



## HP129a PRODUCT SPECIFICATIONS

System Type	12", two-way, high-power, ported (150 W transformer for 25, 70.7, and 100 V or transformer bypass position)
Impedance (Nominal) <sup>1</sup>	8 Ω
Sensitivity dB @ 2.83 V / 1 M	97 dB
Sensitivity dB @ 1 W / 1 M <sup>2</sup>	97 dB
Frequency Response (±3 dB) <sup>3</sup>	118 Hz - 16 kHz
Frequency Response (±10 dB) <sup>3</sup>	73 Hz - 19 kHz
Max. Program Power <sup>4</sup>	300 W
Max. Continuous Power RMS <sup>5</sup>	150 W
Max. Power SPL @ 1 M <sup>6</sup>	119 dB
Coverage Angle (±6 dB @ 2 kHz)	80°
Coverage Angle (±6 dB @ 10 kHz)	90°
Coverage Angle (Avg. 2-10 kHz)	95°
Directivity Factor (Q)	6.1 (Avg. 100 Hz - 10 kHz)   10 (2 kHz)
Directivity Index (DI)	6.6 dB (Avg. 100 Hz - 10 kHz)   10 dB (2 kHz)
Tap Selector	Five-position rotary switch with transformer bypass position
Transducer: Low-Frequency Driver	305 mm (12") treated fiber cone, treated cloth surround
Transducer: High-Frequency Driver	1 x 35 mm (1.375") Mylar compression driver with waveguide
Low-Frequency Voice Coil	50.8 mm   2"
Crossover Frequency	2.2 kHz
Network Type: Low Pass	24 dB per octave, 4th order
Network Type: High Pass	24 dB per octave, 4th order
Enclosure Material	Injection molded ABS baffle, glass fiber reinforced
Grille	Iridite-plated steel with powder-coat finish
Inputs	4-pin, 5.08 mm Euroblock for individual or daisy chain connection
Height	452.1 mm   17.8"
Diameter	457.2 mm   18"
Weight	16.4 kg / 36.2 lbs
Included Accessories	Hanging hardware, Euroblock connector and terminal weather boot
Optional Accessories	Surface mount bracket (AC-HP-SM129)
Certifications	CE, RoHS, UL1480A, UL2239

## Description

The HP129a is a 12", coaxial, hanging speaker with a surface-mount option and a proprietary BroadBeamHP® waveguide. Engineered to deliver true high SPL performance, the HP129a incorporates a 12" treated fiber cone and one 35 mm (1.38") Mylar compression driver with a professional-grade electro-acoustic sub-assembly. The result is a pendant-mount speaker with maximum efficiency (97 dB 1 W / 1 M) and an extended frequency response from 73 Hz - 19 kHz (±10 dB). For lasting performance, the enclosure is made from injection-molded, glass-filled ABS.

Mounting hardware is included and features hanging and safety cables, Euroblock connector and terminal weather boot. For easy ordering, stocking and installation, every speaker is equipped with a five-position tap switch for 25, 70.7, and 100 V applications with a transformer bypass setting. For surface-mount applications, SoundTube offers a surface-mount adapter (AC-HP-SM129).

## Features

- Patented BroadBeamHP® coverage pattern providing smooth response and maximum SPL across the audio spectrum
- One 12" (305 mm) treated fiber cone with a treated cloth surround and one 1.375" (35 mm) Mylar compression driver with waveguide
- Weatherized components for indoor/outdoor applications and a ported enclosure for added bass response (down to 73 Hz, ±10 dB)
- High SPL, high-efficiency system for the sound reinforcement and PA markets
- Easy-access, five-position tap switch for 25, 70.7, and 100 V applications with transformer bypass position
- Reduced amplification costs and maximum efficiency (97 dB sensitivity), with 8 Ω impedance
- UL1480A approved
- High quality black or white painted finish. Custom colors available
- Included accessories: hanging hardware, Euroblock connector, terminal weather boot
- Optional accessory: surface-mount bracket (AC-HP-SM129)

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

<sup>2</sup> 1 W/1 M sensitivity determined using nominal impedance

<sup>3</sup> Frequency response measured in half or full space as dictated by speaker mounting configuration

<sup>4</sup> Max program power is 3 dB above max continuous power

<sup>5</sup> Continuous power rating, EIA-426-B test

<sup>6</sup> Max output based on max continuous power

## Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
150 W	119 dB	150 W	119 dB	19 W	110 dB
75 W	116 dB	75 W	116 dB	9.5 W	107 dB
38 W	113 dB	38 W	113 dB	4.8 W	104 dB
19 W	110 dB			2.4 W	101 dB

## Applications

Developed specifically for true PA and sound reinforcement applications including arenas, stadiums, gyms, ice rinks, nightclubs and other open-ceiling or outdoor applications where rapid installation, high SPL and lasting durability are required.

