## HP8i

## High-Power Speaker

**Technical Information for System Engineers** 







#### Specifications: HP8i-T64 HP8i-SM-T64

System Type	8" 2-way high-power ported (64 Watt transformer or 70.7/100 Volt applications with voice coil/8 Ohm direct)
Frequency Response (-3 dB) <sup>1</sup>	88 Hz – 15 kHz
Low Frequency (-10 dB) <sup>1</sup>	52 Hz – 17 kHz
Max. Program Power	250 W
Max. Continuous Power RMS <sup>2</sup>	125 W
Max. SPL dB @ 1M	116 dB
Sensitivity dB @ 1W/1M <sup>3</sup>	95 dB
Impedance	8 Ohm (nominal value)
Tap Selector	Selectable via barrier terminal strip

#### **Transformer Taps**

70.7 V	Output	100 V	Output
64 W	113 dB	n/a	n/a
32 W	110 dB	64 W	113 dB
16 W	107 dB	32 W	110 dB
8 W	104 dB	16 W	107 dB

Coverage Angle (-6 dB @ 2 kHz) 115°  Coverage Angle (-6 dB @ 8 kHz) 90°  Directivity Factor (Q) 4.04 (100 Hz to 10 kHz averaged) 6.07 @ 2 kHz  Directivity Index (DI) 5.21 dB (100 Hz to 10 kHz averaged) 7.83 dB @ 2 kHz  Transducers  Low Frequency Driver 1 x 203 mm (8.0 in) concentric coaxial coated fiber driver  High Frequency Driver 1 x 25 mm (1.0 in) compression driver with a 50 mm (2.0 in) titanium diaphragm  Crossover Frequency 1.8 kHz  Network Type  Low Pass 12 dB per octave, 2nd order  High Pass 18 dB per octave 3rd order with protection circuitry  Inputs Corrosion-resistant gold-plated barrier strips  Enclosure Material Engineered glass-fiber reinforced composite  Colors Black or white  Diameter 316 mm (12.43 in)  Length 405 mm (15.95 in)  Net Weight 10.71 kG (23.6 lbs)  Accessories  Optional See installation options on back page		
Directivity Factor (Q)  4.04 (100 Hz to 10 kHz averaged) 6.07 @ 2 kHz  Directivity Index (DI)  5.21 dB (100 Hz to 10 kHz averaged) 7.83 dB @ 2 kHz  Transducers  Low Frequency Driver  1 x 203 mm (8.0 in) concentric coaxial coated fiber driver  High Frequency Driver  1 x 25 mm (1.0 in) compression driver with a  50 mm (2.0 in) titanium diaphragm  Crossover Frequency  1.8 kHz  Network Type  Low Pass  12 dB per octave, 2nd order  High Pass  18 dB per octave 3rd order with protection circuitry  Inputs  Corrosion-resistant gold-plated barrier strips  Enclosure Material  Engineered glass-fiber reinforced composite  Colors  Black or white  Diameter  316 mm (12.43 in)  Length  405 mm (15.95 in)  Net Weight  10.71 kG (23.6 lbs)  Accessories	Coverage Angle (-6 dB @ 2 kHz)	115°
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Transducers  Low Frequency Driver  High Frequency Driver  1 x 25 mm (1.0 in) concentric coaxial coated fiber driver 1 x 25 mm (2.0 in) titanium diaphragm  Crossover Frequency  1.8 kHz  Network Type  Low Pass  12 dB per octave, 2nd order  High Pass  18 dB per octave 3rd order with protection circuitry  Inputs  Corrosion-resistant gold-plated barrier strips  Enclosure Material  Engineered glass-fiber reinforced composite  Colors  Black or white  Diameter  316 mm (12.43 in)  Length  405 mm (15.95 in)  Net Weight  10.71 kG (23.6 lbs)  Accessories	Directivity Factor (Q)	4.04 (100 Hz to 10 kHz averaged) 6.07 @ 2 kHz
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Accessories	Length	405 mm (15.95 in)
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Optional See installation options on back page	Accessories	
	Optional	See installation options on back page

SoundTube continually develops new product innovations and improvements. Updates to existing products without prior notice are an example of SoundTube's drive for constant improvement.

