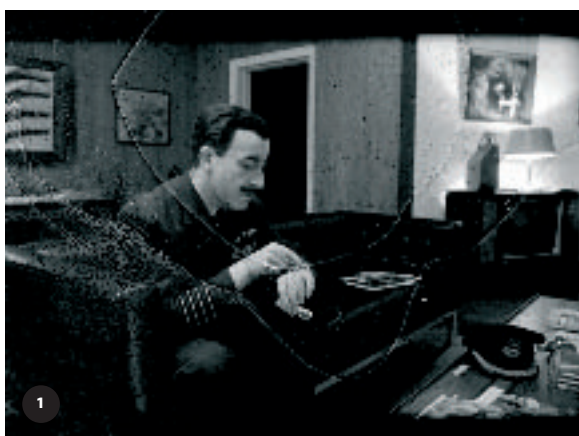


# Dr. Strangelove

## A 4K RESTORATION OF A CLASSIC

Upon its release in 1964, *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb* was loved by critics and fans alike. The film, directed by Stanley Kubrick, mercilessly spoofed the fears of nuclear Armageddon prevalent in the 1950s. Despite being one of the first 25 motion pictures deemed worthy of protection for posterity by the National Film Preservation Board in 1989, prints of the film were often scratched and of varying densities, especially in some stock footage shots of military planes and explosions. Until recently, this cinema classic existed only as cobbled together elements, many of which were generations removed from the original negative, which itself was long lost.



"It's one of the gems in the Columbia Pictures library but it never had the careful treatment it deserved," says Grover Crisp, vice-president of Asset Management and Film Restoration at Sony Pictures Entertainment.

The film stars Peter Sellers in multiple roles, along with Sterling Hayden, George C. Scott, Slim Pickens and James Earl Jones. It was nominated for four Academy Awards. Thanks to Crisp and the dedicated people at Cineric, Inc., a New York City film lab that specializes in challenging film restorations, *Dr. Strangelove* now looks as good as new and is safely archived for posterity.

The film's classic status along with the damaged condition of its many elements, drove Crisp's decision to perform a full 4K digital restoration, the first ever for a black-and-white film. Part of the task involved detective work to track down the best element for a given scene, shot or even frame.

Cineric president Balazs Nyari says that the company spent roughly six months working on the project. Every frame of the many disparate elements that were provided by Sony Pictures was scanned at 4,000 lines of resolution and converted to digital files at Cineric using a specially adapted Oxberry scanner. Digital Director and Restoration Specialist Dan DeVincent created look up tables (LUTs) designed to optimize the scanner for each type of element. Cineric also developed a wet gate scanning technique that eliminated many scratches and other flaws. Automated software tools provided by Autodesk and da Vinci were also used.

During a second pass, the Cineric team physically corrected more dirt and scratches, as well as anomalies including flicker and unsteadiness by hand using other software tools. Density fluctuations were addressed in a final correction pass.

The corrected digital master file (approximately nine terabytes) was subsequently recorded onto an extremely fine-grain, high resolution, low contrast 35mm black-and-white film that was used to generate new 35mm black-and-white prints. The corrected 4K data can also be used to generate new HD masters as well as digital cinema copies. Proprietary LUTs will ensure that the HD copies of the film retain the exact look of the restored film master.

Cineric has made a major commitment to a 4K infrastructure. "We believe that in the future all high-quality restoration work will be done in 4K space," says Nyari. "The art and science of 4K digital restoration is still in its infancy. We challenged our technology vendors to improve the tools, and they came through. Cineric is pioneering the use of 4K film restoration technology because we believe that is what it takes to faithfully preserve classic films for posterity the way they were meant to be seen. The artists who created these films as well as future audiences deserve nothing less."

A pristine print of the fully restored film premiered at the London Film Festival in October 2006, and met with rave reviews.

- 1 Actor Peter Sellers in a scene from the unrestored film
- 2 The same scene after Cineric, Inc. removed the flaws and restored the film.

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