

Kinoton's SpectaVision-Motion Ride system: the exciting attraction in Nuremberg, Germany

The Cinecitta, Germany's most successful multiplex, is situated in the heart of Nuremberg, featuring an IMAX theatre and 19 35-mm theatres in addition to various cafes, bars, shops, and restaurants.

In February 2002 another attraction was opened at the Cinecitta: the MAD simulation theatre. MAD stands for "maximum adrenalin dose". This is a very special cinema experience which one not only sees and hears, but also feels. The audience becomes part of the action via hydraulically moving seats. The illusion is so perfect that the audience cannot believe it is not sitting in a roller coaster racing down its track.

To entertain visitors waiting to enter, the reactions of the audience in the theatre can be watched through a window in the foyer of the simulation theatre.

The high spot of the system is the absolutely synchronous control of the seats to match the picture, without which the illusion of reality does not succeed. For each film sequence software is programmed, controlling the hydraulics of the seats during the film reproduction. The synchronization of film sequence, sound, and seat control is done via a time code on the film material.

It was Kinoton who carried out the project technically. Kinoton was also responsible for Cinecitta's technical equipment in the first two building phases.

The elaborate technology of the SpectaVision Motion Ride system is composed of different parts:

- **The pre-show area**

Here the guest is prepared for the visit in the simulation theatre, gets information of how to behave and a foretaste for the upcoming film event. Kinoton designed a system for completely automatic reproduction of digital image and sound information. The picture and sound material is stored on a special MPEG server, called up in the requested order via a media control especially configured for this project and presented on an LCD video projector.

- **The 2D/3D projection system**

The SpectaVision-Motion Ride system in Nuremberg works with two Kinoton SP 75 E projectors. Thus either 2D films can be shown or 3D films when both projectors work in parallel. The heart of these projectors is Kinoton's patented electronic sprocket drive instead of the classic maltese cross drive. This intermittent drive system provides unsurpassable reproduction quality due to perfect picture steadiness, first-class focus and high contrast.

After a showing the electronically driven sprockets of the SP 75 E projectors bring the position to the beginning of the requested film in forward and back running. For gentle high speed operation the spool drives work at a low and always constant film tension. Especially encapsulated spool cases not only make sure that the projection booth is pleasantly quiet, but they also prevent the valuable film material from getting dirty and from being damaged and scratched.

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- **The 6-channel digital sound system**

The especially designed 6-channel amplifier system with a power of almost 20,000 W provides digital sound throughout the auditorium. Highly efficient and dynamic JBL loudspeaker systems reproduce sound realistically and without any distortion.

- **The motion system**

The MAD simulation theatre has 24 platforms with two seats each. The platforms can be moved in six axis. There are three steps of motion intensity which the audience can adjust individually. As the acceleration can reach up to twice the power of the gravitational pull of the earth, it is compulsory to fasten seat belts.

- **The show control system**

Kinoton especially developed the control and automation system for the MAD simulation cinema because in addition to the usual programming steps in the cinema it has to fulfill a large number of additional tasks like the synchronous drive of the moving platforms with the picture, the storage of film titles, film lengths and order of the films for the automatic programme start, the automatic positioning of the projectors to the beginning of the film and the automatic swinging in of the polarization filters in 3D operation.

Kinoton, especially known for the technical equipment of cinemas, has been internationally active in the large format and special venue areas for many years due to its know-how in projection, sound and control technology. Under the brand name GigaVision Kinoton offers complete large format systems for the reproduction of films in 835, 570, 870 and 1070. Under the name SpectaVision Kinoton designs and supplies special systems for e.g. planetariums, leisure parks, exhibitions, and museums. The MAD simulation cinema in Nuremberg is the first reference project for Kinoton's SpectaVision-Motion Ride system in the South of Germany.



The two FP 75 E Projectors









The Hydraulic System



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Racks with Amplifiers, DIPIT

-  CINEMA
-  STUDIO
-  LARGE FORMAT
-  SPECIAL VENUE
-  DIGITAL SYSTEMS
-  DISPLAY SYSTEMS