

FP6030

Sound-Focusing Speaker
Technical Information for System Engineers



SOUNDTUBE
ENTERTAINMENT



Specifications: FP6030

System Type	2 x 25 mm Stereo or mono high-directivity (8 Ohm stereo, 4 Ohm mono). Optional transformer for distributed systems (25/70.7/100 Volt).
Frequency Response (-3 dB) ¹	143 Hz – 21.5 kHz
Low Frequency (-10 dB) ¹	104 Hz – 22.0 kHz
Max. Program Power	30 Watts
Max. Continuous Power RMS ²	15 Watts
Max. SPL dB @ 0.5 M RMS	92.5 dB S/95.5 dB M
Sensitivity dB @ 1W/0.5 M ³	80.5 dB stereo, 83.5 dB mono
Impedance (nominal)	8 Ohm stereo, 4 Ohm mono (bridged)
Coverage Angle (-6 dB @ 2 kHz)	41° (averaged)
Coverage Angle (-6 dB @ 10 kHz)	48° (averaged)
Directivity Factor (Q)	14.16 (averaged 140 Hz - 10 kHz); 14.23 @ 2 kHz
Directivity Index (DI)	9.06 (averaged 140 Hz to 10 kHz); 26.48 @ 2 kHz
8 Ohm/4 Ohm Input	Hardwire lead
Transformer Input Option	4-Position tap switch in supplied junction box

Optional Transformer Taps

70.7 V	Output	100 V	Output	25 V	Output
10 W	93.5 dB	10 W	93.5 dB	1.25 W	84.5 dB
5 W	90.5 dB	5 W	90.5 dB	0.63 W	81.5 dB
2.5 W	87.5 dB	2.5 W	87.5 dB	0.32 W	78.5 dB
1.25 W	84.5 dB	1.25 W	84.5 dB	0.16 W	75.5 dB

Transducers	
Full-Range Drivers	Twin 25 mm (1.0 in) full-range aluminum convex transducers
Network Type	
High Pass	75 Hz or 350 Hz, switchable
Voice Coil Diameter	20.5 mm (0.81 in)
Dome Material	Custom molded PETG, clear
Enclosure Material	High impact polystyrene
Grille (Protective Driver Guard)	High impact polystyrene
Colors	Clear dome, black enclosure, custom dome colors available
Dome Diameter	781 mm / 30.75 in
Dome Height	333 mm / 13.1 in
Weight	4.1 kg / 9.0 lbs
Shipping Weight	9.3 kg / 20.5 lbs
Accessories	
Included	Cable hanging bracket, mounting bushing & hardwire lead
Optional	Decorative SoundSleeve™ (AC-CPSU), Wall Mount Bracket (AC-WB3), Junction Box (AC-FP6-XFMR)
Packaging	1 Per box, bulk shipping available

¹ Frequency response is measured in half & full space and includes a low-frequency peak > +3 dB.

² Continuous power rating, EIA-426-B test.

³ 2.83 Volts at a distance of 0.5 meter.

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

- Patented Dual-Parabolic™ dispersion control technology provides a dramatic hot spot with crisp stereo separation.
- 781 mm (30.75 in) Custom-molded PETG clear polymer dome for minimal visual impact.
- Twin 25 mm (1 in) convex aluminum High Excursion Micro Transducers in individually sealed enclosures for stereo or mono music & messaging.
- Patented ZeroReflection™ enclosure technology for accurate sound reproduction.
- Narrow 41° coverage angle for sharp focus.
- Single-point balanced mounting for easier and cleaner-looking installs.
- Shipped as individual units, bulk shipping available.
- Optional wall bracket available.
- Custom colors & printed decorative SoundSleeves™ available.

Description

The SoundTube FP6030 incorporates 2 full-range, high-performance 1.0" convex aluminum dome High Excursion Micro Transducers with patented Dual-Parabolic™ sound dome technology to deliver a targeted audio footprint for high-definition music and messaging applications. Standard model ships as 8 Ohm (or 4 Ohm bridged) with optional 25/70.7/100 Volt transformer available. Mounting hardware is included; optional wall bracket is available.

