

Jon Fauer, ASC

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# FILM AND DIGITAL TIMES

Art, Technique and Technology in Motion Picture Production Worldwide



# FILM AND DIGITAL TIMES

Art, Technique and Technology

Film and Digital Times is the guide to technique and technology, tools and how-tos for Cinematographers, Photographers, Directors, Producers, Studio Executives, Camera Assistants, Camera Operators, Grips, Gaffers, Crews, Rental Houses, and Manufacturers.

It's written, edited, and published by Jon Fauer, ASC, an award-winning Cinematographer and Director. He is the author of 14 bestselling books—over 120,000 in print—famous for their user-friendly way of explaining things. With inside-the-industry “secrets-of-the-pros” information, Film and Digital Times is delivered to you by subscription or invitation, online or on paper. We don't take ads and are supported by readers and sponsors.

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# Contents April 2026 - Issue 135

J.M.W Turner.....	3
From Battersea BSC Expo to Millbank: Tate, Turner, Constable...	4
Turner & Constable at the Tate .....	5
Turner & Constable, Fire & Water .....	6
Turner & Constable, Rivals & Originals.....	7
Turner, Storm and Fire. 1.33:1 Aspect Ratio.....	8
Tim Sidell, BSC on Turner and <i>The Night Manager</i> .....	9
Tim Sidell, BSC: Leitz Hugo, Mamiya 645, Optimo Zooms .....	10
Tim Sidell, BSC: VENICE 2.....	11
Tim Sidell, BSC: VENICE in Wales, Columbia and Spain .....	12
Tim Sidell, BSC: <i>The Night Manager</i> Details .....	13
Tim Sidell, BSC: Turner, Constable and Style .....	14
Tim Sidell, BSC: The Story of Art.....	15
<i>The Night Manager</i> Frames .....	16-17
Canon CINE-SERVO 40-1200mm T5.0-10.8 Zoom .....	18
40-1200mm T5.0-10.8 — 2026 .....	19
50-1000mm T5.0-8.9 — 2014 .....	19
Canon Cine Servo 40-1200mm — Left .....	20
Canon Cine Servo 40-1200mm — Right .....	21
Blake McClure, ASC on <i>Rooster</i> with URSA Cine 17K 65.....	22
Blake McClure, ASC: First URSA Cine 17K 65 Cameras .....	23
Blake McClure, ASC on <i>Rooster</i> in 65mm Format.....	24
Blake McClure, ASC on URSA Cine 17K 65.....	25
Blake, McClure ASC: URSA Cine 17K 65.....	26
Blake McClure, ASC: Putting the camera in the right place.....	27
AJA BRIDGE LIVE IP with SMPTE ST 2110 I/O.....	28
AJA IP25-R v2.0 Firmware Update.....	29
AJA OG-GEN10 HD/SD Sync Generator .....	29
Claudia Raschke, ASC — Explorer of Light .....	30
Claudia Raschke, ASC Dancing with Camera.....	31
Claudia Raschke, ASC on Kevin Kostner's <i>The West</i> .....	32
Claudia Raschke, ASC on Documentary Virtual Backgrounds...	33
NIPROS OLED EVF .....	34
Angénieux 0.75x Wide Angle Adapter .....	34
Takuro Ishizaka, JSC on <i>Rental Family</i> .....	35
Takuro Ishizaka, JSC: the Look of <i>Rental Family</i> .....	36
Takuro Ishizaka, JSC: Production in Japan .....	37
<i>Rental Family</i> Frames.....	38
Natasha Leonnet on Grading <i>Rental Family</i> .....	39
Chris Field on Macro Moving Pictures and Laowa Probe Zoom	40
Chris Field and Laowa Probe Zoom .....	41
NANLUX Evoke 5C .....	42
NANLUX Evoke 5C Light Kit .....	43
Easyrig STABIL Medium for Vario 6.....	44
Christophe Casenave on Creativity, Character, Change .....	45



## COVER

J.M.W. Turner. *Snow Storm: Steam-Boat off a Harbour's Mouth*. 1842, at Tate Britain's Exhibition *Turner & Constable, Rivals and Originals*.

# From Battersea BSC Expo to Millbank: Tate, Turner, Constable



Above: Turner fire. River Thames looking toward BSC Expo in Battersea Park, London. Below: Constable water. Millbank side near Tate Britain.



## Turner & Constable at the Tate



Self-Portrait. Joseph Mallord William Turner. (1775 – 1851)  
1799. Oil on canvas. 23 × 29.3". Tate Britain.



Portrait of John Constable (1776 - 1837) by Ramsay Richard Reinagle.  
1799. Oil on canvas. 25.1 × 30". National Portrait Gallery, London.

Art photography in this article by Jon Fauer.

It was a windy walk from BSC Expo in Battersea Park along the river, past Architecture-on-Thames familiar from too much *James Bond* and *Slow Horses*, then over Vauxhall Bridge to Millbank and Tate Britain's *Turner & Constable, Rivals and Originals*. The exhibition (11/27/25 to 4/12/26) is a celebration of creative journeys, divergent styles and two artists' determination to stand out, to be unique. Turner and Constable are protagonists in our current cinematic dialog about the perfection of imperfection, character and look and the overwhelming desire to be different.

As Constable painted with increasingly finer detail, Turner evolved with a pre-Impressionist riot of swirling colors, fire and raging seas. These are the same questions that try cinematographers' souls. Words flare up: character, organic, bokeh, roll-off, swirly, silky, softer, smoother, but isn't it really about thinking differently, uniquely, obliquely, and not clinically, intellectually, respectably?

Having left the halls of Battersea's BSC Expo with its tantalizing displays of ancient, vintage and modern glass and rehousing of unusual distinction, here were Turner and Constable confronting similar choices. As Edward Lear, artist and author of *The Owl and the Pussycat* ("They dined on mince and slices of quince") wrote, "Copy first the works of God, and those of Turner next."

Turner was not only a genius artist who worked very hard. He also enjoyed the excitement of painting to an audience. Tate Britain notes: "The Royal Academy's annual exhibition was where reputations were made and lost. For artists, the challenge was making art that stood out from the crowd. Turner soon learned ways to command attention through scale and increasingly intense color. Constable was struggling to get noticed. This spurred an important development, the making of large-scale paintings known as six-footers." Here's looking up to you, 65mm Larger Format.



