OPTICS



DP Kate Cornish **DIR** Max Miller

Article: T. Oxford



'OPTICS' DP Kate Cornish - PHOTO Joel Pratley



'OPTICS' DP Kate Cornish with Natalie Hunter - PHOTO Joel Pratley

Optics is a black comedy that centres around, ***"two women who find themselves very suddenly helming this PR firm that deals in crisis management for the upper echelon of society. Think ministers, celebrities, and public figures,"*** notes DP Kate Cornish. Starring series creators/writers Jenna Owen and Vic Zerbst, a sudden death in the leadership of Fritz & Randell creates a vacuum pitting Nicole Kidman (Owen, and yes - that is in fact her character's name) and Greta Goldman (Zerbst) against their former boss Ian and his boys club management approach as they attempt to seize the reins of power. However, they may have bitten off more than they can chew.

Appropriately, for a series that deals in the manipulation of appearances, Cornish sought to control the look of the show initially through the optical elements. ***"It's called Optics ... no pun intended. We wanted to do something interesting optically, because it's all about how you perceive different stories and how the media can twist and turn the narrative. So, we wanted to play with that visually."***

Covering six episodes on a tight schedule of four shooting days per episode while still achieving a distinctive look requires flexibility and adaptation. To this end, after initial discussions with Ant Pawley from Southern Cross Cameras (who ultimately supported the production), Cornish notes that Pawley had shared how for Netflix series *Boy Swallows Universe,* Shelley Farthing-Dawe ACS had recently implemented a ***"series of makeshift rear lens elements with the aid of an optician. They gave him the ability to dial in and change the effect of the bokeh."*** However, with the release of the ARRI Impression filters, this DIY process was no longer necessary.

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Connecting magnetically to the rear element of the ARRI Signature Prime series (and only compatible with those lenses), the Impression filters allow for a range of intensities in look that can also be easily swapped and transferred between different lenses in the kit. The initial range of Impression filters are the V filters, a set of eight filters with four positive and four negative filters. ARRI describes the effect of the positive filters as to, ***"produce 'bauble' bokeh in the background, where out-of-focus highlights are bright in the middle and blurry at the edges. Bokeh at the edges of the image becomes more stretched and pointier."*** Conversely, when using the negative filters, ***"in the background, 'donut' bokeh gives out-of-focus highlights a bright ring around the edges, making them appear sharper."***



Jenna Owen (Nicole Kidman) Kate Walsh (Hannaah Halston) & Vic Zerbst (Greta Goldman) in 'OPTICS' - DP Kate Cornish

Optics is one of the earliest productions to adopt the new technology across the show to establish a specific visual style. For the majority of the show, Cornish used the 140P filter as a base look for the world of the show, noting that along with the overall stylistic effect of the filters, ***"the Signature Primes are beautiful. They're very sharp. And we wanted to kind of soften them as well. And so those filters helped us with that."*** (The naming system for the filters is a number that increases with the intensity of the filter, along with a P or an N to denote Positive or Negative; interested readers can experiment with an online comparison tool on the ARRI website).

Beyond establishing the aesthetic parameters for the world of Fritz & Randell and the beleaguered women newly installed at the top of the corporate hierarchy, different filters would be deployed in select scenes largely for comedic effect. Cornish cites one scene where Ian, suffering the agonies of being subservient to Nicole and Greta, experiences heart pains and seeks medical treatment. When asked about any stresses in his life, ***"he has this flashback and, truly, the scene is just the girls asking him to download a productivity app to make things a bit more efficient. But he sees it as though they're overhauling the entire way that they work, it's making his life difficult. And the way that we view it through his lens, we put the 50N negative filter on and it makes everything look like things are rushing at you, and it's very overwhelming. ... [Which] made it even funnier."***

Additionally, the production shot on Alexa 35 with a Nostalgic texture, based on a show LUT that Cornish created during camera tests. ***"We were very specific with that look and I had a lot of Max's [Miller, series director] and my references pulled together to get those colours right. It's very saturated and very contrasty but it also rolls the highlights a lot."*** The use of the Nostalgic texture was also part of aligning with Miller's references, with Cornish pointing out that one note was



Vic Zerbst (Greta Goldman) in 'OPTICS' - DP Kate Cornish



Bali Padda (Cody Smith), Kaan Guldur (Leo), Charles Firth (Ian Randell) in 'OPTICS' - DP Kate Cornish

that ***"[Miller] wanted it to look very old-money ... it is a very heightened show. I think if he could have shot film, he would have."*** While acknowledging that the textures implemented in the Alexa 35 are relatively new technology, Cornish remarks that ***"I really like how the Nostalgic texture looks. I've just used it so many times that I'm used to it."*** And although a blend of new optical and texture technology might be a difficult sell for a cinematographer in some production settings, the combination of extensive testing (including separate sessions on her own time prior to official camera testing) and a supportive environment led to the look of the show: ***"they really trusted my aesthetic choices. I think as soon as they saw the rushes from the dailies, they were like 'great!'."***

The world of *Optics* is centred around the office of Fritz & Randell, which was based in an unused corporate space that production had the ability to control, allowing a custom colour palette to be developed that contrasts the clinical blue of the working areas with the rich wood panelling and warmer lighting of the boardroom. Additionally, collaborating with production designer Jamie Cranney allowed for further nuances, such as a darker shade of blue for certain office spaces, creating the impression of isolation for select characters.

