



## Preliminary Data: SM800i

## Mounting hardware included

System Type	8 inch, coax, surface-mount, with passive radiator (120-watt transformer for 25/70.7/100-volt or 8 ohm direct)
Impedance (nominal) <sup>1</sup>	8 ohms
Sensitivity dB @ 2.83 V/1 m	91.0 dB
Sensitivity dB @ 1 W/1 m <sup>2</sup>	91.0 dB
Frequency Response ( - 3 dB) <sup>3</sup>	90 Hz - 22 kHz
Frequency Response ( - 10 dB) <sup>3</sup>	55 Hz - 22 kHz
Max. Program Power <sup>4</sup>	240 W
Max. Continuous Power RMS <sup>5</sup>	120 W
Max. Power SPL @ 1 m <sup>6</sup>	112.0 dB
Coverage Angle (-6 dB @ 2 kHz)	120°
Coverage Angle (-6 dB @ 10 kHz)	120°
Coverage Angle (averaged 2-10 kHz)	120°
Directivity Factor (Q)	5.0 (averaged 100 Hz - 10 kHz); 8.0 (2 kHz)
Directivity Index (DI)	5.0 dB (averaged 100 Hz - 10 kHz); 8.0 dB (2 kHz)
Tap Selector	Six-position rotary switch with voice coil direct
Transducer - Low-Frequency Driver	203 mm (8 in) polypropylene woofer with butyl rubber surround
Transducer - High-Frequency Driver	25 mm (1 in) convex aluminum tweeter with waveguide
Low-Frequency Voice Coil	50.8 mm (2.0 in)
Crossover Frequency	2.5 kHz
Network Type - Low Pass	12 dB per octave, 2nd order
Network Type - High Pass	12 dB per octave, 2nd order
Enclosure Material	Injection-molded ABS
Grille	Powder-coated stainless steel
Inputs	Four-pin, 5 mm Euroblock for individual or daisy chain connection
Colors	Black or white
Height	477.0 mm (18.78 in)
Width	295.9 mm (11.65 in)
Depth (including bracket)	390.4 mm (15.37 in)
Weight	13.6 kg (30.0 lbs.)
Shipping Weight	15.9 kg (35.0 lbs.)
Packaging	One per box
Accessories Included	Surface-mount bracket, seismic safety cable, Euroblock connector, terminal weather boot and paint mask
Accessories Optional	Stand mount adapter (AC-SM8-SMA)
Regulatory - CE	Approved
Regulatory - UL	UL 1480 pending
<b>Transformer Taps</b>	

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

70.7 V	Output	100 V	Output	25 V	Output
120 W	112.0 dB	120 W	112.0 dB	15 W	103.0 dB
60 W	109.0 dB	60 W	109.0 dB	8 W	100.0 dB
30 W	106.0 dB	30 W	106.0 dB	4 W	97.0 dB
15 W	103.0 dB	15 W	103.0 dB	2 W	94.0 dB
8 W	100.0 dB				

## Key Features

- Patented BroadBeam® waveguide technology delivers a consistent dispersion pattern for maximum intelligibility and edge-to-edge coverage (up to 10 kHz, independently verified).
- One 203 mm (8.0 in) flat honeycomb composite woofer and one concentric 25 mm (1.0 in) convex aluminum tweeter.
- One 203 mm (8.0 in) passive radiator for augmented low-frequency response (down to 48 Hz, - 10 dB)
- 120-watt low-insertion loss transformer and maximum output (112 dB max. SPL, 91 dB sensitivity).
- Easy-access tap switch for 25/70.7/100-volt with voice coil direct position.
- Powder-coated, stainless steel grille with tool-free locking system.
- Easy-install and proprietary Vise-Lock™ mounting system including a rust-free anodized, die-cast aluminum mounting plate and a hollow ball-joint assembly, which rotates 45° in all directions.
- Pre-mountable pole- and surface-mount bracket allows for quick and easy division of labor.
- Engineered with non-corrosive materials for indoor/outdoor applications.
- Included accessories: Surface-mount bracket, seismic safety cable, paint mask, Euroblock connector and terminal weather boot.
- Optional accessory: Stand-mount adaptor (AC-SM8-SMA).
- High-quality black or white paint finish, custom colors optional.

## Description

The SM800i is a premium high-efficiency surface-mount loudspeaker for distributed or 8 ohm systems. The SM800i incorporates a dedicated 8 inch flat honeycomb composite woofer and a convex aluminum dome tweeter with a BroadBeam® waveguide to deliver a consistent dispersion pattern and superb intelligibility for background to foreground music and messaging.