J.M.W. Turner by Charles West Cope. 1828.  
6.3" x 5.1" oil on card. National Portrait Gallery, London.

## Turner & Constable, Fire & Water



1831. J.M.W. Turner.  
*Caligula's Palace and  
Bridge.*  
97" x 54" oil on canvas.  
Tate Britain.



1831. John Constable.  
*Salisbury Cathedral from  
the Meadows.*  
76" x 60" oil on canvas.  
Tate Britain.

At the Royal Academy 1831 Exhibition, Turner's *Caligula* hung next to Constable's *Cathedral*.

A critic from the *Literary Gazette* wrote, "Exaggerated, however, as both these works are—the one all heat, the other all humidity..."

Turner is heat and haze, atmosphere, shafts of light, intense color.

Constable is water, dew, detail.

## Turner & Constable, Rivals & Originals



1835.  
J.M.W. Turner  
*Keelmen Heaving in Coals by Moonlight*  
48" x 36" oil on canvas  
National Gallery of Art,  
Washington, DC

At left: Turner's impressions of the River Tyne during the Industrial Revolution. Intense shaft of moonlight, swirling smog, exaggerated torchlight.

Below: Constable's Larger Format *Waterloo Bridge*, fine detail and dots of white (called "Constable's snow"), took thirteen years to complete.

1831.  
John Constable.  
*The Opening of Waterloo Bridge*  
86" x 52" oil on canvas  
Tate Britain.



## Turner, Storm and Fire. 1.33:1 Aspect Ratio.

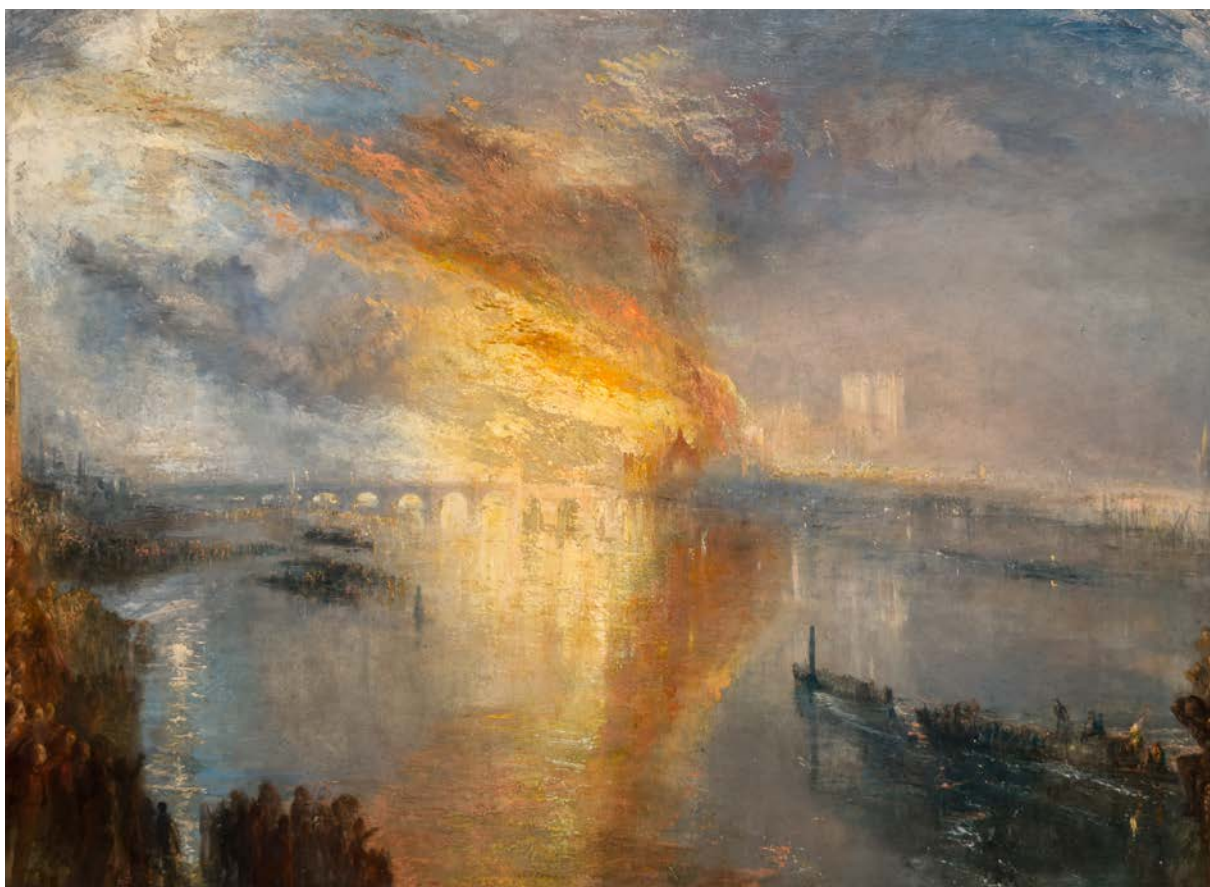


1842.  
J.M.W. Turner  
*Snow Storm: Steam-Boat off a Harbour's Mouth.*  
Oil on canvas. 4' x 3'.  
Tate Britain.

John Ruskin wrote in 1843 that Turner's *Snow Storm* was "one of the very grandest statements of sea-motion, mist and light, that has ever been put on canvas".

Other critics were less kind. "Soapsuds and whitewash," one wrote.

Turner would have been the very model of a modern major DP: "I did not paint it to be understood, but I wished to show what such a scene was like; I got the sailors to lash me to the mast to observe it; I was lashed for four hours, and I did not expect to escape, but I felt bound to record it if I did."



1834.  
J.M.W. Turner.  
*The Burning of the Houses of Lords and Commons.*  
Oil on canvas. 4' x 3'.  
Cleveland Museum of Art.

Turner's "depth of field" focuses our attention away from the thousands of people watching from the shore and toward the conflagration.

