

## First Large Scale Opera for Wireless Headphones

Written by Bob Snyder  
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Hard to believe this is not yet up on their European web site, but Sennheiser professional and consumer technology played a major role in *Invisible Cities*: **the world's first large scale opera for wireless headphones**



Imagine an opera with no opera house and no assigned seats — audience members are not restricted in their movement and encouraged to roam freely.

The landmark production (with singers, dancers and an 11-piece orchestra) was a collaboration among The Industry, L.A. Dance Project and Sennheiser, was staged at Los Angeles' iconic Union Station — the largest railway terminal in the western United States.

The Invisible Cities opera, written by Christopher Cerrone and based on the 1972 novel by Italo Calvino, combines historical fiction with surrealist elements to create an 'invisible opera for wireless headphones'. Invisible Cities used Sennheiser's wireless technology to convey both dialogue and music to listeners. Performers were outfitted with Sennheiser wireless microphones and attendees will use Sennheiser's RS 120 wireless consumer headphones for an opera-house-less experience.

The opera's narrative centers on explorer Marco Polo's descriptions of fantastical cities to Emperor Kublai Khan. By using wireless headphones from Sennheiser, audience members were intimately connected to the storyline, each with their own unique view as the opera moves throughout the terminal.

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At the heart of Invisible Cities' technical production was Sennheiser's new Digital 9000 wireless system, which was launched last year after having been under development for over a decade. Sennheiser calls it "the most advanced wireless system in the world and used in top level theatre, music and broadcasting events."

Bexel, part of the Vitec Group, custom-built a Managed Antenna System (MAS) that allows for extended coverage of Sennheiser's wireless microphones, in-ear monitors and headsets. On the audio side, Bexel also supported Sennheiser's superb high-quality microphones with a DiGiCo SD11 paired with a DiGiCo D-Rack. The orchestra, located approximately 1000 feet from the main hall, was connected via fiber. The DiGiCo system allows the audio mixer to control the mic preamp from that distance.

Go [Invisible Cities Opera](#)

Watch [The Technical Support for Invisible Cities](#)