



For Installations Requiring

- Compact, full-range loudspeaker
- Even, omnidirectional coverage
- Clear voice announcements
- Seamless background music
- Fast distributed system install

Description

The model 110B was designed to provide clear voice announcements, seamless background music and even, omnidirectional coverage. It is a compact, unobtrusive speaker that is just 10" in diameter and offers fast distributed system installation. Broad dispersion of all frequencies is achieved with a 6.5" full-range driver and proprietary dispersion technologies. The 110B offers a hemispherical coverage pattern and can evenly cover a large area with fewer speakers. It comes fully assembled and ready to mount using our hanging kit or mounting bracket.

On-board amplification is offered with Model 110B Power2, making a separate amplifier unnecessary in applications where only a single wide-dispersion speaker is required for coverage.

Features

- Hemispherical coverage pattern.
- Accurate, full-range voice announcements.
- Light-weight enables many varied mounting possibilities.
- Fully assembled and ready to mount.
- Hanging or surface-mount.
- Standard white (paintable) and custom colors available.
- Available with on-board amplification (Model 110B Power2).

¹ Impedance listed per IEC 60268-5 with a minimum less than 80% the nominal impedance

² 1 W / 1 M sensitivity determined using nominal impedance

³ Frequency response measured in half or full space as dictated by speaker mounting configuration

⁴ Max program power is 3 dB above max continuous power

⁵ Continuous power rating, EIA-426-B test

⁶ Max output based on max continuous power

110B PRODUCT SPECIFICATIONS

System Type	6 1/2" (165 mm) full-range
Impedance (Nominal) ¹	4 Ω
Sensitivity dB @ 2.83 V / 1 M	96 dB
Sensitivity dB @ 1 W / 1 M ²	93 dB
Frequency Response (±3 dB) ³	220 Hz - 18 kHz
Frequency Response (±10 dB) ³	100 Hz - 20 kHz
Max. Continuous Peak Power ⁴	70 W
Max. Continuous Power RMS ⁵	35 W
Max. Power SPL @ 1 M ⁶	108.5 dB
Coverage Angle (±6 dB @ 2 kHz)	165°
Coverage Angle (±6 dB @ 10 kHz)	155°
Coverage Angle (Avg. 500 Hz - 4 kHz)	170°
Transformer	Optional 30 W
Transducer: Full-Range	6 1/2" (165 mm) treated pulp fiber
Voice Coil	1" 25.4 mm
Enclosure & Reflector Material	Structural foam polystyrene with rust-resistant hardware
Inputs	Hardwire leads
Colors	White (paintable); custom colors available
Height	11 7/8" 302 mm
Diameter	Sphere: 10" (254 mm) Reflector: 14 7/8" (378 mm)
Weight	8 lbs 3.6 kg
Shipping Weight	11 lbs 5 kg
Packaging	One per box
Optional Accessories	30 W Line Matching Transformer (TX30), Hanging Kit (HK), 24" Hanging Kit Extension (HKEXT), Mounting Bracket (MBS), Beam Clip (BC), Drop-Ceiling Bracket (DCB), Small Screen (SS), Small Screen with Weather Filter (SWFS), Dust Filter (110SF)
Certifications	CE, RoHS

Applications

Providing full-range music and voice in a compact, unobtrusive enclosure, the 110B loudspeaker is ideal for applications such as supermarkets, retail stores, factories, warehouses, courtrooms, classrooms/other educational facilities, stadium/arena concourses, gift shops, restrooms, airports/transportation centers, office building reception areas, restaurants, casinos, shopping center common areas/food courts and anywhere background music and articulate voice announcements are required.

Patented Technologies

SoundSphere and the MSE Audio Group constantly develop new technologies which enhance audio product performance. SoundSphere innovations are protected by multiple U.S. and international patents, which explicitly cover SoundSphere's enclosure and dispersion technologies. The MSE Audio Group actively defends its patents in order to protect SoundSphere resellers and end-users.

Technical Data and Specification Tools

SoundSphere strives to provide complete and effective technical information and data to dealers, engineers and designers. All data is available from SoundSphere or at www.soundsphere.com.

Technical data and downloads include:

- EASE™ data - 3-D polar plots
- EASE™ Address - 2-D modeling for distributed systems
- Tech Sheets - technical information and architectural specs for system engineers
- Distributed System Quick Planning Guide - online configuration tool and step-by-step guide are available to assist in the design of effective public area distributed sound systems using SoundSphere omnidirectional loudspeakers

Independent Data Acquisition and Verification

All data for SoundSphere loudspeakers is independently collected from and verified by NWAALabs (www.nwaalabs.com) using their proprietary MACH testing system. All data is collected and analyzed according to ASTM, ISO and AES standards using EASERA, TEF and MLSSA. Full balloon data including both phase and magnitude is compiled into a variety of formats including EASE 4.x, GLL and CLF.

