

GENELEC®

CASE STUDY

Marvel: Earth's Mightiest Exhibition

NEW MARVEL EXHIBITION
MAKES ITS WORLD PREMIERE
WITH 70 GENELEC SMART IP
LOUDSPEAKERS





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GENELEC SMART IP LOUDSPEAKERS DELIVER AN IMMERSIVE SOUNDSCAPE FOR EXHIBITION'S DEBUT



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In December 2023, a new exhibition titled [Marvel: Earth's Mightiest Exhibition](#), produced by Semmel Exhibitions, had its world premiere in Wellington, New Zealand. Offering a fresh perspective on Marvel's rich 80+ year history, the exhibition gives a behind-the-scenes glimpse into the creation of some of popular culture's most iconic stories and characters — enhanced by an immersive soundscape from [Genelec](#).

The audio for the project was a collaboration between Sebastian M. Purfürst of Berlin-based [LEM Studios](#) and acoustic scenographer, Markus 'Hossi' Hossack. Commissioned to realise the artistic and technical concept of the immersive sound installation, Purfürst and Hossack developed a soundscape that guides guests into the world of Marvel. "Our main aim was to develop a reliable, rock steady and touring-ready audio

” WITH THE SMART IP SOLUTION, EVERYTHING WAS MUCH EASIER – FROM RIGGING AND CABLING TO ROUTING.

setup that delivers cinematic audio quality with a three-dimensional presence and resolution for the exhibition space,” begins Purfürst.

“As composers, media artists and engineers, we like to call the development of the sonic layers of the exhibition experience ‘acoustic scenography’, which comprises the actual musical narration, ambient moments, sound effects, voice-overs, and documentary layers. The whole exhibition follows a common musical timeline, and, depending on the dramatic presentation of the rooms, we balance out the intensities and complexities of these acoustic elements. You might have a cinematic immersive experience in one room, followed by a more contemplative space where you could take in valuable background information or look at an original artefact.”

Marvel: Earth's Mightiest Exhibition covers a 2,000 sq metre space with eleven themed

galleries and a shop. It contains 60 pieces of original comic art, both vintage and modern, as well as the only known page to survive from the original Amazing Spider-Man script. Just like the comics and films, it explores the relationship between the extraordinary and ordinary, shedding light on how these stories resonate with millions of fans around the world.

In the exhibition, Marvel's history is told through rare artefacts, multimedia displays and immersive technology that takes visitors on an unforgettable journey, with Purfürst and Hossack choosing 70 Genelec [4430](#) Smart IP networked loudspeakers for the exhibition. “We utilised a complex matrix of loudspeakers spread across the exhibition space, with a central processing unit that feeds all acoustic events based on the [Dolby Atmos](#) standard,” explains Hossack.



” THE SOUND QUALITY IS TRANSPARENT, DETAILED AND GIVES LOTS OF ENERGY IN AN EXHIBITION SETTING.

“The biggest challenge we faced before deploying Genelec’s Smart IP loudspeakers was the complex routings. We would have needed a lot more cabling, for power, audio, networking and so on. With the [Smart IP solution](#), everything was much easier — from rigging and cabling to routing. The loudspeakers were also the perfect size and integrated into the space seamlessly.”

The Marvel Universe provided Purfürst and Hossack with endless inspiration for musical ideas and sound design. The audio elements bring the characters to life — the Captain America statue, which is frozen in ice, crackles and emits eerie ambient drones. The surreal multiverse of Doctor Strange has otherworldly, spinning wormhole-like sonic particle streams, and the dark back alleyways of New York City play out fragments of urban beats. The rainbow bridge seen in the pages of Thor

comics also has orchestral and vintage synthesiser sounds.

“This was such a fun project to work on, but once we had finished our studio production we faced some complex on-site challenges,” explains Hossack. “Reverberations and reflections caused problems, as well as sound spilling between galleries. We were also faced with very tight deadlines for set-up and on-site mixing. Additionally, the creation of a high-fidelity listening experience coupled with highly detailed audio events and the dramatic concept of the exhibition was also a challenge.

“The possibilities presented to us by Genelec’s Smart IP loudspeakers meant that we were able to resolve all these issues with relative ease. Thanks to Smart IP, build time was cut in half — since just one ethernet cable delivers power, audio and



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sophisticated loudspeaker management. It's a massive timesaver to be able to run just one network cable from each loudspeaker to a nearby network switch with no amplifiers to worry about. Cabling is massively reduced and routing is greatly simplified.

"We also found [Smart IP Manager](#) to be an incredibly useful tool. The software is a big bonus, enabling quick and easy adjustment of the loudspeaker output to the acoustic characteristics of each space. It allows us quick and easy access to all sorts of parameters, which means that we can finely tune the response of each loudspeaker as well as the system as a whole. Having a loudspeaker of the same model in such great numbers also gives you a solid foundation to carry through the whole exhibition space.

"Finally, the sound quality of Genelec's Smart IP loudspeakers is transparent, detailed and the sheer quantity of loudspeakers gives lots of energy in an exhibition setting,

which is great. For this project, the 4430s were the perfect size, yet delivered studio quality sound."

Marvel: Earth's Mightiest Exhibition has now finished its run in New Zealand, with new venues set to be announced in the coming months. Combining expertly designed immersive audio with never-seen-before artefacts, the exhibition is a walkable comic book that's a must-see for any adoring Marvel fans. Genelec's Smart IP models offer the ideal audio solution, transporting visitors to the centre of the cinematic universe.



THE KIT

- 70 x 4430A
- 1 x Smart IP Manager