

The American Society of Cinematographers

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Top-Dollar Camerawork

Cinematographer Jake Polonsky, BSC delivers two visually distinct worlds in the Showtime series Billions.

Unit photography by Jeff Neumann, courtesy of Showtime.

High finance is a notoriously complex field, and a TV series detailing its practitioners and the people who police them must inevitably reflect that complexity. Such is the case on *Billions*, a Showtime series set in the respective offices of New York's financial elite and the government agents whose job it is to keep them in check.

Damian Lewis stars as Bobby "Axe" Axelrod, a powerful fund manager of enormous wealth and success, while Paul Giamatti plays Charles "Chuck" Rhoades Jr., a U.S. Attorney with a critical eye on Axelrod's activities. Despite the straightforward dramatic setup, the series creates protagonists and antiheroes with mixed motivations. It is, says director of photography Jake Polonsky, BSC, "an adult story. It's not being pitched at 14-year-olds. You've got to stick with it."

Polonsky shot 10 episodes of *Billions*' first season. "I'd worked on an American show before — an ABC miniseries called *The Assets*, shot in Lithuania," he says. "So, I had a taste of how things are done in the American system, but *Billions* was the first time I'd done anything [of this scale]."

The cinematographer's career actually began in the United States, when he "got a Fulbright scholarship to go to the American Film Institute. I'd done a degree in history and English, but I'd always wanted to get into film. So, aged 22, I turned up in Hollywood and had this incredible year. A lot of good teaching and meeting a lot of people who are still good friends." Polonsky's contemporaries included Jaime Reynoso, AMC (recently busy on the Netflix series *Bloodline*) and Haris Zambarloukos, BSC, GSC (whose credits include *Thor*, *Jack Ryan: Shadow Recruit* and *Cinderella*). Having later worked on music videos and commercials, Polonsky pursued 2nd-unit work, including time on the feature *Divergent*, shot by Alwin H. Küchler, BSC and directed by Neil Burger, who would become the lead director on *Billions*.

Series showrunners Brian Koppelman and David Levien had seen Polonsky's work on the U.K. program *Black Mirror*, which the cinematographer describes as "hugely helpful." Offered the job to shoot *Billions*, Polonsky soon found himself in New York City with three scant weeks to prepare for a 20-week shoot. With the show's writing reliant on quick, short scenes in varied locations, the crew was faced with two or three company moves per day, and Polonsky refers enthusiastically to his collaborators' work ethic: "You can look at a day on paper that seems incredibly tough, but there are enough people and enough resources to support it. My key grip George Patsos would glow if he could get his dolly set before the sound department got into the building."

Polonsky adds, “We had two stages — the U.S. Attorney’s office was in Queens, the Rhoades house set was in Green Point, and we had a brilliant real location for Axe Capital [Axelrod's company].”

The *Billions* pilot, shot by Eric Steelberg, ASC, was, naturally, a crucial visual reference for Polonsky, although it would later be re-graded and supplemented with new scenes. Overall, the photography was intended to establish two thematically separate worlds reflecting the show's lead characters. “There's Chuck's world, which is the U.S. Attorney’s office — warm tones. His office has a lot of dark wood in it. With Axe, there's a lot more light — hard edges.” The stark whiteness of the Axe Capital corporate office space, with its huge windows and skylights, was enthusiastically embraced. “Shooting digital, that's often a no-no, but we really liked the geometry and the symmetry that you got out of all those lines and the fluorescent light in the ceiling. We tried to give that place a lot of depth.”

Technical preparation was eased by the fact that “Showtime was not bothered about the whole 4K thing, and they still don't seem to be, so we didn't need a 4K camera,” Polonsky notes, referring to the requirement of some other studios to shoot in 4K to help future-proof content. This led to a straightforward camera choice: the Alexa Plus, shooting 2K ProRes to SxS cards. “They were reluctant to have a traditional DIT on the whole show, so we wanted to put in place a workflow that was fairly bulletproof,” says the cinematographer. To this end, he used the conventional, built-in Alexa Rec 709 LUT, describing it as “a basic idea of what you want the picture to look like.”