Architectural Specifications

The loudspeaker driver shall consist of one 6.5" (165 mm), full-range driver made of treated pulp fiber.

Performance specifications of a typical production unit shall be as follows: Usable frequency response shall extend from 100 Hz - 20 kHz (± 10 dB). The vertical polar coverage shall be $170^\circ \pm 6$ dB. Measured sensitivity (1 W / 1 M) shall be at least 93 dB. The speaker shall have a rated impedance of 4 Ω . The speaker shall be available for 25, 50, 70, and 100 V modes and shall include 7 power tap selection leads for use with electrical wire nuts or crimp caps. Rated power capacity shall be at least 35 W continuous RMS and conform to EIA-426-B testing. Calculated maximum continuous output at 1 M and shall be 108.5 dB.

The complete loudspeaker shall be no more than 11.875" (302 mm) in height. The driver shall be mounted in a spherical enclosure made of structural foam polystyrene that is no more than 10" (254 mm) in diameter. The reflector shall be no more than 14.875" (378 mm) in diameter.

The complete loudspeaker shall weigh no more than 8 lbs (3.6 kg). Hardware shall be rust and corrosion resistant.

Optional accessories shall include: a 30 W Line Matching Transformer (TX30) with taps for 25, 50, 70, and 100 V constant voltage systems; a Mounting Bracket (MBS) to mount flat against a ceiling surface; a three-element Hanging Kit (HK) for single-point suspension; a 24" Hanging Kit Extension (HKEXT); a Beam Clip (BC) for mounting to a beam flange; a Drop-Ceiling Bracket (DCB); a Small Screen (SS) to protect the speaker from foreign objects; a Small Screen with Weather Filter (SWFS) that additionally offers a water protection barrier; and a Dust Filter (110SF). An optional 30 W on-board amplifier (Power2) makes a separate amplifier unnecessary in applications where only a single wide-dispersion speaker is required for coverage.

The system shall be the SoundSphere Model 110B for wide-range, wide-coverage sound dispersion.

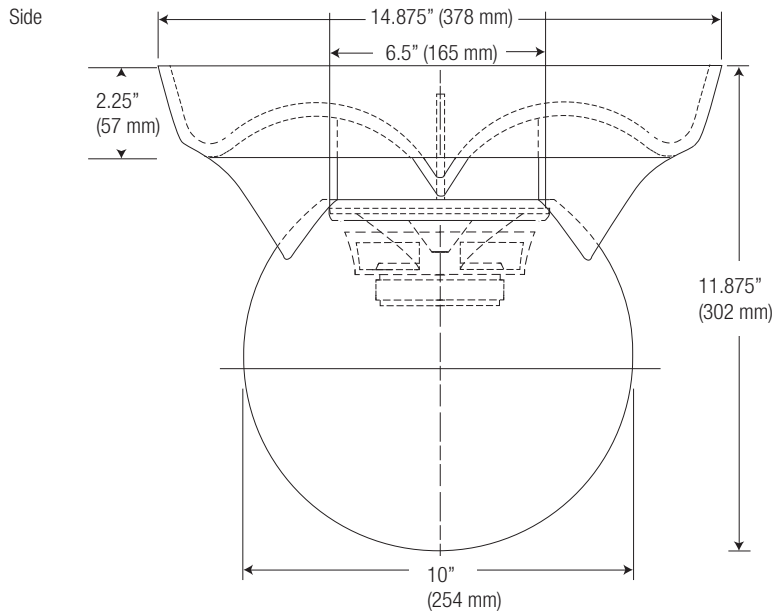
Warranty

SoundSphere loudspeakers are warranted against failure or malfunction due to defects in materials or workmanship for a period of five years from date of original purchase. Speaker electronics are warranted for three years. Defective units will be repaired or replaced at our option if delivered prepaid to our factory. Repaired or replaced units will be returned at our expense. Warranty does not cover appearance or damage caused by abuse, misuse, neglect, accident, or exceeding maximum rated power. Warranty does not cover labor costs involved in removing and/or reinstalling the defective unit, nor any liability due to accidents caused by improper installation. Warranty is extended to original purchaser and is not transferable.