## **Key Features**

- High-SPL, high-efficiency system for the sound reinforcement and PA markets.
- BroadBeamHP® coverage pattern providing smooth response and high SPL across the audio spectrum.
- One 203 mm (8.0 in) concentric coaxial coated fiber driver, 25 mm (1.0 in) compression driver with a 50 mm (2.0 in) titanium diaphragm.
- Weatherized components and sealed input panel for indoor/outdoor applications.
- Switchable dual input option for either voice coil/80hm direct or 70.7/100
   Volt applications.
- Multiple installation hardware options for overhead and surfacemount applications.
- Integrated hanging and safety cables for easier and cleaner-looking installs.
- Fine black or white paint finish.

## **Applications**

The SoundTube HP8i is a premium 2-way low-profile, high-efficiency, high-SPL speaker with BroadBeamHP® technology providing a wide dispersion pattern for the sound reinforcement and PA markets.

The HP8i is engineered for installations requiring full-range background/fore-ground music plus paging. A smooth and even coverage pattern makes the HP8i an ideal choice for use in warehouses, gyms, aerobic rooms, super stores, theme parks and other open-ceiling or outdoor applications where high SPL is required.

#### **Cast Composite Enclosure**

SoundTube's HP8i cast composite enclosure provides a low-resonance platform with effective self-damping properties for a clean, tight sound. Compression cast glass-fiber composite material coupled with SoundTube's patented ZeroReflection™ internal shaping provides extreme stiffness, eliminating internal standing waves and external diffraction distortions. The result is accurate sound and tight bass in a commercial speaker.

## **Technical Data**

SoundTube Entertainment strives to provide complete and effective technical information and data to dealers, engineers and

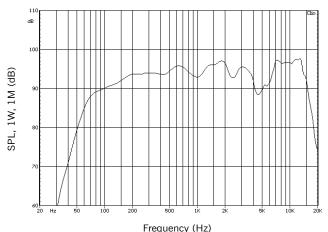
<sup>&</sup>lt;sup>1</sup> Frequency response is measured in full space.

<sup>&</sup>lt;sup>2</sup> Continuous power rating, EIA-426-B test.

<sup>&</sup>lt;sup>3</sup> 2.83 Volts at a distance of 1 meter.

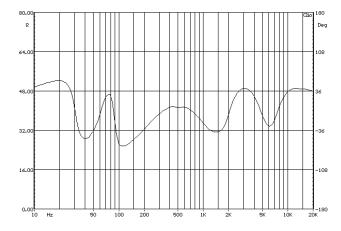


#### Frequency Response (unequalized)

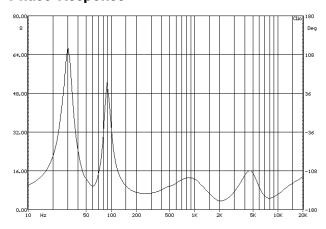


Frequency Response on-axis in full space  $(4\pi)$ .

## Impedance Response



#### **Phase Response**



designers. All data are available from SoundTube Entertainment or at www.soundtube.com.

Technical data and downloads include:

**Tech Sheets** – Technical information and architectural specs for system engineers.

#### **Data Acquisition**

All performance data acquired at SoundTube's Technical Measurement Center (TMC) are analyzed using standardized measurement techniques, including Measured Length Sequence (MLS) and Time Delay Spectrometry (TDS). Performance, development, and data acquisition tools include: Gold Line TEF 20 Suite, CLIO, LMS, LEAP, and proprietary modeling software.

# Data for Other SoundTube Products

Also available: Sales & installation information for all SoundTube speaker systems, including open ceiling, in-ceiling, surface-mount, in-ground and sound-focusing speakers.

## **Architectural Specifications**

The loudspeaker shall consist of one 203 mm (8.0 in) concentric coaxial coated fiber driver, 25 mm (1.0 in) compression driver with a 50 mm (2.0 in) titanium diaphragm, and a frequency-dividing network installed in a dual-ported enclosure. The low-frequency voice coil diameter shall be 50 mm (2.0 in).