"If I could find anything blacker than black, I'd use it," Turner said about his style some years later.

Long before high dynamic range was even a notion, Turner was pushing limits, retaining details in the flames and painting shapes in the shadows.



Tim Sidell, BSC with Ronford Atlas 7 fluid head. Photo: Manuel Bermeo. Courtesy of *The Night Manager S2* 2025 © The Ink Factory/BBC/Amazon.

Tim Sidell, BSC was the sole cinematographer of all 6 episodes of *The Night Manager Season 2*, starring Tom Hiddleston, Hugh Laurie and Olivia Colman. Tim's credits include *Flux Gourmet*, *Romeo & Juliet*, *I Hate Suzie*, etc.

### **Jon: How did art school lead to a career in film?**

Tim: I studied illustration, which is interesting for cinematography because of the similarity in visualizing someone else's ideas. Then I became obsessed with painting. I did some exhibitions, commissions and gradually painting became video installation, then experimental film. I became interested in cinematography and started working with other artists, shooting films with them. Then I did short films, music videos, commercials, then features, and so on. I still tinker in the studio with painting, experimental film, still photography and printing my own negatives in the color dark room.

**The day after we met at BSC Expo London, I went to the Turner Constable Exhibition at the Tate Museum. A prominent ASC DP (name withheld to protect the guilty) once said, "The difference between Turner and Constable was that Turner got up earlier in the morning to catch the light."**

The exhibition was interesting to me because it demonstrated a point where their work was almost indistinguishable. Then they veered apart. I found myself more aligned with Turner and his life of exploration. There's something more natural and impressionistic; there's a questioning. I found Constable's work increasingly cold, methodical and factual rather than emotive.

**That is very relevant in our discussion of your work and the current dialog about lenses today. As with Turner, do you lean toward putting your own unique style or signature on your films?**

Very much. We had a debate at BSC Expo about that. It's tricky to put more value on one approach or the other. Some cinematographers may be wary of having a style that stands out too prominently because they don't want to lose work if it is seen as being too specific. Maybe they want more diversity. It's also a question of diplomacy. Though that's not quite how I feel.

**Doesn't every cinematographer have a style, conscious or not?**

Perhaps. For me it's about facilitating, encouraging and nurturing the story with the Director and the team. The creative style often is born out of that context and collaboration.

**Tell us about how this all worked on *The Night Manager*.**

Collaboration. We enjoyed a great deal of creative freedom, within reason, on *The Night Manager, Season 2*. It's still TV drama, episodic, six parts. There are some frameworks you have to follow, but we were never told to do one thing or another.

**How did the style evolve?**

This is my second main project with Georgi Banks-Davies, the Director. I tried to show Tom Hiddleston, as Jonathan Pine, playing different personalities. He's Alex Goodwin at the beginning, then Max Robinson as an undercover detective, and then Matthew Ellis, a very showy city banker. For the undercover version, we held

## Tim Sidell, BSC: Leitz Hugo, Mamiya 645, Optimo Zooms



Olivia Colman and Tom Hiddleston at the military outpost in “Syria”, shot in Tenerife. Tim Sidell, BSC (left) handheld on the “blue” camera and Dan Nightingale on “red” camera. Photo by Des Willie © The Ink Factory/BBC/Amazon.

back a little bit, always handheld, hiding around corners, longer lenses, a bit more voyeuristic, a bit rougher, a bit more reactive.

We gave a different accent when he’s Matthew Ellis, the role he plays in front of Teddy and Roxy. It was more bombastic. We did bigger camera moves with a Steadicam, crane or whatever.

### Did you have different lenses for the Jonathan Pine iterations?

Our main lenses were Leitz HUGO primes. We had two sets, starting at 21mm, one for each VENICE 2 camera. One of our sets had the 50mm T1.0 Noctilux. That was fun to work with.

For the Matthew Ellis banker version, we used my complete set of Mamiya 645 Sekor C Medium Format lenses rehoused by TLS. They have a hint of anamorphic about them. They’re fitted with a speed booster on the back so they become wider and a 2/3 stop faster. You feel the speed booster as the outer edges become diffused in terms of focus and lower contrast, and the image is slightly warped. It’s a little more three-dimensional, like a baby step towards anamorphic. We felt that was appropriate to elevate the Matthew Ellis character who’s larger than life and feels he has to play that part.

[From TLS: “The original Mamiya 645 lenses were designed to cover a film area of 6 x 4.5 cm. With an image diagonal of 75mm, they amply cover 65mm format sensors. Our speed booster is essentially a 0.71x adaptor that sits at the rear of the original lens. It concentrates the light onto a smaller surface area, thereby increasing the speed of the lens by 1 f-stop. So, an original f/2.8 lens becomes

T2.3 (f/2.2). Furthermore, the speed booster reduces the focal length of the lens. So, a 35mm base lens becomes a 25mm once rehoused with the speed booster. This affects optical performance. The speed booster renders a beautiful cinematic characteristic not seen in the original lens. Although most popular in LPL mount, TLS also offers a PL mount.]

### How did you come to choose HUGO?

Going back to where we started, we talked about Turner and Constable. Turner’s painting has an emotional quality. I prefer “emotional” lenses (as my partner calls them) as opposed to very technical lenses, which might be sharper but don’t have the same feeling. I default to older glass because I don’t need all of the extra sharpness. I like some softening. It’s more forgiving on skin. I like lenses to be very small because they have better balance for handheld. Also, smaller lenses are less intimidating to the actors. Having a great whopping lump poked in front of an actor’s face is not pleasant.

Our references for *Night Manager* included thriller, espionage, long lens scenes in *The Conversation* as well as wide shots in *The Conformist* and *Parallax View*. But *Night Manager* is also a thriller, so we considered *Hurt Locker* and *Sicario* which looked sharper and had more snap than the older lenses I’d normally go for. Our mandate was to find lenses that were small, light, fast, had a good range of focal lengths, not as forgiving as something like K35, but not as hard as something like Master Primes. We found those qualities with the Leitz HUGO. They’re still slightly



Tim Sidell, BSC underslung with the Ronford Baker Altas 7 head on a crane. Photo by Des Willie © The Ink Factory/BBC/Amazon.

sharp, but I eased that with diffusion and low con filtration. It's an excellent set and what they do for such small size is incredible and it's a great range of focal lengths. They're very fast and worked very well.