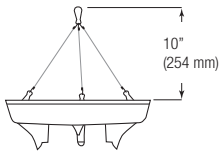
SoundSphere®

13720 W. 109th St.
Lenexa, KS 66215
Phone: 913.663.5600
Fax: 913.663.3200
Toll Free: 855.663.5600
www.mseaudio.com

Mechanical Drawings

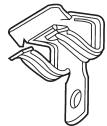


Accessories



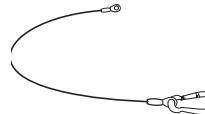
Hanging Kit (HK)

10"
(254 mm)



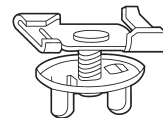
Beam Clips (BC)

Locates a 0.25" hole on a 0.125" to 0.25" beam flange using just a hammer.



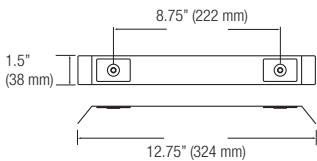
Hanging Kit Extension (HKEXT)

24" extension for use with HK.



Drop Ceiling Bracket (DCB)

Two twist clips and MBS are supplied. Clips twist onto t-bar stringers, and mounting bracket attaches with wing nuts.



Mounting Bracket (MBS)

For mounting speaker on a flat surface.

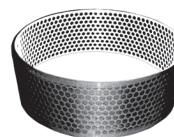
Line Matching Transformer (TX30)

The Model TX30 is a 30 W line matching transformer for the Model 110B with taps for 25, 50, 70 and 100 V constant voltage systems. The TX30 is designed for factory or field mounting in the 110B reflector. Connection to system wiring is via 10" color-coded flying leads. Available taps - 25 V: 30, 15, 7.5, 3.8, 1.9, 1, 0.5 W | 50 V: 30, 15, 7.5, 3.8, 1.9 W | 70 V: 30, 15, 7.5, 3.8 W | 100 V: 30, 15, 7.5 W.



Small Screen (SS)

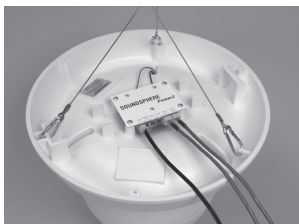
Protects speaker driver from foreign objects.



Small Screen with Weather Filter (SWFS)

Protects from foreign objects, plus a water protection barrier.

Model 110B Power2 with On-Board Amplification

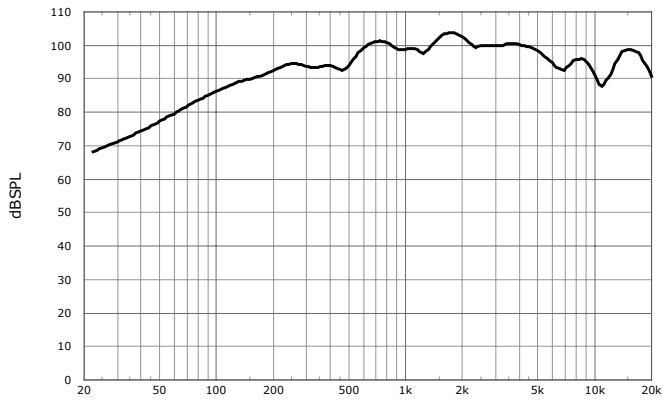


The Power2 adds on-board amplification to the compact Model 110B broad coverage speaker, making a separate amplifier unnecessary. Designed specifically for applications where only a single wide-dispersion speaker is required for coverage, the Power2 provides an easier and less expensive installation in such areas as small warehouses, open-ceiling classrooms, or lecture halls with video projectors, board rooms, and small retail stores.

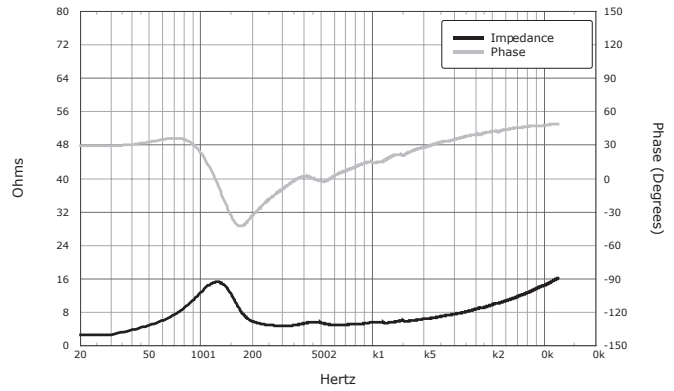
The amplifier has been designed to mount to the rear of the reflector. Two electronically balanced inputs with level controls are provided. The Power2 amplifier also includes a master output level control.