The SM800i uses a 120-watt, low-insertion loss transformer and a six-position tap switch with a voice coil direct position. Mounting hardware includes a Vise-Lock™ system with a durable, anodized,



die-cast aluminum mounting plate. The proprietary Vise-Lock™ system includes a tool-free, hollow ball-joint assembly, which rotates 45° in all directions, allowing for precise aiming and lasting performance.

Non-corrosive materials including stainless steel grille and screws plus all-aluminum mounting hardware and a sealed enclosure make the SM800i ideal for indoor/outdoor use.

## Applications

Engineered for applications requiring maximum intelligibility, true low-frequency response and rapid installation, the SM800i delivers a smooth and even coverage pattern ideal for casinos, convention centers, gyms, nightclubs, aerobic rooms, airports, super stores, arenas, theme parks, transportation hubs, shipping centers and stadiums. For additional low-frequency response down to 40 Hz (-10 dB) the powered SM1001-P may be incorporated.

## BroadBeam® Wide Dispersion Technology

SoundTube's patented BroadBeam® technology incorporates a high-frequency waveguide mated to a 1 inch convex aluminum tweeter. The BroadBeam® high frequency waveguide delivers a constant dispersion pattern across the upper registers of the frequency spectrum. The result is maximum edge-to-edge coverage and intelligibility (up to 10 kHz, independently verified).

## Patented SoundTube Technologies

SoundTube Entertainment and MSE Audio Group constantly develop new technologies that enhance audio product performance. SoundTube Entertainment innovations are protected by multiple U.S. and international patents, which explicitly cover SoundTube

dispersion, enclosure and dome technologies. MSE Audio Group actively defends its patents in order to protect SoundTube resellers and end users.

## Technical Data and Specification Tools

### Technical Data

SoundTube Entertainment strives to provide complete and effective technical information and data to dealers, engineers and designers. All data are available from SoundTube Entertainment or at [www.soundtube.com](http://www.soundtube.com).

Technical data and downloads include:

EASE™ data – 3-D polar plots.

EASE™ Address – 2-D modeling for distributed systems

Autodesk® Revit® software

Tech Sheets – Technical information and architectural specs for system engineers

SoundTubeSPEC™ – Proprietary speaker placement software

### Independent Data Acquisition and Verification

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

### Architectural Specifications

The loudspeaker shall consist of one 203 mm (8.0 in) low-frequency transducer and one 25.4 mm (1.0 in) convex aluminum tweeter. The system shall include a crossover network and 120-watt low-insertion loss transformer installed in the enclosure. The low-frequency voice coil diameter shall

be 50.8 mm (2.0 in).

Performance specifications for a typical production unit shall be as follows: Useable frequency response shall extend from 55 Hz – 22 kHz (-10 dB). Measured sensitivity (2.83 volt, 1 meter) shall be at least 91 dB. The speaker shall have a nominal impedance of 8 ohms. The speaker shall be available for 25-, 70.7- and 100-volt modes and shall include a six-position tap switch with a voice coil direct position.

The frequency dividing network shall have a crossover frequency of 2.5 kHz with slopes of 12 dB per octave (2nd order) for both low- and high-pass filters. Rated power capacity shall be at least 120 watts continuous (RMS) and conform to EIA-426 testing. Maximum continuous output at 1 meter shall be 112 dB.

The low-frequency transducer shall have a flat honeycomb composite cone with butyl rubber surround. The high-frequency transducer shall be constructed of aluminum with a proprietary BroadBeam® waveguide. The passive radiator shall be constructed of polypropylene and deliver extended low-frequency response.

The grille shall be powder-coated, stainless steel with a tool-free locking system. The proprietary Vise-Lock™ mounting system includes a rust-free, anodized, die-cast aluminum mounting plate and a hollow ball-joint assembly engineered to rotate 45° in all directions. A pre-mountable pole- or surface-mount bracket allows for quick and easy division of labor applications.

Overall dimensions including the mounting plate and bracket for the SM800i are 477.0 mm (18.78 in) tall by 295.9 mm (11.65 in) wide by 390.4 mm (15.37 in) deep.

The system shall be the SM800i for both low- and high-impedance applications.