### **Did you use diffusion filters?**

Yes, I usually do. I always have a set of Tiffen Lo-Cons and Black Diffusion FX or Digital Diffusion FX. I like those because they don't halate too much. I like the reduction in resolution, but without the blooming. There are some scenarios where I will use Black Pearlescents or Black Satins, which have weak halation.

### **You also had zooms?**

We had zoom lenses, particularly for some of the espionage scenes. Our workhorse zoom was the lightweight Angénieux Optimo Ultra Compact 37-102 T2.9 FF, though we also carried two Angénieux EZ's. Sometimes we used Ultra Compacts on the Steadicam rather than a fixed prime so I could manipulate the focal length during a move. We also had 2x extenders for the zooms.

The long lens overhead sequences were inspired by Francis Ford Coppola's *The Conversation* and we used the Angénieux Optimo Ultra 12x Full Frame Zoom. The reason I love the Optimo zoom series is because it is classy glass. And, with a little bit of filtration, they just nail the look.

### **Does the Optimo Ultra 12x match the Ultra Compact Zooms as well as the HUGO Primes?**

Yes it does. We used the Ultra 12x at La Alpujarra Administrative Center, when Alejandro's character appears and goes into the Ministry of Justice and Sally meets him. There are three massive buildings around the square. We scouted all the high camera positions and the teams made it happen. It was not easy getting three camera crews each in separate buildings.

### **How did you decide when to go handheld, on Steadicam, sticks,**

### **crane or something else?**

It was quite a mix. We didn't have a hard and fast rule, but we'd lean towards much more handheld with the "Max Robinson" scenes. We'd never be handheld with the "Matthew Ellis" character. But of course, all of these personalities converge as the series progresses, so the rules kind of dissipate. A lot was Steadicam and a good bit was handheld. I love operating handheld.

### **You mentioned that the cameras were Sony VENICE 2?**

Yes—not so lightweight, but for me it's all about balance. If you can put it on your shoulder, let go and it stays there, then that's a well-balanced camera. Front-heavy cameras are no good for natural operating. I have a little cushion between my shoulder and the bottom of the camera. I'm not so keen on shoulder rigs as they offset the balance too much. And I like the SHAPE telescopic handgrips. I can push the release buttons to adjust their configuration, even during a take. I try and keep the underside of the camera very slim for handheld, because the way that you move to keep the camera stable and smooth has to come from your core, not bouncing on top of your shoulder. I used to do a Brazilian martial art called Capoeira that taught me a way of moving. A bit of stretching at the beginning of the day helps to warm up.

### **Did you operate a camera?**

I've always enjoyed operating. There's the immediacy, relationship with the cast, intricacies of framing and height relative to the subject, the eye line, all of that. We often needed two cameras running at the same time. Dan Nightingale was our main camera and Steadicam Operator. He did an amazing job. We often tag-teamed the handheld scenes, sometimes bouncing between characters.

Rather than A and B Camera, we called them red and blue. There would be times when I'd operate with a single camera, and other times where Dan would operate. There were occasions where we had three cameras and times when I would be at the monitors.



INT. THE GOLD MUSEUM Ep. 2 taken with Mamiya 645 lens. Framegrabs courtesy of The Ink Factory/BBC/Amazon.

I do like to move the camera. I also had a Chapman Cobra—a little pedestal dolly with a pneumatic riser—with a Ronford Slider and Ronford Atlas 7 Mini Fluid Head. I can operate and go where I want without having to choreograph out the movement in advance. I often have the camera underslung with the Atlas 7 on a small jib arm with the Cobra dolly so I can float, find and hover the camera over a shoulder or wherever, without restriction and without the edginess of handheld. I've also done the same with a telescopic crane, with the arm's control in my left hand and the Atlas 7 handle in my right hand so I can go anywhere.

### Where were the locations?

It was quite a puzzle figuring out the equipment across all the territories. We shot a month in London from June to July in 2024, then Wales for the big beach at the beginning of Episode 2, then Colombia—Bogotá, Medellín, Cartagena—for six very hot weeks from July to August; back to London and then to Spain, doubling for Colombia, for three and a half months. We were in Barcelona for almost eight weeks. All the jungle scenes, the port, airport and the little village were in Tenerife. The time in prep to find those locations and get everything matching was tricky.

### How did you manage the logistics of equipment rental?

The camera and lens package for London and Wales came from Sunbelt. For all the other locations, we kept the glass from Sunbelt and rented cameras from EPC in Spain. They sent the equipment to Columbia. We had four VENICE 2 camera bodies. Because we were quite remote, we wanted backups. Lighting and grip in Colombia came from Congo Films. They had a lot of flashy new equipment. Also, they run a film school that's very cool.

### Why did Spain double as Colombia? It worked well.

Budget funding. That's the way it was structured.

### Back to cameras. Did you have VENICE Rialto?

We used the Rialto occasionally. It's super handy and sometimes the only way to get into certain places, for example the car shots when they're driving through the jungle and we're scrunched inside the car, shooting French overs, or frontally from the dash. The Rialto comes in handy for that. In fact, it's the only way.

### What were your ISO and LUT settings for the VENICE 2?

All over the place. I use the ISO settings freely. In the past, I was very considered in my ratings. But with the time taken to manage and keep the ISO ratings consistent, I found it quicker and easier to adjust things in the grade. Normally I ended up tweaking the ISO to protect highlights.

The LUTs were quite important. I don't go too strong with LUTs because I don't want to push the image too far or to light to much against the LUT. So, the LUTs are quite subtle. I was very keen to temper the greens in Columbia—there is so much green. The LUT for those scenes had the same slightly steeper gamma curve as all the LUTs (for more punch in the middle and slightly reduced contrast) but a reduction in the saturation of those more yellowy greens. I think I had four LUTs and mostly used one or two of them.