Applications

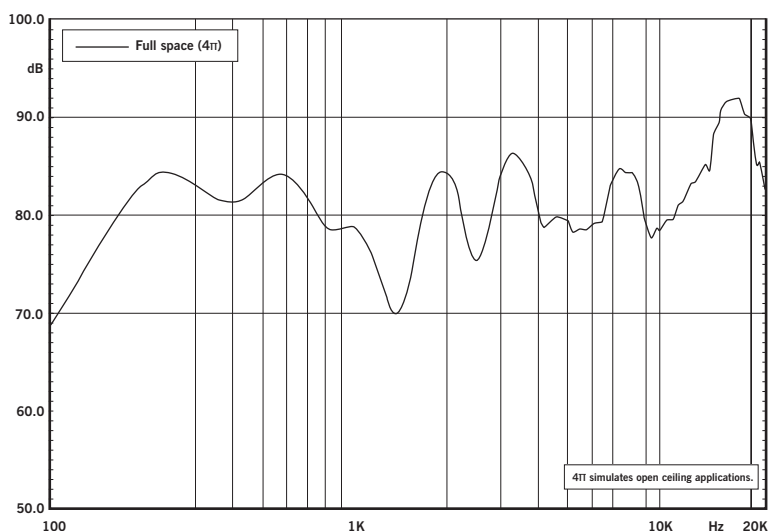
Tight coverage, wide-range stereo sound (104 Hz – 22 kHz, -10 dB) and true audio containment (43° @ 2 kHz, -6 dB) make the FP6030 the ideal choice for focused audio applications. Applications include museums kiosks, P.O.P. displays, trade shows, digital signage, or anywhere contained high-fidelity stereo or mono sound is required.

Patented Dual-Parabolic™ Technology

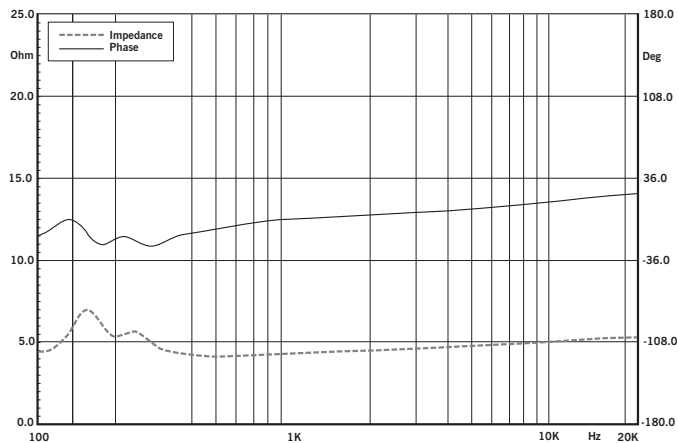
By incorporating patented Dual-Parabolic™ dome technology, the FP series provides a dramatic hot-spot with crisp stereo separation. With sound waves



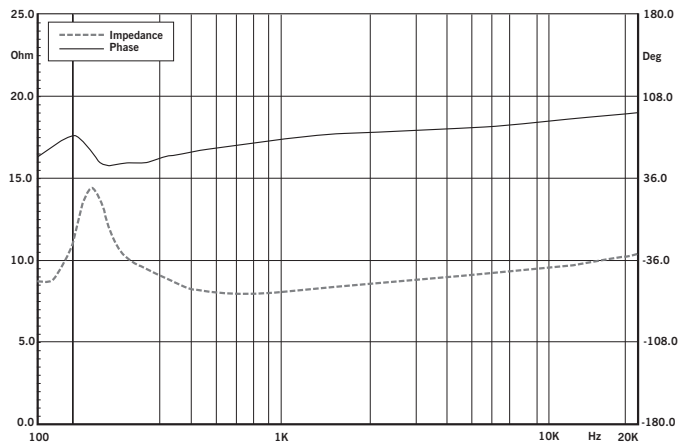
Frequency Response



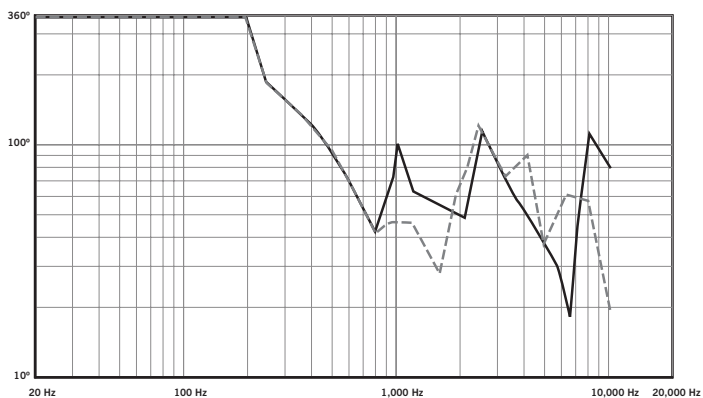
Phase/Impedance Reponse (Mono 40hm)