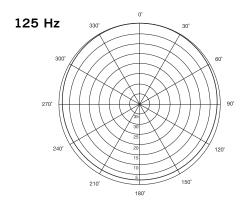
Performance specifications of a typical production unit shall be as follows: Usable frequency response shall extend from 52 Hz – 17 kHz. The loudspeaker shall be available with a switchable transformer/8 Ohm input, and shall be equipped with corrosion-resistant gold-plated barrier strips for both impedance modes. Taps shall be nominally 8 W @ 70.7 V (16 W @ 100 V), 16 W @ 70.7 V (32 W @ 100 V),  $32~W \ @\ 70.7~V$  (64 W @ 100 V) and 64 W @ 70.7 V (tap position not used @ 100 V). The frequency-dividing network shall have a crossover frequency of 1.8 kHz. Rated power capacity of the components and network shall be at least 125 Watts continuous RMS power.

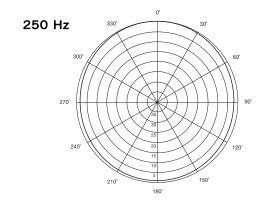
The enclosure shall be constructed of a glass-fiber reinforced composite for maximum performance. The grille shall be constructed of UV-resistant ABS plastic material.

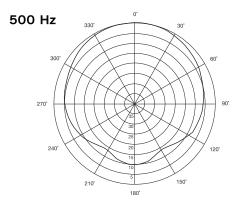
Technical data, EASE™ plots, SoundTubeSPEC™ software & product downloads available at www.soundtube.com

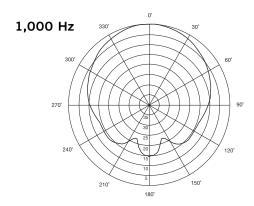


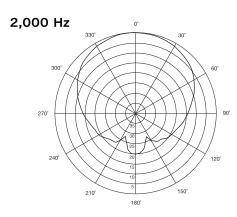
## **Horizontal One Octave Polars**

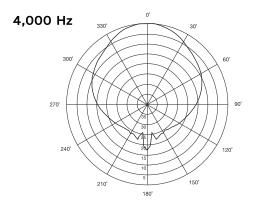


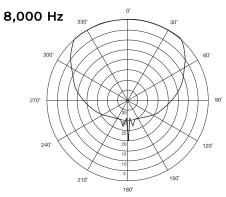








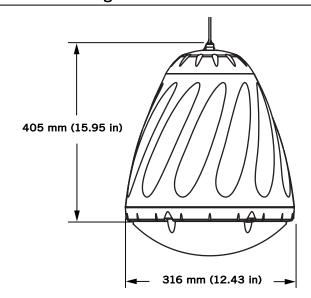




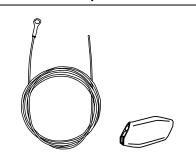
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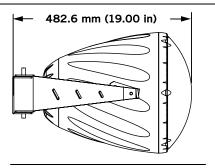
## **Mechanical Drawings**



#### **Installation Options**



Hanging/Safety Cable with SpeedClamp™



HP8i-SM Surface-Mount speaker system

Installation for the HP8i shall be by a single hanging aircraft cable with a 1/4-20 stud into threaded insert on rear input panel. The HP8i-SM model shall include a Surface Mount Bracket kit constructed of 12-gauge cold rolled steel (CRS) with electrostatic paint. A safety cable shall be included as a seismic and safety redundancy system on both models. The external wiring input connectors shall be barrierterminal strip and shall accept from 16 -22 gauge wire (or wire of any size using a blade terminal input). Overall cabinet dimensions shall be no more than 316 mm (12.43 in) in diameter, by 405 mm (15.95 in) in length, and weigh no more than 10.71 kG (23.6 lbs).

The system shall be the SoundTube HP8i for both low and high impedance.

#### SoundTube Entertainment

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

#### **Optional Accessories**

(not shown)

AC-CC-10 – 10' adjustable Combi-Cable AC-CC-20 – 20' adjustable Combi-Cable

AC-HK-10 – 10' hanging cable AC-HK-20 – 20' hanging cable AC-BC1 – Beam Clamp

AC-SL1 – Snap Link AC-FE1 – Forged Eyebolt AC-HP8-GC – Protective Sports Cage Grille

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

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