This was also the first project I did in ACES, which was really good. Initially, I was unsure because everything seemed even more digital and a bit magenta—the color I hate the most. It reminds me of video cameras from the nineties. But once we figured that out and dialed the magenta out, the color separation you get with ACES is on another level. You can look into the shadows and find more information there. Obviously it's already there in the camera either way, but the ACES color space and HDR was an interesting journey.

### Wait, you're handheld, it's 47 degrees Celsius, and you had a DIT with a cart rolling around in the jungle?

Yes. But if it was an extreme setup in the middle of nowhere, then



Framegrab: ALPUJARRA SQUARE, MEDELLIN (Ep. 2). Application of language of *The Conversation*, taken with Angénieux Optimo Ultra 12x.

we'd scale down. Usually, Matt Hutchings or Nick Randall from Rebel Colour just got there. In his tent with a Flanders monitor, he also tirelessly ensured I had my own Flanders nearby alongside my little Odyssey monitor, which was set to Log and false color so I could see, with full accuracy, if and where the image might clip.

#### **You recorded Sony X-OCN?**

Yes. We went with X-OCN ST because there's a fair amount of VFX work. I've shot a lot with X-OCN LT and never had any issues. It's superb. But they were happy to provide the hard drives, so it was fine with us.

#### **What was the VENICE sensor mode?**

We were Full Frame, full width, 17:9 sensor mode, framing for 2:1 aspect ratio and cropped in post to 2:1. We recorded 8.6K.

#### **I guess the VENICE internal NDs helped with the changing weather conditions and locations.**

It is a game changer what Sony and the VENICE have done there.

#### **Your crew did not have it easy: cameras moving, tough locations.**

Red Cam was focused by Joseph Mastrangelo. I've been working with him for years. Blue Cam was David Agha-Rafei. At the beginning, production said that the A Camera team would be from the UK for the whole show. B Camera team would always be local. I said, "No, that's not going to work. If I'm going to operate, I'm going to need to bounce between cameras and know that whoever is there with the focus control knows the way I work. It's an instinctive collaboration that grows over years. Even if it means I have to have a local Second AC on my camera team, I've got to have my two focus pullers." That worked out well. Raquel Rodriguez was our second AC for Red Cam in Colombia as well as Spain. Lara Blanco took over Blue Cam focus in Spain to maintain the local quota, and she was incredible, along with Flora Novarro as Second AC.

#### **You had some beautiful drone shots as they were driving on the**

#### **narrow road through the jungle.**

That's an interesting story. We had the DJI Inspire 3. In the past I've insisted it had to be VENICE or ALEXA on a heavy-lifter drone. But I must admit, the Inspire 3 is so nimble and it can go so far and for so long compared to a heavy lifter, you just get better material. Andrés Sotomayor was the Drone Op. He won't stop until he's got what you want.

#### **What do you use for lenses on the Inspire 3?**

I used the native DJI lenses. I found that we've been able to match material perfectly well in grading, given that the drone language is completely different anyway. I think we used the 35mm and 50mm. I don't like the feeling of drones on very wide lenses.

#### **Let's talk about grading.**

Simone Grattarola is the colorist working with DaVinci Resolve. The company is Time Based Arts in Shoreditch, London. We mastered in HDR and then did a tweak pass for SDR. I think I was in the final grade for nearly 40 days.

#### **You're viewing in HDR or SDR on set?**

SDR on set. I always make sure that we shoot tests. They are as much a confirmation of what we're doing as they are a representation for the entire team of where we're going. The Director, Heads of Departments, Crew, Producers and Network Teams get to see what we're going to do. It becomes a bit of a contract. This is our promise as to how we'll make the imagery look.

Having Simone involved at the very early stage was so important as we were shooting those tests, taking them into the grade, creating LUTs based on those tests and then loading those LUTs into the cameras. The execs came to that test grade as well so that we could all sign off and say, yes, we are doing this. We had their support.

#### **Meanwhile, back at Turner, Constable and style. This show is for screens at home. If it were projected theatrically, would you**



Diego Calva as Teddy Dos Santos: BARQUERO TRADE OFFICE, CARTAGENA shot in Barcelona. Framegrab courtesy of The Ink Factory/BBC/Amazon.

## have used the same lenses?

I think so. The choice was largely visual, but it was also a process of wanting lenses that are physically light, small and fast, regardless of the screen size. I might have been a little more lenient on the focus pullers in terms of the aperture if it was for large screen, but it would've been a subtle difference. I don't think it would've changed much.

## It's interesting how Turner went to larger and larger canvases to attract attention and compete with Constable.

The competitiveness between them was amazing. Turner's work became fields of color. Some were almost like Rothko—you get lost in it. And at that point, Constable was becoming more mechanical.

**Turner's work was pre-Impressionism. His backgrounds became swirly, almost like Petzval lenses. This was some 30 years before Claude Monet's *Impression, Sunrise* (1872) invited the scorn of the French art establishment.**

The critics said Turner was senile at the time. So was Cezanne for his constructive take on Impressionism. He was building a block of fruit as a very physical thing, but the establishment thought that he just couldn't paint. He was pioneering a whole new movement called Modernism. I love that cutting edge when you are potentially being shouted down and challenged for doing something that is creative and you are breaking new ground.

**And yet, were vintage lenses refused or scorned? Maybe in the analog film days when lens manufacturers tried to overcome gate weave, poor projection, multiple generations of printing that degraded the image?**

It is less the case now. I remember writing my dissertation for an MA in photography about vintage as a marketable aesthetic. The fact that you could shoot on your phone and then pop a couple of filters on it in Instagram and make it look like it was shot on film in the seventies somehow had this signifier of authenticity simply

because it looked old. I found that interesting: you're degrading an image and somehow that makes it more authentic.

That's a critical take on the concept. But at the same time, I've always preferred an organic feeling lens because of my background in painting, and I don't want anything to look digital. I'm trying to get to a place where you don't feel it's digital. That doesn't mean it has to feel like film; it just needs to feel that everything is bound together within its own world.

