Outdoor/In-Ground Speaker

Technical Information for System Engineers





Specifications: XT850

XT850

•	
System Type	8" coaxial outdoor (64 Watt transformer for 25/70.7/100 Volt
	or 4 Ohm transformer bypass position)
Impedance (nominal)	4 Ohms (nominal)
Sensitivity dB @ 2.38 V/1m ³	88.0 dB
Sensitivity dB @ 1W/1m	85.0 dB
Frequency Response (- 3 dB) ¹	51 Hz - 10 kHz
Frequency Response (-10 dB) ¹	38 Hz - 22 kHz
Max. Program Power	200 Watts
Max. Continuous Power RMS ²	100 Watts
Max. SPL dB @ 1 M	105.0 dB
Coverage Angle (-6 dB @ 2 kHz)	360° Horizontal - 40° Vertical
Coverage Angle (-6 dB @ 10 kHz)	360° Horizontal - 40° Vertical
Tap Selector	5-Position rotary switch with transformer bypass position
Transducer- Low-Frequency Driver	1 x 203 mm (8.0 in) Polypropylene cone, butyl rubber surround
Transducer- High-Frequency Driver	1 x 25 mm (1.0 in) Aluminum dome
Low-Frequency Voice Coil	32 mm (1.26 in)
Network Type- Low Pass	6 dB per octave, 1st order
Network Type- High Pass	6 db per octave, 1st order
Crossover Frequency	3.0 kHz
Enclosure Material	Roto-molded polyethylene plastic
Grille	Stainless-steel with powder-coat finish
Inputs	18-Gauge wire lead
Color Options	Granite green or sandstone
Diameter	360 mm (14.17 in)
Total Height	417.1 mm (16.42 in)
Weight	7.6 kG (16.7 lbs)
Shipping Weight	10 kG (22 lbs)
Included Accessories	Anti-theft brackets, water-tight strain relief
Optional Accessories	N/A
Packaging	1 Per box
Regulatory- UL	1480 (UEAY) pending
Regulatory- CE	approved
Regulatory- IP	IP55 approved
RoHS	Approved

Transformer Taps

Output

103 dB

100 dB

97 dB

94 dB

100 V Output

64 W

32 W

16 W

103 dB

100 dB

97 dB

25 V

8 W

4 W

2 W

1 W

Output

94 dB

91 dB

88 dB

85 dB

70.7 V

64 W

32 W

16 W

8 W

¹ Frequency response is measured in half space.

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

³ 2.83 Volts at a distance of 1 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 BroadBeam[®] waveguide technology provides smooth 360° horizontal off-axis coverage and reduces overall system costs.
- One 8.0 in (203 mm) weatherproof polypropylene woofer with butyl rubber surround and one 1.0 in (25 mm) aluminum dome tweeter with integrated horn & mounting bracket.
- UV-, scratch-, chlorine-, and weatherresistant with professional-grade com ponents for long-lasting performance and durability.
- Patented, durable and weather sealed Zero-Reflection[™] enclosure.
- Weather-proof 5-position tap switch for 25/70.7/100 Volt applications with transformer bypass position. 64 Watt transformer included.
- Liquid-tight compression fittings for water-tight protection.
- Multiple wire inlet locations for fast and easy daisy chaining.
- Stainless steel fasteners & grille.
- UL 1480 (UEAY) pending.
- Color options: granite green or sandstone.

Description

The SoundTube XT850 is a premium 2-way outdoor loudspeaker solution for installations requiring high-performance sound in a durable speaker design. The XT850 is designed for full-range back-ground/foreground music and paging.

The sealed, in-ground enclosure design delivers true low end response (38 Hz,

- 10 dB) and optimal off axis performance. The XT850 includes theft-resistant mounting hardware and a weather-proof 5-position tap switch for 25/70.7/100 Volt applications with transformer bypass position

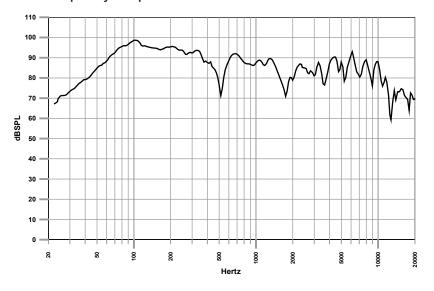
Applications

The ultra-wide 360° horizontal dispersion pattern makes the XT850 an ideal choice for theme parks, promenades, playgrounds, shopping malls, restaurants, resorts, gardens and other outdoor applications. XT850 speakers come with in-ground anti-theft brackets and stainless-steel square-tip screws for increased outdoor security. **XT850**