Several of the challenges with working in an office environment are the colour spikes of traditional fluorescent lighting and the potential flickering of newer LED fixtures that have begun to replace the older lighting systems. Numerous options were explored, including a custom build based on the typical fixtures found in modern offices, however there were limitations in dimming (with the system employing stepped dimming) and three fixed colour temperatures. Cornish reflects that ***"knowing how moody we wanted the show ... I was concerned about 'what happens if I dim the lights down to ten percent?"*** When camera tested, the lights revealed that ***"sure enough, it was flickering like bananas if you went any lower than***



Bali Padda (Cody Smith) & Belinda Giblin (Meredith Laughton) in 'OPTICS' - DP Kate Cornish



Bali Padda (Cody Smith) & Charles Firth (Ian Randell) in 'OPTICS' - DP Kate Cornish

thirty percent ..."

The ultimate solution came in the form of Titan Tubes rigged into the ceiling and operated through a DMX system, allowing full control of the fixtures, although this was aided by one happy accident, according to Cornish: ***"Originally, [this office] had fluorescent tubes. ... Then they had it renovated and they got these flat panel LEDs installed. So, what was really funny was when we pushed up these LEDs [to install the Titan Tubes], we found the honeycomb crates that were originally there. They were just left up in the roof."*** This stroke of luck (and a gift from the eternal laziness of contractors) lead the production to made simple adjustments with wood to affix the Titan Tubes to the honeycomb grids and then mount them in the ceiling, giving a solution that blends the fixtures into the production design while also controlling the light from each tube.

The series opens with a scene shot at 400 frames per second on the Freefly Ember, appropriately heightened to match the action: a drunken brawl between various revellers dressed as monks and various religious figures, ultimately culminating in an AFL player punching an actual priest who steps in to break up the melee. This scene incites the events of the first episode and Cornish notes that, ***"we really wanted to open the show with a bit of a visual bang and really leave an impression."*** In order to reach exposure, the interior of Sydney's Cricketers Arms in Surry Hills was pummelled with a number of large fixtures, opting for tungsten lighting both for budgetary reasons and to cast the interior in a golden light reminiscent of Renaissance painting. ***"It's so beautiful. Technically it's a cartoonish exhibition of pub violence, but it looks just like a painting."***

When it came to lighting the pub, ***"We used two 12k Fresnel's and three 5k Fresnel's, all tungsten, outside and then Vortexes inside. We knew those fixtures would be able to handle 400fps without flickering and give us the level we needed at such a light-thirsty camera setting."*** They also replaced all the pracs inside with LED bulbs.

Using the Impression filters brings several considerations, including the need for diopters when using the wider focal lengths in the Signature Prime range due to the filter changing the infinity focus point. In instances where these wider focal lengths would be used to establish the scene, Cornish went without the Impression filter, finding that ***"it also just broke the image up a little bit too much, and the purpose of the wides was often to be sharp so you could establish a space."*** Furthering the use of wider focal lengths throughout the series, certain exterior scenes use an ARRI/Zeiss Ultra Prime 10mm to give an extreme perspective, as seen during the funeral scene from the first episode: ***"I do really love watching cool, composed, wide shots, like that you see at the start of the church. Just looking up."***

Additionally, use of the Impression Filters across the various lens options results in the rear focus changing, necessitating adjustments from the camera team. Cornish was supported by A Cam 1st AC Molly Sutherland, who she praises with doing a lot of her own testing with the camera package and manually remapping for focus. ***"I owe so much credit to her for doing all the technical hard yards for that. I'm like: 'I just think they're pretty!' And then I've got my 1st AC going: 'I'm gonna murder you.' So much extra work."***

The majority of the series was shot multi-cam and supporting Cornish as B Camera Operators and Steadicam Operators were Pete Barta and Max McLachlan. The camera team was rounded out by Sam de Teliga (B Camera 1st AC), Bronte Nener (A Camera 2nd AC), Irisha Adnyana (B Camera 2nd AC) and Ashley Smith (Video Split). The show was gaffed by Thomas Brian and Paul 'Mico' Micallef served as Key Grip.

Reflecting on the project, Cornish remarks that, ***"It was so exciting to really world-build this whole new universe, which I got to have a hand in creating the aesthetic for. I think 'creatively fulfilling' would be the ultimate sentiment that I would end with."***

Capping off a busy year, 2024 also saw the release of Cornish's debut feature film, *Nugget Is Dead: A Christmas Story* on Stan, and she also shot the second block of the upcoming third season of *Heartbreak High*, set to be released on Netflix later in 2025.