**But devil's advocate, the digital sensor is essentially analog because it's just shades of black, white and gray, and then it gets converted to a digital signal. But it starts out analog. We could argue that a lot of this dialog came from the low resolution of early digital cameras. And now that we're getting cameras like the VENICE 2, which has higher resolution and smaller pixels. It's almost like the dots in printing or pointillism, with smaller points of paint. You don't see moiré or artifacts or notice the digital qualities as much.**

I must admit, I went to a Sony screening at Golden Square in London a number of years ago. It was 4K material on a 4K projector. And I just thought, really? Do we need 4K? At that point we'd just gone from HD to 2K but it was a revelation because I just thought, oh, now I'm not seeing the corners of the pixels. It's more organic.

**And the skin tones are smoother.**

Yes. So I thought, okay, bring on the resolution. I'm game. Film doesn't have hard gates, by which I mean brights at one end and darks at the other end don't suddenly stop. It just sort of fades and carries on and just bleeds away into this ethereal loveliness. Admittedly, you see that less these days because almost everything goes through a DI. Whereas digital is absolutely hard. This is the bottom, this is the top. You've got white, you've got black. As Ernst Gombrich asks in *The Story of Art*, what is white, what is black? It depends on the context. To me, nothing in the visual representation should be zero or a hundred.



Framegrab: NIGHT OWLS HQ - LONDON MEWS HOUSE. Framegrab courtesy of The Ink Factory/BBC/Amazon.

**Talking about Turner and getting the attention of the audience, isn't it the same for us cinematographers searching for a signature or style that separates ones work from everyone else and hopefully attracts the attention of a Director or Producer?**

Maybe. My own signature starts with subjectivity. A key thing that we wanted to do on *Night Manager* was to articulate what is in the script, which is an exploration of identity. In Season One, Jonathan Pine is more of an action hero. Here, in Season Two, he has questions—he's less sure of himself. There's also an investigation of gender and sexuality in this season.

So we explore Pine's identity, but also those of Teddy and Roxy. There's a very interesting triangle between them where they're all trying to figure out who they are in the life they find themselves in. Even bigger than that is the way Roper and Sandy Langbourne play up to the stereotypes of British imperialism, suggesting a question about the identity of Britain post-Brexit.

To articulate the subjectivity, I love to move the camera, anchor on a person and not only share their experience, but also witness it. I think maybe that's part of my signature along with color and texture, which comes from lenses, filtration, location and light. As I said earlier, it's about not having zero and not having a hundred within the frame, but having everything in between.

**Your compositions were very interesting and different. Framing was unusual. It was sometimes nicely off balance.**

Thanks. I don't like cropped heads. I want to see some space above. It's informed by my love of portraiture. I remember when I was painting how I'd buy all the different colors in tubes and I'd buy extra big tubes of white and yellow ochre because every color I mixed had white and yellow ochre. They were like the binding agent visually. I think it's the same in what I try to do with lighting and in the grade where there's a slight earthiness that holds it in the same world.

**How did you prepare for *The Night Manager*? Did you go to art galleries, museums?**

If only there were time. Georgi put a mood board together before I was involved, then we started anew on assembling a fresh one together with Víctor Molero, the Production Designer. Georgi also mentioned a couple of films that she wanted me to watch and I'd sent her a few as well.

**It seems that you were both in sync visually.**

Definitely. In addition to that, she pushes me to avoid being precious. Her drive is authenticity. We never do a camera rehearsal or crew show. Georgi blocks with the artists and wants me in there from the beginning. I'm watching the blocking and influencing it if I think something's essential, easier or quicker to shoot, and I'll also be plotting a shooting plan during the process. And there are no marks on the floor.

**Your focus pullers probably were not loving that. Full Frame and it looked like you were wide open quite often.**

They're used to it. They knew what they signed up for. I normally settle at T2½ or T2.8. Joseph would run in with his tape measure sometimes, but I think he knew that it was fairly pointless. It's all about being reactive. That's the authenticity that Georgi is after. And she doesn't want a camera rehearsal because she doesn't want to miss something that might happen. And it's quick.

Almost every shot is a master, unless it's a closeup or specific detail. That is the way I learned to work long before I met Georgi. You get as much as you can in one direction so that you've got a chance to light something with shape, turn it around, shoot back the other way. It's fluid. And the actors love it because they are free. They don't have to land on a position.

Every take is a discovery. Every take is different.

## The Night Manager Frames



THE GOLD MUSEUM  
(Ep. 2)

Tim Sidell, BSC:

"The interior included very long takes - 8 or 9 pages. This was largely shot with the Mamiya 645 lenses for the Matthew Ellis" look—with a sweeping Techno shot and much Steadicam."



Camila Morrone  
as Roxana Bolaños



Tom Hiddleston  
as Jonathan Pine

Framegrabs courtesy of  
The Ink Factory/BBC/  
Amazon.

## The Night Manager Frames



MAYRA'S OFFICE, RIVER HOUSE, LONDON (Ep.4)  
Indira Varma as Mayra Cavendish.

Tim Sidell, BSC:  
"Shot in Barcelona. Warm and cold light, so rather than an overall wash of cool blue, we could achieve color tension. This was also a strategy to avoid London being merely grey."



Hugh Laurie as Roper,  
taken with the Yashika  
45mm T1.5 lens  
converted by TLS, close  
focuses to 13".



Olivia Colman  
as Angela Burr

Framegrabs courtesy of  
The Ink Factory/BBC/  
Amazon.

# Canon CINE-SERVO 40-1200mm T5.0-10.8 Zoom



You climb a mountain because it's there. Canon makes a new lens because they can. And probably when users ask. Clearly, cinematographers were calling to go wider and tighter.

Canon introduces the new CINE-SERVO 40-1200mm T5.0-10.8 zoom lens in PL or RF Mount. That's a zoom range of 30x.

Remarkably, the lens is the same size and weight as the Canon 50-1000 mm 20x zoom introduced 11½ years ago, in October 2014.

The new 40-1200mm zoom lens is lightweight, compact and versatile. It will be welcomed by sports, nature, documentary, broadcast and live event cinematographers. With the built-in 1.5x extender, it reaches 60-1800mm. This is a Super35 format zoom lens but because an extender enlarges the image circle, it's also an expander to cover Full Frame. (Note: Canon is strict about image circle coverage—your mileage may vary.)

