



1928's *The Man Who Laughs*



Restored at NBCUniversal's StudioPost

RESTORED TO LIFE

A NEW GENERATION OF FILM FANS DISCOVER LOST MASTERWORKS
AND CULT FAVORITES, THANKS TO DIGITAL RESTORATION

BY CHRISTINE BUNISH

Using the latest digital restoration techniques, facilities are busy transforming aged, faded and damaged films into treasured content ready for new theatrical runs, home video distribution and release on streaming platforms or safe archiving for future viewing. Here, industry pros discuss with *Post* how they are preserving masterpieces and cult favorites of yesteryear for future generations.

NBCUNIVERSAL — THE MAN WHO LAUGHS

Universal Pictures, a division of NBCUniversal (www.nbcuni.com), has continued its historic silent film initiative with the restoration of *The Man Who Laughs*, a 1928 romantic drama directed by Paul Leni and starring Conrad Veidt. Based on the Victor Hugo novel, the film centers around the son of a noble rival to the English king whose face has been permanently disfigured into a grotesque smile in an act of revenge. He becomes a circus clown and falls

in love with an orphaned blind girl before he's faced with the decision to reclaim his birthright or follow his love for the young woman.

The primary source for the restoration was a 35mm composite fine grain from the Universal Studios vault, which was created in 1954 from the nitrate original camera negative. The 4K digital restoration was completed by NBCUniversal StudioPost. The restored film premiered at the 2018 San Francisco Silent Film Festival.

"Often, few film elements survive, but we had access to 18 various film elements in international archives," says Peter Schade, vice president of content management at NBCUniversal global media operations. "We used the fine grain as the primary element as it is only one generation removed from the original negative, and it's got English inter-titles."

Nevertheless, "there was more than 25 years worth of aging on the fine grain, not to mention the print-



Film was scanned at 4K.



The project was archived to DPX files.

ed-in damage from the negative — wear and tear, film warps, jump cuts, scratches, dirt and density shifts,” he reports.

NBCUniversal’s StudioPost facility “is an excellent partner in supporting our restoration effects,” Schade says. “Content management coordinates the project, and our mastering supervisor, Seanine Bird, works closely with the artists there to identify the best tools to use. There’s always something new on the market or software upgrades. We try to find the best tools and put them into the workflow.”

The film was scanned at 4K on an Arriscan film scanner. Then, in the first pass, the image was stabilized using HS-Art’s Diamant film restoration software. Film perforations not only wear out over time, causing unwanted movement; takes that have been spliced together also weaken, come apart and destabilize the image.

A two-part process repaired wear and tear and artifacts. “To keep within budget we couldn’t do a thousand hours of manual repairs,” notes Schade, “so we started in an automated fashion with Phoenix by Digital Vision and Algosoft software. Then, what was left, we handled manually with MTI Film’s Correct, which has powerful dirt and scratch removal tools. Scratches, stains and

hairs printed over several frames were manually addressed with Autodesk Flame. Image distortion is particularly hard to deal with — you can’t get rid of it entirely but we try to make images look as close to original as possible.”

Grain management is another challenge in image restoration. “We had to be careful not to remove grain to the point where it doesn’t look like film anymore,” says Schade. “So we made moderate use of Cinnafilm’s Dark Energy to manage excessive noise brought out in the high-resolution scan.”

The inter-titles also came in for some work, he points out. “Because the cards have no images, just white text on a black background, a lot of dirt is highlighted. We often recreate the title cards with the same font so we have more control, but they can’t look too perfect or they’d stand out. So we have to blend them in with the rest of the film.”

At the same time, color grading was done on proxy files, then the color list was applied to the clean 4K files. Colorist Larry Gibbs was charged with balancing grayscale values, contrast and density using Autodesk’s Lustre.

Although *The Man Who Laughs* is a silent film, it has a particularly interesting audio story.

“Films of the nineteen-teens and early 1920s had no soundtrack. For modern exhibitions, the films often have live accompaniments in theatrical venues,” Schade explains. “But our fine grain has a soundtrack on it; we believe this score was produced a few years after the film’s release in 1928,” says Schade. “This original soundtrack will be available for screenings in theaters.”

The restoration team cleaned up clicks and pops in the original soundtrack using iZotope software. In addition, NBCUniversal has been commissioning composers to score and record new soundtracks for the pictures in the silent film initiative. “The Academy of Motion Picture Arts & Sciences put us in touch with the Berklee College of Music’s Berklee Silent Film Orchestra in Boston, which expressed an interest in recording the music for this film,” says Schade, “and they ended up producing an incredible score.”

The feature score is believed to be the first

undertaken by college student composers and performers for a major Hollywood studio; they recorded the new score in Berklee’s studios, performed live accompanying the film at the San Francisco Silent Film Festival and took a mini tour with the film to five of New England’s classic repertory film venues last summer.

The non-compressed 4K restoration was archived as DPX files on the lot in Universal City with a disaster recovery backup on a server in Colorado. A DCP was made for venues that want to screen the film; to further service non-theatrical release requests, ProRes mezzanine-level image files and Pro Tools audio files are also archived. “Universal Pictures Home Entertainment is working with Flicker Alley to release *The Man Who Laughs* on DVD and Blu-ray in the first half of 2019,” Schade reports.

The restored *The Man Who Laughs*, which received an enthusiastic reception at its San Francisco premier, “looks better than it’s ever looked,” he says. “It’s a blend of melodrama and romance, although it tends to get classified as a classic horror film. It has a unique place in film history.”

SONY PICTURES ENTERTAINMENT — **RIDE LONESOME**

One of five westerns that director Budd Boetticher made with Randolph Scott for Columbia Pictures between 1957 and 1960, *Ride Lonesome* was recently given a 4K restoration supervised by Grover Crisp, executive vice president of asset management, film restoration & digital mastering at Sony Pictures Entertainment (www.sonypictures.com). These westerns were enormously successful in their day and continue to have a cult following; the restored 4K versions of *Ride Lonesome* will be available for theatrical release and distribution on television and streaming platforms.

Ride Lonesome suffers from the fate of many color films of that period in that the 35mm original camera negative is very faded. We wanted to take advantage of the digital tools available today to try to save the film in advance of any



Schade