## Patented Technologies

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

## BroadBeam® Wide Dispersion Technology

SoundTube's proprietary BroadBeam technology incorporates a high-frequency waveguide mated with a 1" convex aluminum tweeter. The BroadBeam waveguide technology delivers a consistent dispersion pattern across the upper registers of the frequency spectrum. The result is an audio system requiring fewer speakers with higher intelligibility, offering reduced power needs, shorter installation time and cost savings on shipping and labor.

## Technical Data and Specification Tools

SoundTube Entertainment strives to provide complete and effective technical information and data to dealers, engineers and designers. All data is 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 is independently collected from and verified by NWAALabs ([www.nwaalabs.com](http://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 shall consist of one 305 mm (12") low-frequency transducer and one 35 mm (1.375") high-frequency transducer with a frequency dividing network installed in a ported enclosure. The low-frequency voice coil diameter shall be 50.8 mm (2").

Performance specifications of a typical production unit shall be as follows: Usable frequency range shall extend from 73 Hz - 19 kHz ( $\pm 10$  dB). The loudspeaker shall be available with selectable 25, 70.7, 100 V tap switch with transformer bypass position. The frequency dividing network shall have a crossover frequency of 2.2 kHz. Rated power capacity of the components and network shall be at least 150 W continuous RMS and conform to EIA-426-B testing. Maximum continuous output at 1 meter shall be at least 119 dB.

The low-frequency transducer shall have treated fiber cone material with a treated cloth surround. The high-frequency transducer shall be constructed of Mylar material.

Installation for the speaker shall be galvanized steel cable affixed to the speaker chassis via an integrated snap hook. For safety redundancy, a secondary steel cable shall be included. The external wiring input connector shall be a four-pin, 5.08 mm Euroblock for 8  $\Omega$  or distributed systems and shall accept 10 - 22-gauge wire. The unit shall be for indoor and outdoor applications and have a weather-resistant boot covering all wire connections. The system shall ship complete with mounting hardware including hanging and safety cables, Euroblock connector and terminal weather boot. The speaker has an optional surface-mount bracket (AC-HP-SM129).

The ported enclosure shall be constructed from injection molded, glass-filled reinforced ABS with a total volume of 1700 cubic inches. The grille shall be constructed of iridite-plated steel with a powder-coat finish and affix to the speaker via friction fit with two blind-mounted, radial screws.

The unit is factory preset to the 150 W setting in the 70.7 V operating mode, with a tap switch located on the front baffle of the speaker and is accessible by a removable grille plug. Signal input shall be by four-pin Euroblock connector.

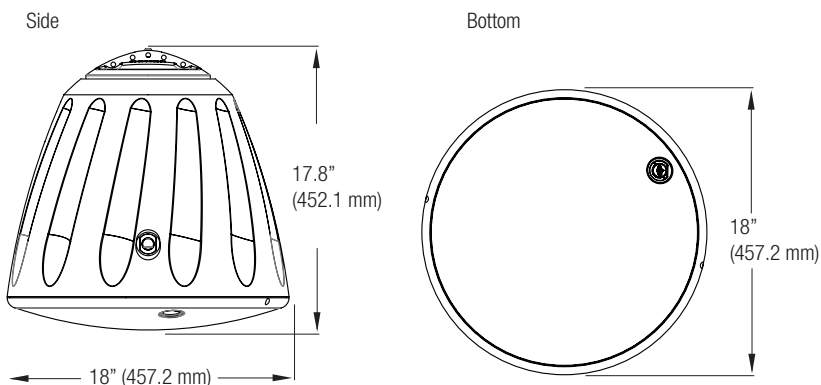
The system shall be the SoundTube HP129a for both low and high impedance applications.