## Lens-Camera Communication

The Canon CINE-SERVO 40-1200mm T5.0-10.8 zoom lens uses industry standard camera-to-lens communication protocols. The PL mount has Cooke /i Technology and ZEISS eXtended Data.

The RF Mount version uses Canon RF communication protocol.

The Servo Unit is removable. It has a traditional zoom rocker. External control of focus, iris and zoom is managed through 20-pin or 12-pin ports that also supply power and serial communication with the camera. Absolute encoders ensure that zooms are smooth and focus is without lag. A snap zoom from 40mm to 1200mm can be done in about 1 second with external power. An imperceptibly long zoom, perhaps for a title sequence, can be adjusted to a very slow 180 seconds. A small LCD display on the drive unit displays menus and current settings.

## Canon Cinema EOS Lens Family

The new Canon CINE-SERVO 40-1200mm T5.0-10.8 Zoom lens joins this family:

- CINE-SERVO 11-55mm T2.95-3.95 RF/PL
- CINE-SERVO 17-120mm T2.95-3.9 RF/PL
- CINE-SERVO 15-120mm T2.95-3.95 EF/PL
- CINE-SERVO 25-250mm T2.95-3.95 EF/PL
- CINE-SERVO 50-1000mm T5.0-8.9 EF/PL

[usa.canon.com](http://usa.canon.com)

## 40-1200mm T5.0-10.8 — 2026



### CINE-SERVO 40-1200mm T5.0-10.8 PL

Model Name	CN30×40 IAS J/P1
Mount	PL
Zoom Ratio	30x
Focal Length	40-1200mm
with 1.5x Extender	60-1800mm
Built-In Optical Extender	1.5x
Maximum Aperture	T5.0 at 40-560mm T10.8 at 1200mm
with 1.5x Extender	T7.5 at 60-840mm T16.2 at 1800mm
Iris Blades	11
Image Circle	29.6 mm Ø
with 1.5x Extender	43.3 mm Ø
Focus Barrel Rotation	180°
Front Diameter	136 mm
MOD (fr Image Plane)	3.5 m / 11.5'
Object Dimensions at MOD w/ Aspect Ratio 1.78:1 for Sensor Area of 24.6 x 13.8mm	170.3 x 95.5 cm at 40 mm 5.9 x 3.3 cm at 1200 mm
with 1.5x Extender	113.5 x 63.7 cm at 60 mm 3.9 x 2.2 cm at 1800 mm
Approx. Size (WxHxL)	6.89 x 6.72 x 15.95 in 175 x 170.6 x 405.2 mm
Approx. Weight	14.55 lb 6.6 kg
Pitch of Gears	Focus: 0.8/0.5, Zoom: 0.5, Iris: 0.5
Lens Data Protocol	Cooke /i Technology, ZEISS eXtended Data

### CINE-SERVO 40-1200mm T5.0-10.8 RF

RF Mount. Model Name	CN30×40 IAS J/R1
Similar specs as PL except RF Mount and:	
Lens Data Protocol	Canon RF Communication
Length	17.21 in / 437.2 mm
Weight	6.7 kg

## 50-1000mm T5.0-8.9 — 2014



### CINE-SERVO 50-1000mm T5.0-8.9 PL

Model Name	CN20x50 IAS H/P1
Mount	PL
Zoom Ratio	20x
Focal Length	50-1000mm
with 1.5x Extender	75-1500mm
Built-In Optical Extender	1.5x
Maximum Aperture	T5.0 at 50-560mm T8.9 at 1000mm
with 1.5x Extender	T7.5 at 75-840mm T13.35 at 1500mm
Iris Blades	11
Image Circle	31.4 mm Ø
with 1.5x Extender	N/A
Focus Barrel Rotation	180°
Front Diameter	136mm
MOD (fr Image Plane)	3.5 m / 11.5'
Object Dimensions at MOD w/ Aspect Ratio 1.78:1 for Sensor Area of 24.6 x 13.8mm	139.3 x 78.1cm at 50mm 7.3 x 4.1cm at 1000mm
with 1.5x Extender	92.9 x 52.1cm at 75mm 4.9 x 2.7cm at 1500mm
Approx. Size (WxHxL)	6.89 x 6.72 x 15.95 in 175 x 170.6 x 405.2 mm
Approx. Weight	14.55 lb 6.6 kg
Pitch of Gears	Focus: 0.8/0.5, Zoom: 0.5, Iris: 0.5
Lens Data Protocol	Cooke /i Technology

### CINE-SERVO 50-1000mm T5.0-8.9 EF

EF Mount. Model Name	CN20x50 IAS H/E1
Similar specs as PL except EF Mount and:	
Lens Data Protocol:	Canon EF Communication
Length	16.27 in / 413.2 mm
Weight	6.6 kg

# Canon Cine Servo 40-1200mm — Left

left side



with Focus & Zoom Control



i and eXtended Data Contacts

PL Mount



# Canon Cine Servo 40-1200mm — Right





Blake McClure, ASC. Photo by Katrina Marcinowski, courtesy of HBO and Warner Bros.

### **Jon: Tell us about *Rooster*.**

Blake McClure, ASC: It's a new show for HBO. Bill Lawrence and Matt Tarses are the creators and showrunners. They did *Shrinking*, *Ted Lasso*, *Scrubs*, *Spin City*, etc. *Rooster* is about a father-daughter relationship starring Steve Carell. He's an author. His daughter works at a liberal arts college in New England and is going through a divorce. He forces his way back into her life to help her fix this marriage. It's a comedy, a drama, a relationship story.

### **Which college is it in New England?**

Bill Lawrence's is the great-great-grandson of Sarah and William Van Duzer Lawrence, who founded Sarah Lawrence College. He went to William & Mary. Matt went to Williams. Part of the show is based on their college experiences.

### **When did you start and finish shooting?**

Principal photography was from the end of April to the first week of August 2025. I was on the Warner Bros lot doing *All's Fair*, and John Brawley, ACS was there shooting *Shrinking* with the Blackmagic URSA Cine 12K. My DIT said, "Let's check out this new camera." Actually, I had never shot with a Blackmagic camera. But he was excited about the compression and what it could do. I asked John about the URSA Cine 17K 65 because 65mm was interesting to me for *Rooster*.