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**All SoundTube products come with a 5-year limited warranty.**



**Graphs and Plots**

**Frequency Response**

N/A

**Impedance/Phase**

N/A

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**Vertical Beamwidth**

N/A

**Directivity Index (DI)**

N/A

# SM800i

High-Powered Surface-Mount Speaker  
Preliminary Technical Information for System Engineers



**SOUNDTUBE**  
ENTERTAINMENT

## Polar Plots

—— Horizontal  
- - - - Vertical

125 Hz

250 Hz

500 Hz

1,000 Hz

N/A

N/A

N/A

N/A

2,000 Hz

4,000 Hz

8,000 Hz

10,000 Hz

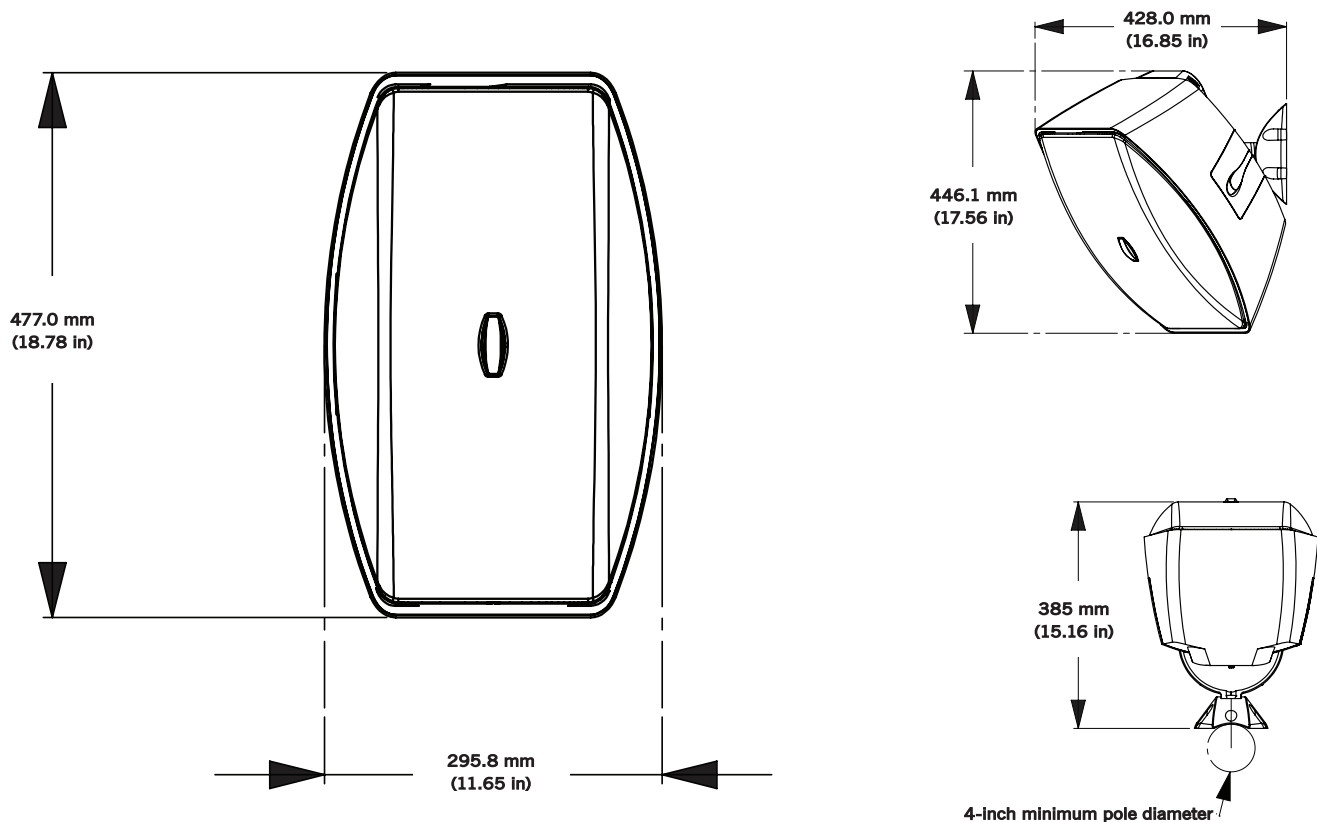
N/A

N/A

N/A

N/A

## Mechanical Drawings



SoundTube Entertainment manufactures a complete line of speakers for:  
**Open-Ceiling • In-Ceiling • Surface-Mount • Outdoor • Sound-Focusing**

All SoundTube products are designed and engineered in the USA.