Polonsky’s specific image plan for any given setup could be accommodated with a simple exchange of images during the preparation of dailies. As he explains, “I like to be sent one frame of each take. I open those frames up every morning, and if they look as I remember, then we're close enough when they go to postproduction.” This approach, while straightforward, relies on accurate monitoring, a subject in which Polonsky maintains a keen interest. “I like to use 17-inch TVLogic monitors, which — for my money — give me the most accurate results if they’re set up right. After all, if you're going to be working in digital, and you do have to take this with a pinch of salt, you really should be able to work in a very precise way.”

Principal lenses were Angenieux Optimo 17-80mm (T2.2) and 24-290mm (T2.8) zooms. “[The 17-80mm] is not the newest thing,” Polonsky says, “but it offers a combination of being quite fast — T2.2, so it’s close to what a prime lens might offer you — and focusing close. It’s also not massive.” He estimates that 95 percent of the show was shot on the lens, often at the wider end of the short zoom. “Every time we used a wide-angle closeup, the results felt enormously three-dimensional. You have to be a little sensitive to the physiognomy of your actors, but we all felt that our characters could take it if we wanted to use it.” This effect was enhanced further in the geometric environment of the modernist Axe Capital offices: “On the 17-80mm, there was quite a lot of distortion. I initially thought this was a problem, then I realized I quite liked it.”

Burger also expressed an interest in the wider end of the photographic spectrum. Shooting with a “27mm at 4 feet is the kind of formula that gives you that kind of look,” explains Polonsky. “We also had a set of Master Primes, if we needed a little more stop or we were on the Steadicam. But they required quite a lot of diffusion to get them close to what the zoom looked like.” To that end, Polonsky employed Mitchell diffusion filters.

Though *Billions* enjoyed the constant availability of two camera teams, they were rarely used simultaneously. “A specific brief I had from the showrunners was that they really didn't like wide eyelines,” Polonsky explains. “They wanted the characters to feel like they're looking at one another. With very tight eyelines, shooting with two cameras sometimes isn't possible.”

Polonsky singles out key grip George Patsos for his creative solutions to shooting in such an extensively glazed location as Axelrod's offices. “There's one enormous skylight that would usually be very uncontrollable, but George managed to put together a giant silk that would control it. The ceiling of the office is also glass. We had a silk that we would usually pull over so there's quite a lot of soft light inside at a high enough level to balance everything out.”

Nevertheless, Polonsky was careful not to erase all the lighting “accidents” that reality brings. “It looks real because it's not perfect,” he says, noting that imperfections subconsciously suggest to the audience that something is real. “On stage, you'll always try and throw a couple of random bits of hard light somewhere with a unit like a Source Four to imply that there's uncontrolled light that bounced off a bit of glass or metal.”

The approach to lighting equipment on *Billions* was deliberately “lo-fi,” says Polonsky. “I had two gaffers on the show, Bill O'Leary on the first eight [episodes], and then Jay Fortune on the last four, and by default they would both reach for similar tungsten lighting. We used a lot of [LED] LiteRibbon for car interiors, but, in terms of cosmetic lighting on people, it was quite traditional.”

Postproduction took place at Harbor Picture Co. in New York City with colorist Joe Gawler. “Joe was great because he was involved from the very beginning,” says the cinematographer. “He worked on the pilot and looked at the tests we did before starting the rest of the show. He'd go through the episodes quite thoroughly before I'd even come in.”

Associate producer Mike Harrop notes that “we'd get Jake at the end of a 14- or 16-hour shooting day. That really sharpens everyone's communications.” And the grade was complicated, Harrop remembers, by the ambition of the show's writers to create “a larger world with all the different locations, the quick scenes and moving about. There's a lot of connective tissue as well — exteriors, transitions.”

For his part, Polonsky remembers a lean and efficient process. “I'm used to grades where you have a huge number of people in there,” he says. “Very pleasingly, it was just me and Joe. Brian and David and Mike would all review it, but things rarely changed radically from what we did. We'd communicated clearly about what they wanted.”

Overall, Polonsky recognizes the benefits offered by the scope of episodic television. “I've worked on long TV show productions before, but this was the longest I've ever done,” he says. “What you can do in terms of how the story develops is totally different to a 90-minute feature. Major feature-film directors — Steven Soderbergh, Martin Scorsese, Oliver Stone — are all now involved in television projects. There's a [growing] perception that in television there is an opportunity to investigate and develop a story in a way that's difficult to do now in features.”

TECHNICAL SPECIFICATIONS

1.78:1

Digital Capture

Arri Alexa Plus

Angenieux Optimo zooms, Zeiss Master Primes