

GENELEC®

# CASE STUDY

**Genelec leaves visitors  
spellbound at HEX!  
Museum of Witch Hunt**

THE DANISH MUSEUM  
EXPLORES THE WITCH  
HUNT FEVER OF THE  
MIDDLE AGES







**HEX! MUSEUM OF WITCH HUNT** USES A GENELEC SMART IP LOUDSPEAKER SOLUTION DESIGNED AND INSTALLED BY THE MOESGAARD MUSEUM EXHIBITION DESIGN STUDIO

Established in the early eighth century, Ribe in south-west Jutland is Denmark's oldest town and boasts a long and colourful history. In the Middle Ages, Europe was in the grip of witch hunt fever, which cost the lives of tens of thousands of women. Most of these women were tortured and burned alive – and the townspeople of Ribe proved especially zealous. Indeed,

Denmark's most famous witch, the unfortunate Maren Spliid, came from Ribe and was burned at the stake in 1641. What better setting then, for a museum to help elucidate and explain this dark period of Danish history. [HEX! Museum of Witch Hunt](#), has recently opened in Ribe complete with a [Smart IP](#) loudspeaker solution from Genelec designed and installed by the [Moesgaard Museum Exhibition](#) Design Studio.



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HEX! aims to tell the story of these witches - who they were, why they were so feared, and the myths and superstitions that surrounded them, fuelled largely by powerful elements within the church and certain monarchs of the time. In order to create the best possible visitor experience, HEX! turned to the museum technology experts - led by Johan Ahrenfeldt - at the famed Moesgaard Museum. Having recently used Genelec's Smart IP technology with great success on one of Moesgaard Museums own exhibitions, Ahrenfeldt had no hesitation in recommending it for HEX!

“We wanted to create a complex soundscape for the various stories being told in each of the nine exhibition rooms,” explains Ahrenfeldt. “However, the building itself posed a few challenges as it's an old listed building in the centre of Ribe. While this definitely adds to the atmosphere, it's not ideal for audio-visual installations! Many of the rooms are quite small with low ceilings, so it was important

that the technology remained as unobtrusive as possible, whilst nevertheless delivering a high quality experience. Genelec's Smart IP loudspeakers were therefore an obvious choice.

“Smart IP technology provides power, audio and control all over a single network cable, and is a godsend to those of us who work in architecturally sensitive environments - HEX! is a case in point,” he continues. “Furthermore, we know that Genelec is a guarantee of superlative audio quality, even at low levels, which was a requirement in this instance due to the intimacy of the environment and the proximity of the loudspeakers to the audience. Our aim was to provide linear and detailed sound reproduction that allows visitors to lose themselves in the experience without feeling overwhelmed.”

The sound design was created by the composer Søren Bendixen of Audiotect, who specialises in creating soundscapes for exhibitions. The design was prepared in



” SONICALLY, THEIR SUPERB DEFINITION AND CRYSTALLINE INTELLIGIBILITY OFFER A TRULY IMMERSIVE EXPERIENCE.

the studio but mixed on-site in an iterative process. The onsite use of the Spat Revolution software engine in the mixing process made it possible to map the sound designs and adapt and benefit from the specific speaker placement in the exhibition rooms - independently of standard audio formats. Ahrenfeldt utilised a total of thirty-six [4420](#) Smart IP loudspeakers across the exhibition rooms supplemented by six [4020](#) and four [4010](#) installation loudspeakers and a compact [7050](#) active subwoofer.

“Each of the nine rooms is set up as a separate zone,” explains Ahrenfeldt. “The zones are managed and controlled via the Smart IP Manager software, which has proved both easy and efficient. We're using [QLab software](#) and a Dante-compatible [RME Digiface interface](#) to control the 47 discrete channels and feed them to the [Dante network](#). The playback by QLab is triggered by the main show control.

“As the rooms are all adjacent to each other with open doors, the audio separation between the zones is very poor. We needed to turn this obstacle into an opportunity. By considering the overall sound design as a composition of nine separate yet interconnected designs, the result is an auditive experience that both facilitates the mood in each individual room as well as providing a more holistic listening experience throughout the museum as a whole.”

Ahrenfeldt believes that the best audio in this type of visitor attraction is the audio that registers almost subliminally. “The last thing you want is for the soundtrack to start playing and people's attention being instantly drawn to the source. Ideally, we don't want people to even notice that there are loudspeakers in the room at all. Genelec's Smart IP loudspeakers help us achieve that thanks to the minimal cabling infrastructure which reduces cost and makes for quicker, tidier and more flexible installation. Also, Smart IP's harmonious design enables them to blend into any environment, with the useful ability to dim the on/off LED indicator on the front of the loudspeaker. Sonically, their superb definition and crystalline intelligibility enable us to create audio designs that offer a truly immersive experience and bring the exhibition to life. For HEX!, the Smart IP series was an obvious choice that helped us overcome a number of obstacles and deliver a world-class audio experience.”



## THE KIT

- 36 x 4420A
- 6 x 4020C
- 4 x 4010A
- 1 x 7050C

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