## SoundTube®

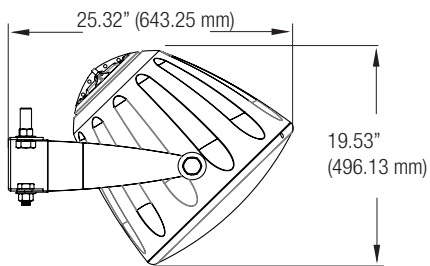
13720 W. 109th St.  
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All SoundTube speakers come with a 5-year limited warranty and 3-year warranty on all electronics.

## Mechanical Drawings

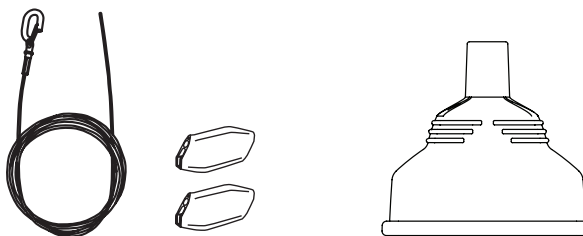


### Optional Accessories



Surface-Mount Bracket  
(AC-HP-SM129)

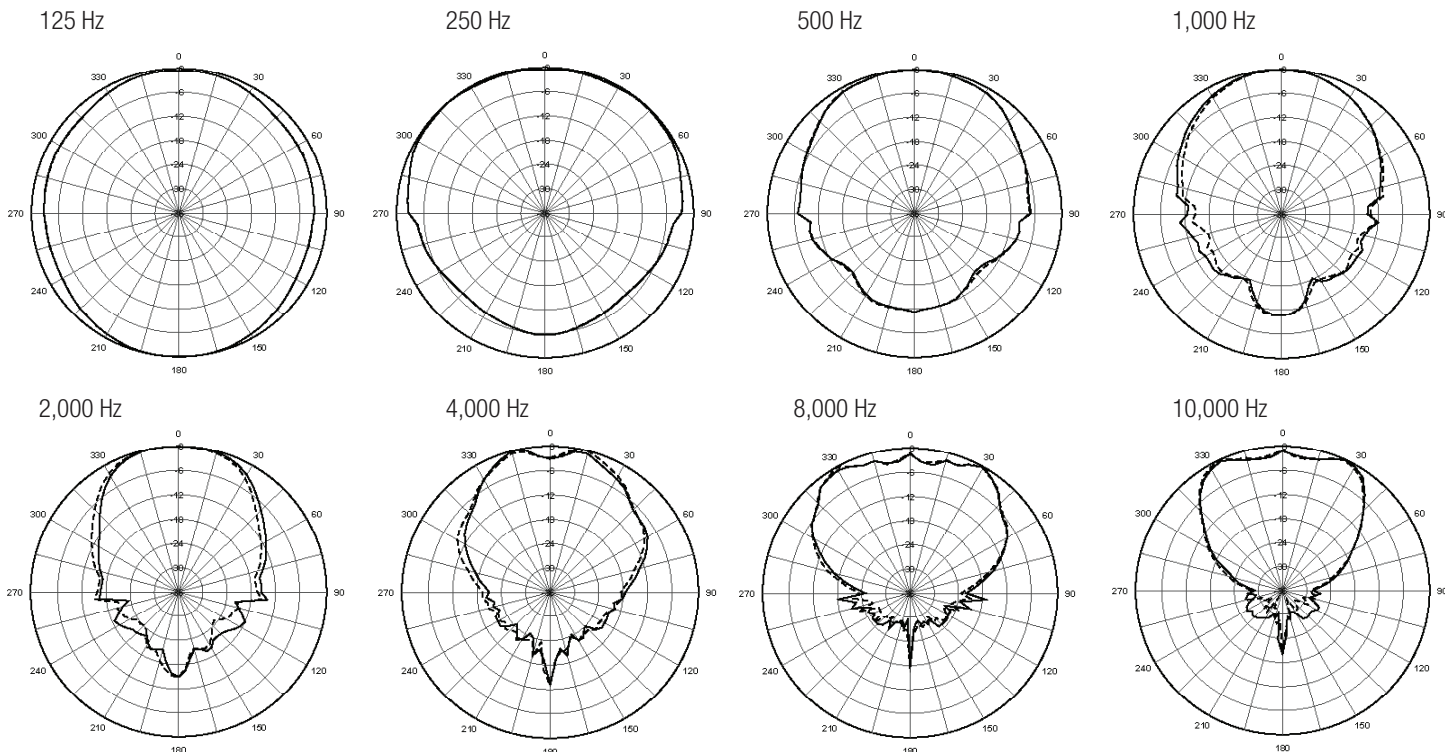
### Included Accessories



Hanging Hardware

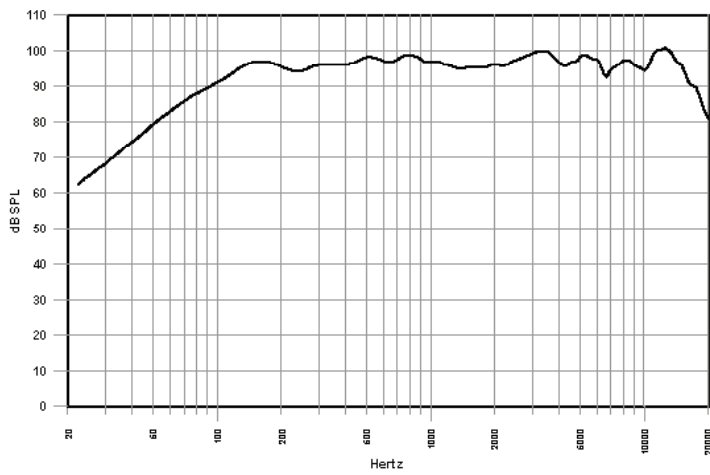
Terminal Weather Boot

## Plots

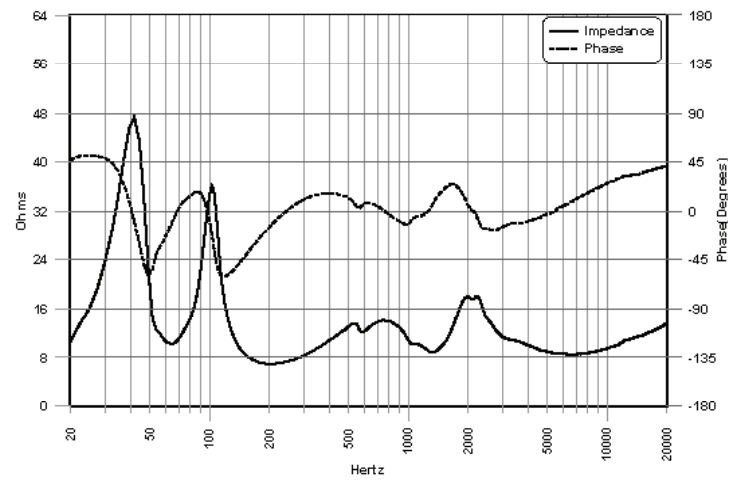


## Graphs

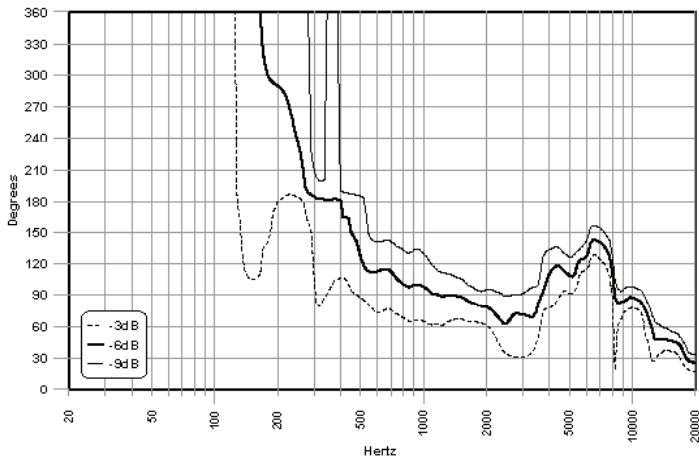
Frequency Response



Phase/Impedance Response



Vertical Beamwidth



Directivity Index (DI)