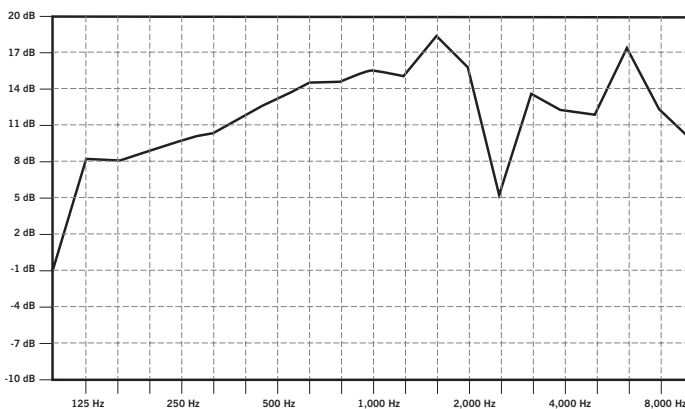
Phase/Impedance Reponse (Stereo 80hm)



Beamwidth (-6 dB)



Directivity Index (DI)





projected into the dome, SoundTube's proprietary technology reflects sound waves from the upper registers of the frequency spectrum directly beneath the dome.

SoundTube Entertainment is consistently developing new technologies that enhance audio product performance. SoundTube Entertainment innovations are protected by multiple U.S. and international patents, which explicitly cover SoundTube dome, enclosure, mounting and dispersion technologies. SoundTube Entertainment actively defends its patents in order to protect SoundTube resellers and end-users.

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.

Technical data and downloads include:
EASE™ data – 3-D polar plots

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

Data Acquisition

All performance data are acquired from SoundTube's Technical Measurement Center and always verified by independent sources. For questions about specific testing procedures, contact SoundTube Entertainment direct (techinfo@soundtube.com.) All data are analyzed using a variety of standard measurement techniques, including Measured Length Sequence (MLS) and Time Delay Spectrometry (TDS). Performance, development and data acquisition tools include: Gold Line TEF 20, CLIO, LMS, LEAP and proprietary modeling software. EASE™ data are acquired through an automated TEF 20/Outline/EASE™ interface.

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

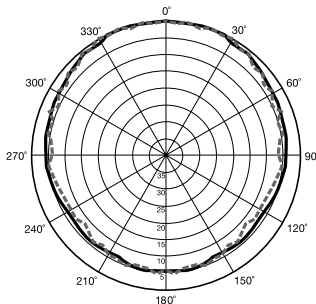
The loudspeaker shall consist of two 25 mm (1.0 in) transducers with a voice coil diameter of 20.5 mm (0.81 in). Sound waves from the transducers shall be reflected from a 781 mm (30.75 in) Dual-Parabolic™ sound dome.

Performance specifications of a typical unit shall be as follows: Useable frequency response shall extend from 104 Hz – 22 kHz (-10 dB). Measured sensitivity (2.83 Volt input, 0.5 meter) shall be at least 80.5 dB stereo (83.5 dB mono). The maximum continuous output at 0.5 meter shall be 92.5 dB stereo or 95.5 dB mono. The loudspeaker shall come with a CAT 5 plus four 16-gauge hardwire leads and be available in 8 Ohm impedance mode (4 Ohm if bridged/mono), or with an optional 25/70.7/100 Volt transformer and accompanying junction box. For the 8 Ohm model, tap setting will be by hardwire lead. For the transformer model, the transformer unit and 4-position tap switch will be supplied in a junction box.

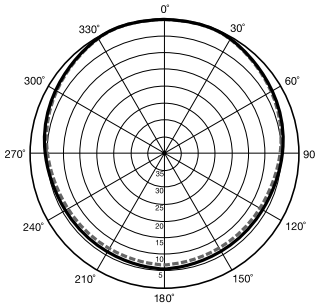
The dome shall be constructed of custom-molded PETG with a high-impact polystyrene driver enclosure. The trans-

