

CASE STUDY

Immersive projection calms children during CT scans at Swedish Hospital

Client: Karolinska University Hospital

Location: Sweden

Product(s) supplied:

PT-VMZ71

PT-JX200

PT-VMZ51S

PT-VMZ51

PT-VMZ61

Challenge

To use projection technology to calm children and adult patients sent for CT scans enabling a less stressful examination and faster throughput.

Solution

- The Panasonic Space Player possesses both lighting and laser projection functions in a single spotlight-shaped design, which attaches to standard lighting rails to make installation and relocation easy.
- The Panasonic PT-VMZ71 Series of LCD projectors ranging from 5000-7000lm brightness and 20,000 hours of maintenance-free projection.

"We use the equipment every day. Light, film and sound contribute to an attractive, calming environment and makes many patients, who were previously afraid to enter the room, now do so without hesitation."

Lena Gordon Murkes

Senior Physician and pediatric radiologist – Karolinska University Hospital



When a leading Swedish hospital was looking for a solution to make CT scans less stressful for its child patients and to increase the numbers of scans a day, it turned to sound and visual specialists Ljudbyrå AB for a solution with Panasonic projectors at its core.

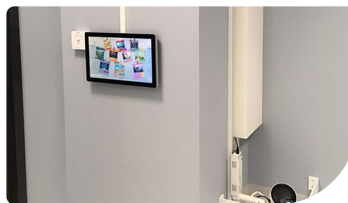
Stockholm's Karolinska University Hospital is one of Europe's leading hospitals with over 1.35m patient visits a year. CT scans are used to provide vital, detailed internal images of the body. Unfortunately, often children and some adults find the process very stressful and claustrophobic, with sedation or anaesthetic sometimes required.

Lena Gordon Murkes, senior physician and the pediatric radiologist responsible for CT scanning at the pediatric hospital contacted Thomas Folland, the founder of Ljudbyrå AB, after seeing one of his interactive displays at a shopping mall. She wanted to see if a similar solution could be used to calm patients and provide a more positive experience in the CT examination room.

Thomas' team accepted the challenge and created an interactive projection and sound solution that has had incredible results. The examination room is now equipped with two Panasonic laser projectors that beam immersive imagery onto the ceiling and CT scanner itself, alongside four speakers for sound and a touchscreen for patients to choose from one of ten different soothing effects. The immersive visual experiences range from a tropical rainforest with the sound of running water and tropical birds to extraordinary underwater scenes and popular cartoon characters.

"Many children and parents come to us at a very stressful time in their lives, with severe trauma or tumors," explained Lena. "In these situations, we have noticed that everyone in the room is calmer with light and sound. Many patients who were previously afraid to enter the room, now do so without hesitation. Many quick examinations can be performed without anesthesia, for patients ranging from toddlers under 1 year old to adults. In cases where patients still need to be anesthetized, the visuals and sound are very helpful as a diversion when we use needles to administer the sedative."

The immersive solution has been so successful that it has also been rolled-out to four additional CT scanning units at the hospital's second facility at Huddinge, south of the city. Clinicians from other hospitals across Europe have also visited to see the solution in action and Norway's University Hospital in Oslo has just deployed the solution.



For the first solution, Ljudbyrån chose the Panasonic Space Player, 1-chip DLP projector, with both lighting and laser projection functions in a single spotlight-shaped design that can be simply attached to standard lighting rails to make installation easy. The Space Player can project in all directions below its horizontal axis and can be used in conjunction with SD cards, PCs, and tablets for play back of contents. The use of a laser light source means 20,000 hours of maintenance free operation.

In other installations the team has chosen projectors from the PT-VMZ71 Series with various brightness levels to suit the individual environments. The Series has a great throw-ratio and a wide horizontal and vertical lens-shift that allows large images to be created in the smallest spaces. The projectors also support 4K and 30p signal input, making the range a future-proofed solution for projecting the latest image quality and content.

"We chose Panasonic for the quality and reliability of its projectors," said Thomas Folland. "In this important medical environment, it was critical that we used laser projectors that offered 20,000 hour maintenance-free operation. The Panasonic projectors have never let us down."

Lena concluded that the solution had changed the way patients feel about a CT scan at their hospital. "Our referrals are surprised when their patients and the children's parents describe a fun and positive experience - instead of the anxiety, fear and discomfort they previously experienced. The audio-visual equipment contributes to a fantastic examination environment for patients, relatives and staff. The environment shortens the survey time and makes a potentially frightening scan a positive experience."

Photo Credits:

Catarina Thepper, Karolinska University Hospital
Thomas Folland, Ljudbyrån

