

# Kino Seehof

## Case study



▲ The Kino Seehof in Zug, Switzerland recently underwent an audio system upgrade much to the excitement of audiences and the owner alike.

## Achieving perfect harmony between video and audio

Small, but excellent - that's how to best describe Thomas Ulrich's second-generation cinemas Gotthard and Seehof in Zug, Switzerland.

Ulrich places high demands on his independent cinemas, requiring them to be traditional, yet modern, artistic and entertaining. As a result, Swiss cinema classics, regional content and international art house productions are screened alongside Hollywood blockbusters, operas and ballet performances.

The upgrade to digital projection some years ago made it easy to present alternative content and strong musical formats like concerts, operas and ballet performances. To provide the perfect audio accompaniment, Ulrich opted to upgrade his sound system and went looking for a solution that

offered flawless audio playback for every application, allowing the audience to become immersed in every scene no matter what they would be watching. Whether an explosive action scene, the nuanced tones of an opera aria, or the soft, monotonous rattling of the Gotthard Express, the system needed to offer optimum sound quality and maximum performance at all volumes.

"Everyone can play loud, but it was important to me to have a sound system that allows us to play tones in all their facets to create a truly immersive experience", explains Ulrich. "We'd already had good experiences with Christie® when upgrading to digital projection using the Christie CP2220 in combination with a Doremi DCP-2K4 server, hence the reason we approached Protronic AG again and asked for their advice."

**Customer:**  
Kino Seehof

**Location:**  
Zug, Switzerland

**Industry/Market:**  
Cinema

**Partners:**  
Protronic AG

**Requirements:**

- Optimal sound quality
- Versatile audio system

**Summary:**  
In demanding a premium experience at his independent theatres, Thomas Ulrich selected a Christie Vive Audio sound system to upgrade the Kino Seehof cinema in Zug, Switzerland.

**Products:**

- LA1 line array loudspeakers
- S115 subwoofers
- S218 LFE subwoofers
- LS3S surround loudspeakers
- CDA3 power amplifiers
- CDA5 power amplifiers

**Results:**  
The audio upgrades to the Seehof cinema provides audiences with a clear, high-fidelity experience whether presenting cinematic, alternative, or art house productions.

"Our aim was to reap all the benefits of digital cinema and to achieve perfect harmony between video and audio," explains Patrik Engler, CEO of Christie's longstanding partner Protronic AG. "In addition to the performance features we also had to keep the architectural conditions within the theatre in mind."

"Christie Vive Audio® was therefore the perfect choice. With the high-performance Class D amplifiers, the speakers' compact line array design and ribbon driver technology, we created an immersive sound experience without the need for expensive ambient sound systems, allowing the exhibitor to unleash the full potential of digital cinema," says Engler.

Compared to traditional audio systems with horn drivers, Christie Vive Audio uses much more concise ribbon driver technology that responds directly to audio signals and achieves incredible clarity. What's more important, they significantly reduce distortion and have an ultra-fast transient response, making them ideal for demanding applications like cinema. In this setting, it is especially important that speech, effects, music and other content sound as natural and authentic as possible to the audience.

To achieve the recommended 7.1 multi-channel sound, Protronic used a Christie CDA3 power amplifier and VAS-LA1 screen cannel solution for the front left, middle and right channels as well as a CDA5 amplifier and a S218 subwoofer for the LFE channel. A CDA3 amplifier and three LS3S loudspeakers were installed on the left and right for the side and back surround sound. Finally,

they opted for an AP20 (Datasat) sound processor.

Due to the structure of the cinema, installing the front loudspeakers wasn't an easy task. "The front speakers were adjusted to fit a pre-existing baffle, however, there is no access to the rear of the baffle," explains Engler. Consequently, engineers first had to remove the screen before they could disassemble the old loudspeakers, adapt the frames and install the new loudspeakers – all before finally remounting the screen.

The auditorium acoustics posed a further problem, which manifested itself as flatter echoes. "We used noise absorbers and took full advantage of Vive Audio's speaker angle of reflection in order to virtually eliminate the flatter echo," says Engler.

"We are delighted with the Christie Vive Audio system. We're able to offer the customer a sound concept to suit all requirements as well as their budget," says Engler.

"It was our goal to offer the perfect cinema experience for all 221 seats in the theatre – both visually and acoustically. We achieved this by adding Vive Audio to the Christie projection – and feedback from our audience has been overwhelmingly positive," says Ulrich.

### Contact Christie

Contact us today to find out how your organization can benefit from Christie solutions.



▲ A rack of Christie Vive Audio Class D amplifiers powers the audio system from the projection booth.



▲ Christie Vive Audio surround loudspeakers are placed around the auditorium, immersing the audience in detailed, lifelike audio.

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