

Anna Mitchell visits Ragnarock – a museum for pop, rock and youth culture – with Kasper Stouenborg, owner of integrator Stouenborg and designer of AV systems and lighting for the facility.



Roskilde, a city just west of Copenhagen, is synonymous with the Roskilde music festival, which started in 1971.

It also has a strong industrial heritage and – when an old manufacturing site was regenerated to create student housing, office space and educational facilities – it found

space to develop Ragnarock, a museum for pop, rock and youth culture.

Jacob Westergaard Madsen, the curator of Ragnarock, said the museum was originally conceived to showcase a collection of rock memorabilia, much of which had been collected at Roskilde festival, as well as archive material from Danish broadcasters.

“AV was always going to be a very important part of this museum because music is about sound and rock and roll

has been filmed since its advent,” he says.

An initial plan for the museum was scrapped just 18 months before the museum opened.

Madsen says the focus was expanded to tell the story of youth culture. He explains: “We didn’t want to create a typical hall of fame. We introduce musicians, but we bring them in via themes.”

Located near the Roskilde music festival site, the museum has quickly become an architectural icon. The building, designed by MVRDV and COBE, has a façade of huge gold studs that contrasts with a deep red entrance hall. A huge overhang draws visitors into the warm interior. However, what really makes the experience for any visitor approaching the museum at night is a permanent lighting show that continually gives the building a new appearance by cleverly lighting different parts of the triangular sides of the studs.

The lighting for the exhibition is the work of Kasper Stouenborg, owner of the Danish integrator Stouenborg, which was also responsible for the AV system design. The AV installation was handled by AV-Center and interactive content

was created by No Parking.

A visitor’s journey starts in the lift where music is played out via Genelec loudspeakers.

When the elevator doors open a mirrored corridor takes visitors through to a large curved display created by four edge blended Panasonic PT-RW630 projectors. The display is interactive and split into three sections designed to show the development of lighting effects for live shows.

It starts with psychedelic lighting, popular in the 1960s that can be manipulated via a touchscreen, laser lighting is controlled by gesture control and a manual system allows a visitor to play with projection mapping effects. All content is managed by a Dataton Watchout server.

Audio played out through Genelec speakers, is also controlled by the visitor’s actions.

Video content on exhibits opposite the main screen can be viewed with audio played through AKG headphones and LCDs powered by Brightsign players, in a set up repeated throughout the museum.

The second room is dominated by a huge

Tech-Spec

- Audio**
- AKG headphones
- Audio-Technica headphones
- Blackbox AV single cup headphones
- Genelec 4020 loudspeakers and amplifiers
- Meyer Sound loudspeakers
- RSF MultiDAP-IP8 audio players
- Sennheiser EW100 wireless microphone systems
- Tannoy TS2.12 subwoofers
- Yamaha MTX3 matrix mixers

mirror ball – which is in fact one quarter of a sphere that appears whole with the use of mirrors. An interactive dance game uses a Panasonic PT-RZ670 projector and Microsoft Kinect for gesture recognition. Audio is delivered via Genelec 4020 loudspeakers.

In the third room a game is introduced, that is accessed via touchscreens and recurs throughout the museum, to take visitors through the process of creating their own band.

The relationship between music and politics is explored in the fourth room. Genelec 4020 loudspeakers are complemented by two Tannoy TS2.12 subwoofers for a richer sound. Ghostly projections dance on a black wall thanks to the installation of Panasonic PT-RZ470 LED projectors, which are also installed in the ceiling to create a droplet like, rippling effect on the floor.

After this darker room, visitors walk out onto the mezzanine of a much larger open space. Here the walls have been lit to resemble giant equalizers. AKG headphones hang along three walls and can be plugged into different headphone ports to listen to a huge range of music tracks, arranged chronologically. To deliver the 140 channels of audio Stouenborg specified 18 RSF MultiDAP-IP8 audio players.

The mezzanine looks over a large open space dominated by a large model of a black heart, the symbol of Ragnarock. A Meyer Sound loudspeaker system with UPJ, UPJunior and USW speakers is installed here to support live events or cinema showings. Two Panasonic PT-RZ670 projectors are installed for that purpose as well as a Lissau DT200 projection screen that descends from the ceiling. The projectors are also used to project images on the back wall of the room when the screen is not in use and are controlled by Christie's Pandoras Box.

“AV was always going to be a very important part of this museum.”

- Jacob Westergaard Madsen, Ragnarock

Sennheiser EW100 wireless microphones are available for presentations and performances in this space and are controlled by a Yamaha MTX3 matrix mixer. Robe Robin 300 and Robert Juliat Tibo LED profile spots light up the stage and are used to change the colour temperature and visual expression of the stage. As well as live events the space can be used for temporary exhibitions so flexibility was crucially important.

A smaller, portable live system with Meyer Sound UPJunior was also provided so the museum had the flexibility to stage events in any of its open spaces.

A number of exhibits in the space use Blackbox AV single cup headphones, iDisplay panels, Genelec loudspeakers and Canon XEED WUX450ST projectors.


Another interactive exhibit allows visitors to walk through time, exploring music from the past, and uses an Optoma EH320UST short throw projector and Microsoft Kinect unit. Elsewhere they can test themselves by guessing a slowed down musical track (played through Meyer Sound MM-4XPD and MM-10XP loudspeakers) while lying on an enormous spinning record and elsewhere sing along to a well known Danish song. (Here they are recorded and may be surprised by their performance later when it's played out on a videowall as they leave the museum).

A final area looks at the production process and here, one of the most interesting exhibits demonstrates that, before the advent of digital

production, people had to think of innovative ways to add effects. To show one of the methods the museum has mocked up a toilet and Stouenborg specified a sort of mini Meyer Sound Constellation system to deliver the reverb effect.

In this area visitors can also listen to demo tapes and, in a departure from the rest of the museum, Stouenborg chose Audio-Technica white headphones to fit in with the white background of the space.

Rack rooms located on each floor contain computers running Dataton Watchout and Extron extenders as well as Genelec amplifiers and a Yamaha MTX3 matrix processor. Here, an MA2 Replay Unit manages all DMX controlled lighting and a PC based version can be used for remote control of lighting as well as a backup for the main system. The exhibits are controlled by Crestron controllers that manage wake up and shut down of the entire exhibition and Crestron touch panels are provided.

Stouenborg has designed a system that engages visitors of all ages with some ingenious content from No Parking. It's fun and informative and introduces topics and exhibits cleverly and puts them in context so the space is accessible and absorbing for all visitors. 

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Video

Brightsign players
 Canon XEED WUX450ST projectors
 Christie Pandoras Box
 Crestron controllers and touchpanels
 Dataton Watchout server
 Extron extenders
 iDisplay LCDs
 Lissau DT200 projection screen
 Microsoft Kinect
 Optoma EH320UST projector
 Panasonic projectors and LCDs