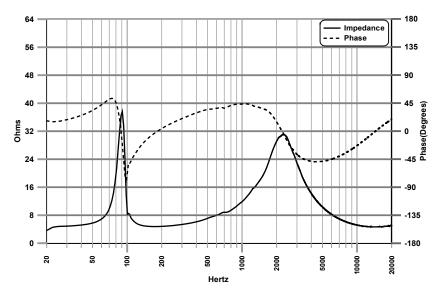
Outdoor/In-Ground Speaker Technical Information for System Engineers



Frequency Response



Phase/Impedance Reponse



Reduce Overall System Costs

SoundTube's BroadBeam® dispersion technology utilizes an advanced diffuser/ tweeter system to provide maximum dispersion of the higher frequencies throughout the XT850's 360° horizontal by 40° vertical coverage pattern.

Designed specifically for outdoor music & paging, the XT850 projects even coverage and smooth response over a larger area than typical outdoor speakers, with fewer units per install – saving time and money on speakers, installation and amp power.

Enclosure Technology

XT enclosures are engineered for maximum durability and performance. Unlike other outdoor speakers, SoundTube incorporates patented ZeroReflection[™] internal shaping to create the most effective environment for sound reproduction. The result is accurate sound and tight bass in an indestructible enclosure.

Patented SoundTube Technologies

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

Technical Data and Specification Tools

Technical Data

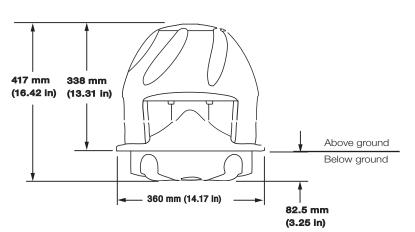
SoundTube Entertainment strives to provide complete and effective technical information and data to dealers, engineers and designers. All data are available from SoundTube Entertainment or at www.soundtube.com

Data Acquisition

All performance data acquired at SoundTube's Technical Measurement Center (TMC) 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, **XT850**

Outdoor/In-Ground Speaker Technical Information for System Engineers





Included Accessory



Anti-theft hardware

SOUNDTUBE

CLIO, LMS, LEAP, and proprietary modeling software. EASE[™] data are acquired through an automated TEF20/Outline/EASE[™] interface.

Architectural Specifications

The loudspeaker shall be of in-ground design consisting of one 203 mm (8.0 in) lowfrequency transducer and one 25 mm (1.0 in) aluminum dome high-frequency transducer with a frequency-dividing network installed in a sealed enclosure. The low-frequency voice coil diameter shall be 32 mm (1.26 in).

Performance specifications of a typical production unit shall be as follows: Usable frequency response shall extend from 38 Hz – 22 kHz (-10 dB). Measured sensitivity (2.83 Volt input, 1 meter) shall be at least 88 dB. The maximum continuous output at 1 meter shall be 105.0 dB. Rated power capacity of the components and network shall be at least 100 Watts continuous RMS power. The loudspeaker shall have a nominal impedance of 4 Ohms and be available for 25/70.7/100 Volt modes with transformer bypass position. The frequency-dividing network shall have a crossover frequency of 3.0 kHz.

The enclosure shall be constructed of a roto-molded polyethylene plastic. The grille shall be constructed of powder coated stainless steel. Color options shall be granite green or sandstone. All transducers and network circuitry are weather resistant and housed in a sealed enclosure.

Installation shall be by in-ground mount. The external wiring input connector shall be hardwire leads. The overall cabinet dimensions shall be no more than 360 mm (14.17 in) in diameter by 417 mm (16.42 in) in height and shall weigh no more than 7.5 kG (16.7 lbs).

The low-frequency transducer shall have a weatherproof butyl rubber surround to resist weather, elements and insects. The highfrequency transducer shall be a horn-loaded dome and constructed of aluminum.

For theft deterrence, all units come with antitheft brackets and square-tip screws.

The system shall be the XT850 for both low and high impedance applications.

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