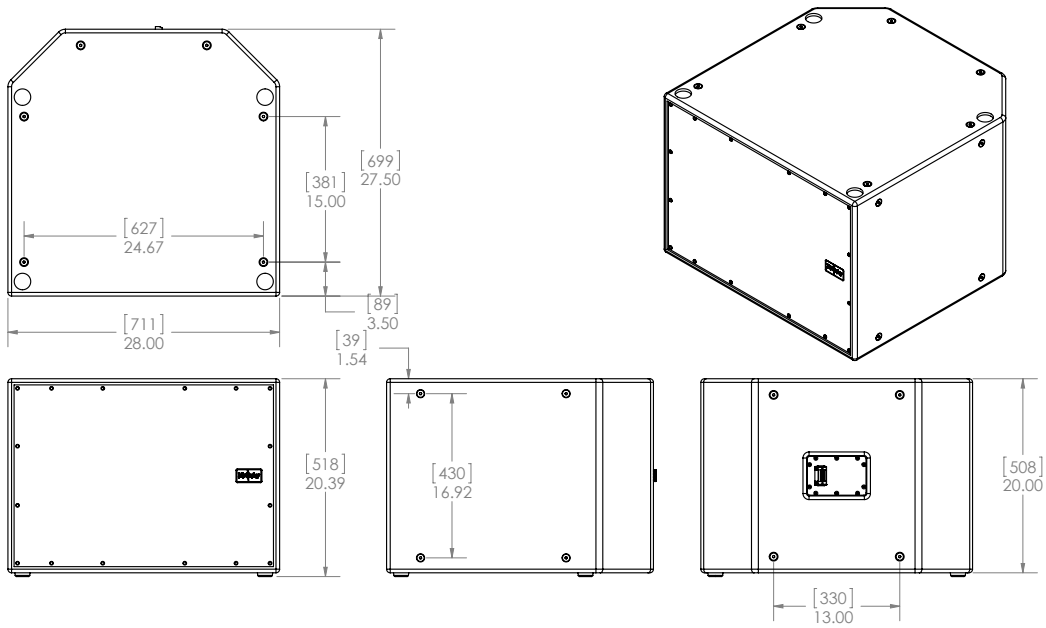
DIMENSIONAL ILLUSTRATIONS



ARCHITECTS AND ENGINEERS SPECIFICATIONS

The subwoofer loudspeaker system shall consist of one (1) McCauley 8251-8, 18 in. (460 mm) diameter transducer, mounted in an optimally vented bass reflex enclosure. The transducer shall have a 4 in. (102 mm) diameter voice coil, high flux density Neodymium motor, Aluminum heat sink, and a linear excursion of least ±0.6 in (15 mm). The enclosure shall be tuned for maximally flat low frequency response and have a vent area large enough such that distortion is minimized at the rated continuous power. Multiple loudspeaker systems in an array shall be capable of producing a directional coverage pattern.

The typical performance specifications shall be as follows: The unprocessed system frequency response shall vary no more than ±3 dB from 35 Hz to 120 Hz measured on axis. The measured sensitivity[1] shall be at least 100 dBSPL at 1 m ground-plane, from 45 Hz to 120 Hz. The transducer shall have a power rating of 1000W AES[2] and a rated impedance of 8 ohms inside the operating band.

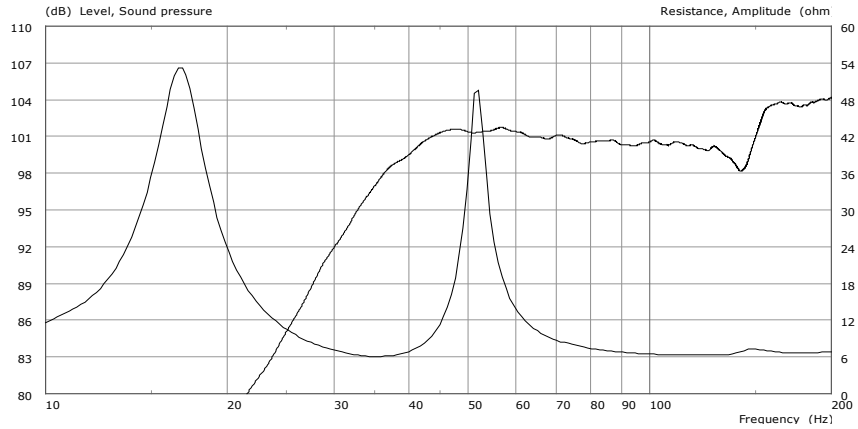
The loudspeaker enclosure shall have a maximum weight of 110 lbs. (49.8 kg) and shall measure 28.0" (711 mm) wide, 20.4" (518 mm) in height, and 27.5" (699 mm) in depth. The enclosure shall be constructed of multi-ply void-free birch hardwood plywood and coated with a weather and wear resistant ProCoat™ polyurethane hybrid finish.

Components in the front of the enclosure shall be protected by a flat grill made from perforated steel and coated with heat cured epoxy powder. All rigging and other hardware pieces shall be weather protected with a heat cured epoxy powder coat finish.

The enclosure shall include twenty-four (24) 3/8"-16 UNC threaded mounting/suspension points. Components in the front of the enclosure shall be protected by a flat grill made from perforated steel and coated with heat cured epoxy powder. All rigging and other hardware pieces shall be weather protected with a heat cured epoxy powder coat finish.

The input connection shall be, one (1) 4-Position, 20A rated, Phoenix PC_4-4-ST-7.62 which accepts single bare wires up to 10AWG or dual 12AWG wires with a ferule. Optionally the input connector shall be two (2) Neutrik Speakon NL4 locking connectors wired in parallel with 12 AWG wire. The connectors shall have a contact resistance of less than 3 mΩ, insulation rating of at least 250 Vrms, and rated continuous current rating of 30 A per contact. The lifetime of the connectors shall be at least 5000 mating cycles. The connectors shall meet or exceed UL 94 HB flammability standards.

The high performance subwoofer loudspeaker system shall be the McCauley Sound model M82i.



1) Drive voltage of 2.5Vrms chosen to provide 1W to the loudspeaker at 100Hz. Zmin=6.0Ω, Znom=7.8Ω from 35Hz to 120Hz.
2) 1012W @ 90Vrms / 8Ω AES2-2013 2hr test. 1350W @ 90Vrms / Zmin=6.0Ω AES2-1984(r2003) 2hr test.

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