Polar Plots

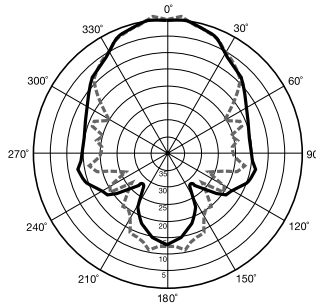
125 Hz



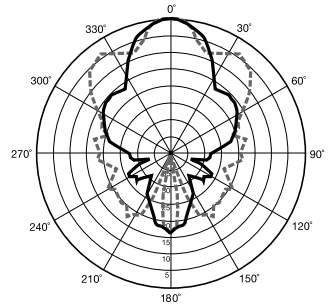
250 Hz



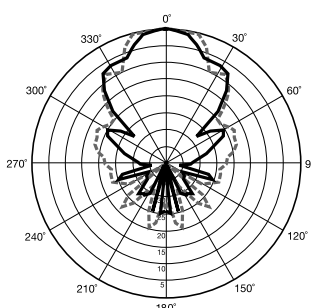
500 Hz



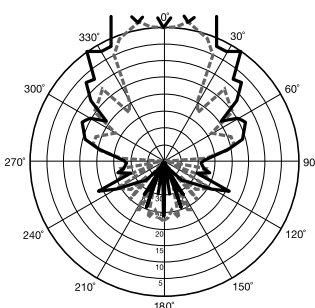
1,000 Hz



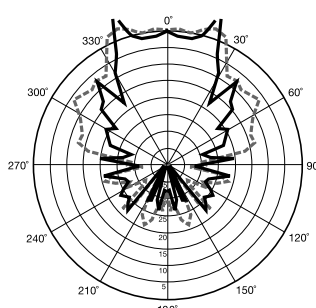
2,000 Hz



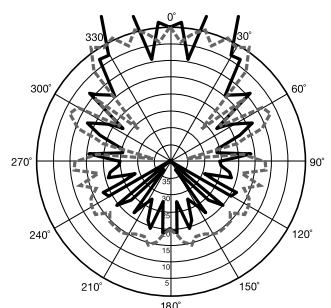
4,000 Hz



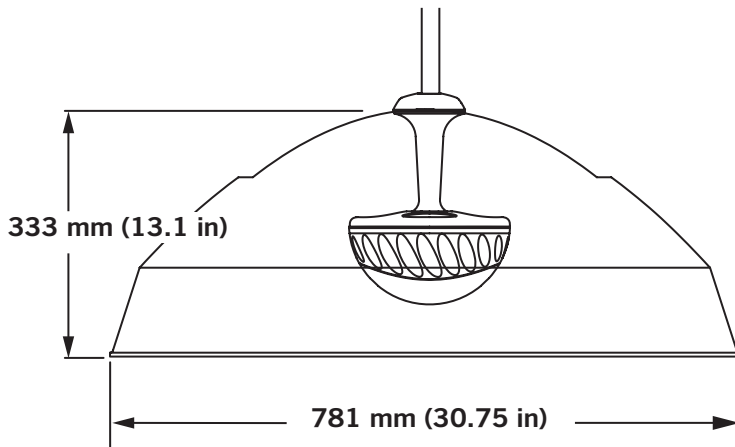
8,000 Hz



10,000 Hz



Mechanical Drawings



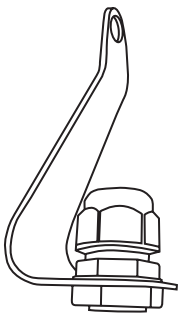
ducers shall have an aluminum dome. The grille shall be constructed of high-impact polystyrene. The overall unit dimensions shall be no more than 781 mm (30.75 in) in diameter by 333 mm (13.1 in) in height and weigh no more than 4.1 kG (9 lbs).

Installation for the FP6030 shall be by single-point hanging affixed to a mounting bushing and cable hanging bracket (8 Ohm) or to a mounting bushing and supplied junction box (transformered option)

Optional accessories include a Wall Mount Bracket (AC-WB3) constructed of cold-rolled steel, a Junction box with transformer (AC-FP6-XFMR) and a decorative SoundSleeve™ for in-store marketing.

The system shall be the FP6030 for 8 Ohm systems or distributed systems.

Included Accessories



Cable hanging bracket & mounting bushing

SoundTube Entertainment

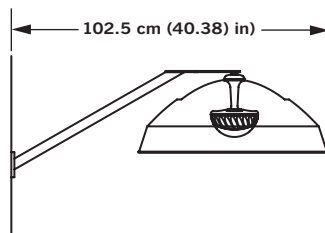
6430 North Business Park Loop
 Park City, Utah 84098
 Phone 435.647.9555
 Fax 435.647.9666
 Toll Free 800.647.TUBE
 www.soundtube.com

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

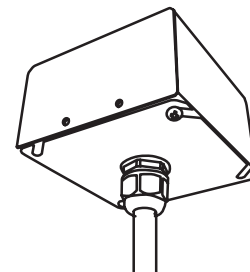
Optional Accessories



AC-CPSU Custom Printed SoundSleeve™



AC-WB3 Wall Mount Bracket



AC-FP6-XFMR Junction box w/transformer (Availability TBA)

SoundTube Entertainment manufactures a complete line of speakers for:
Open-Ceiling • In-Ceiling • Surface-Mount • Outdoor • High-Power

All SoundTube products are designed and engineered in the USA.