

SoundTube Case Study

www.soundtube.com

Project: Immanuel Lutheran Church, Watertown, WI

Venue Type: House of Worship

SoundTube Product: RS102i 10" 3-Way Speaker



Stone walls, columns and majestic wooden arches create acoustical challenges.



Fourteen SoundTube RS102i speakers deliver crisp, clear sound throughout the large church.



SoundTube styling and unique patented technology blend into a traditional setting.

Technical Aspects of Church Acoustics

Members of the historic Immanuel Lutheran Church knew their church's sound system needed an upgrade. Stone walls and columns, plus wooden pews and majestic arches, while beautiful and elegant, created acoustical problems that left many in the congregation unable to understand the spoken word. The church required a modern audio system that would deliver wide and even sound and complement the church's unique architecture.

Maximizing Intelligibility Throughout the Church

Church leaders asked three commercial audio companies to bid on the project. The job went to Richard Grundgeiger, a commercial audio engineer who owns Celestial Sound Systems of Madison, WI. A particular challenge for Grundgeiger was the church's columns, which blocked and muffled sound to rows of pews on either side of the building. His solution was to install 14 SoundTube RS102i 10" 3-way speakers. Each was placed between columns, which allowed the speakers to maximize audio clarity throughout the church.

The SoundTube RS102i was perfect for the project, said Grundgeiger, because of its "wider dispersion, speech intelligibility performance, frequency response, aesthetics and its ability to use less power, thus avoiding 'over-exciting' the room."

Minimizing Labor and Installation Costs

Another benefit of Grundgeiger's choice of SoundTube speakers was the RS102i's ease of installation. Trouble-free wiring options, durable design and mounting hardware engineered for any open-ceiling height resulted in cost savings for the church.

Performance of the Finished System

"The most common reaction from our members is, 'Wow!'" said the Rev. Kathleen Kasper, who leads four services each Sunday. Added one member of the congregation, "Attending church is more enjoyable now, because I can sit anywhere and still hear just as well as if I were right next to the person speaking."

Church leaders and Grundgeiger recognized SoundTube speakers for their engineered audio clarity, ease of installation and unique styling characteristics, which provided a high-performance sound solution in a traditional church setting.



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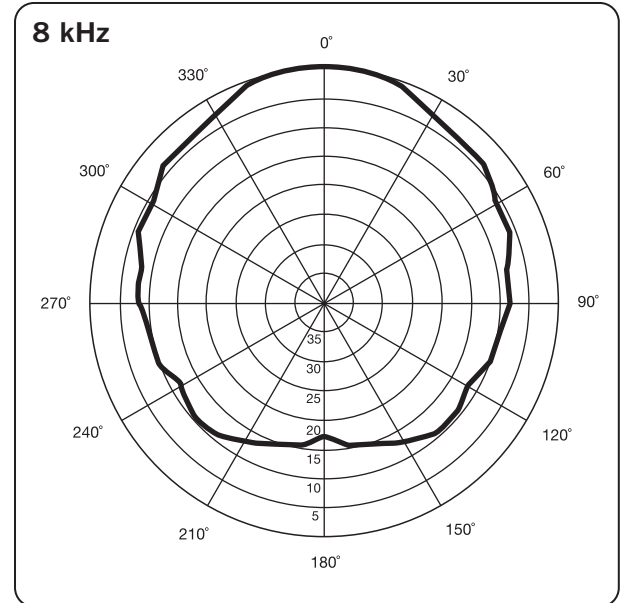
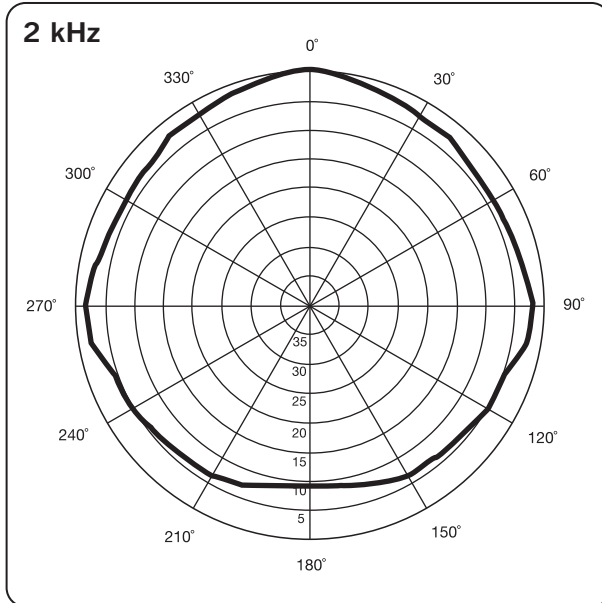
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RS102i Specifications

System Type	10" 3-way ported (8 Ohm, 32 or 64 W)
Frequency Response (-3 dB):	43 Hz – 16.5 kHz
Frequency Response (-6 dB):	35 Hz – 17.5 kHz
Low Frequency (-10 dB):	30 Hz
Max Program Power:	300 W
Max Continuous Power RMS:	150 W
Max SPL dB @ 1 M:	110 dB
Sensitivity dB @ 1 W/1 M:	88 dB
Impedance:	8 Ohm (nominal value)
Coverage Angle (-6dB):	140° horizontal coverage pattern
Low Frequency Driver:	1 x 254 mm (10") treated fiber cone, rubber surround
Mid Range Driver:	1 x 130 mm (5.25") polypropylene cone, rubber surround
High Frequency Driver:	3 x 33 mm (1.3") polypropylene cone
Enclosure Type & Material:	Roto-molded polyethylene plastic
Colors:	Black or white, custom colors available
Diameter:	426 mm (16.76")
Length/Height:	711mm (28")
Mounting Options:	Ceiling