Graphs

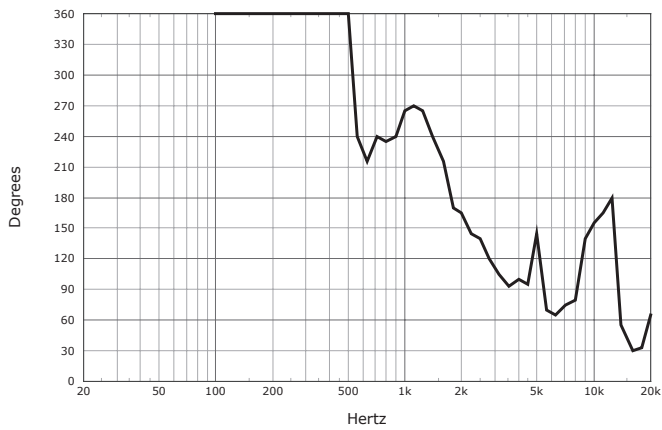
Hemispherical Frequency Response



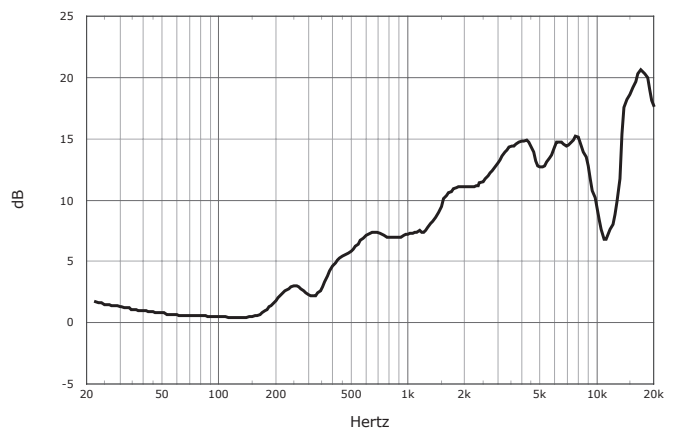
Phase/Impedance Response



Vertical Beamwidth (± 6 dB)

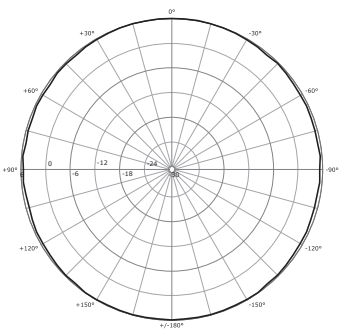


Directivity Index (DI)

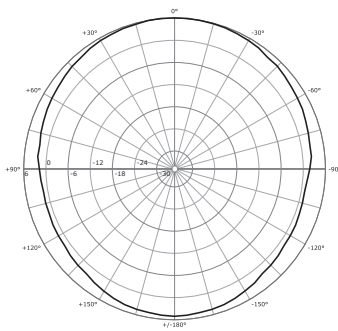


Plots (± 6 dB)

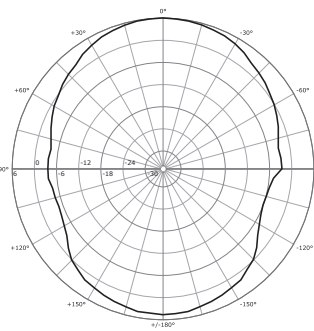
125 Hz



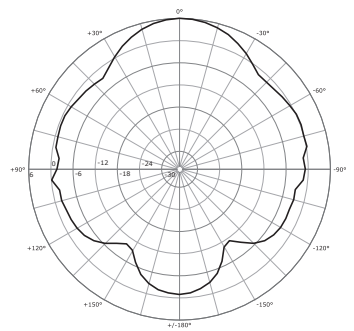
250 Hz



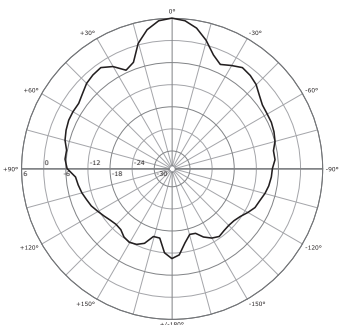
500 Hz



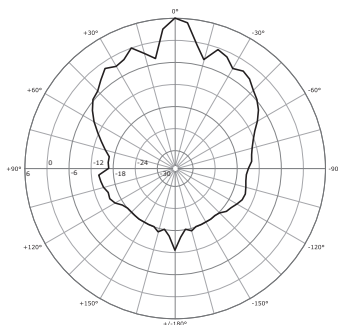
1,000 Hz



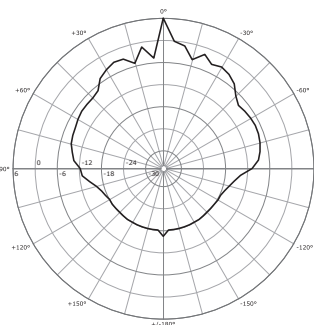
2,000 Hz



4,000 Hz



8,000 Hz



10,000 Hz