I was thinking about Medium Format portrait photography. John connected me with Tim Schumann, Blackmagic Senior Product

Manager, and some of the other guys at Blackmagic, and they got me a camera to test.

I wondered what was the catch. Why is it so good and so affordable? We ran tests. It was incredible. The workflow was the same as the one that the *Shrinking* crew had already used with their Blackmagic URSA Cine 12K. We had the same post producer, so that part was easy. They were not scared about anything new and were actually excited about it. In fact, our post producer and the post house Digital Film Tree had a very close working relationship. They've been working with DaVinci Resolve and Blackmagic for a very long time.

### **How did you get the producers onboard?**

We had a meeting with HBO and they were incredibly supportive. We talked about the codecs, the workflow and what we could do. At first, we were worried about the 8TB media modules that the camera uses. As you know, 8TB camera data storage devices are not ideal for television. You don't want to roll that much footage on one card because you have to download all that data at once. We needed to turn data cards over quicker—1 TB per media module at the most.

That would mean we'd have to buy 40 of the 8TB media modules because you have to store them until the studio lets you clear them. I thought that would be a big ask for the rental house to buy three or four of these cameras and all these new 8TB SSD media modules. We asked Blackmagic whether CFexpress cards were an option.

## Blake McClure, ASC: First URSA Cine 17K 65 Cameras



Blake McClure, ASC. Photo by Katrina Marcinowski, courtesy of HBO and Warner Bros.

**But the camera wasn't even out at that time. In February 2025, Tim Schumann hand-carried what seemed to be the single working prototype to BSC Expo London.**

*Tim Schumann, Blackmagic Senior Product Manager, jumped in.*

Tim: It was just after NAB in April 2025, and fortunately right when we were ready to start shipping production cameras. We got Blake an URSA Cine 17K 65 camera for testing right off the line, walked him and his rental house Camtec through it, and he liked what he saw. We worked with Band Pro, one of our dealers, and Camtec to make that happen. Because the post house DigitalFilm Tree had been working with Blackmagic RAW and the URSA Cine 12K LF on previous productions, working with the URSA Cine 17K 65 wasn't a very big leap for them, as the workflow is very much the same between those two cameras.

When production decided to use the URSA Cine 17K 65 cameras, we had Hook Stowers, one of our leading color science and workflow experts, on the ground in LA over the first couple of weeks to make sure that the production, camera team and DigitalFilm Tree were comfortable and happy with the camera and workflow and were getting all of the benefits they could out of the system. We also worked extensively with Band Pro to make sure the production was supported with all accessories and peripherals.

These were some of the first URSA Cine 17K 65 production units to roll out of the factory, so the timing was quite good. Because the URSA Cine 12K LF has been out in the world for quite a while,

there were lots of accessories and third-party items that worked with it. And because URSA Cine 17K 65 is essentially the same camera but with a larger sensor, all of those add-ons and peripherals already work, which is nice.

Blake continued: As we mentioned, the camera was not out yet. And we could only do it if we had CFexpress cards. We did not want to ask Camtec, our rental house, to buy lots of expensive media modules. Blackmagic did some internal testing and they said CFexpress cards would work if we stuck to the 2:1 aspect ratio that we liked and recorded in 8K instead of 17K. We got that approved by production. This was just two weeks before shooting was to begin and we realized we needed cameras to start prepping. Tim Schumann got us two and then a third camera. At some point we hit them up for a fourth camera.

**Were you worried about using cameras so new that they weren't even shipping yet?**

I felt comfortable because Blackmagic was there. Hook was on set with us for the first couple of days during prep, and then every day, all day, for the first two weeks. Everything worked fine, but he was like a security blanket and very helpful. We knew that Blackmagic is a huge company famous for DaVinci Resolve and they're not going to put a new camera out there without testing.

In fact, Greig Fraser, ASC, had been testing this camera since November 2024. I had emailed him and he responded three hours later, telling me that he had projected the images in theaters

## Blake McClure, ASC on *Rooster* in 65mm Format



and he fully supports the camera. All of those combinations converged and we said, "Let's do this."

### **I guess you were updating firmware all along?**

We had a couple firmware updates in the first week or two, and then we didn't have anything after that.

### **Why did you decide on 65mm format?**

The 65mm format was chosen because of the nature of this show. It's a comedy and with comedies you don't really have the luxury to move the camera in an aggressive storytelling way. It's mostly about the dialogue. It's about the medium shot. They want to see the actors and be able to cut the jokes faster. I knew it was going to be a personal, very heartfelt father-daughter story. Even in the first episode, the first page calls out for a New England campus. It's warm, rich, and I thought Medium Format photography. Of course, the 65mm cine format is smaller than Medium Format stills, but it's a step closer and you can feel that closeness.

When I first read the scripts, I was already thinking about how to approach this show. What can we do? On every show I do, I've tried to do something different. I don't like to repeat myself. I don't like to use the same camera with the same lenses. The Medium Format was an appealing, cool concept and with the Blackmagic camera, it became affordable. To be realistic, I haven't yet done a television series where we could afford three expensive 65mm cameras.

### **Are you shooting multiple cameras at the same time?**

The majority of the show has two cameras. Often, we'll bring in a third. We have a couple of classroom sets where three cameras are helpful. I also use the third camera a lot to leapfrog, so they'll jump ahead to the next setup or location and we can start setting up.

### **What lenses are you using?**

We're using Camtec Falcons. I was told they are rehoused vintage Canon FD lenses, with a look similar to Canon K35.

### **But if they are Full Frame lenses, how do they cover the URSA Cine 17K 65 sensor?**

Camtec had to shave down the front ring on a few of the lenses to avoid vignetting. The 24mm was the only one that still had a little hard clipping in the corner—a tiny few pixels in our 2:1 aspect ratio. Our set consisted of the 20, 24, 28, 35, 55, 85, 135 and 200 mm Falcons. But the lens we used the most was the 55mm T1.3.

### **What did you do about the slight vignette?**

We only used the 24mm lens once and we just enlarged the image in post, a mere 2%.

### **How would you describe the look of these lenses?**

They're sharp. They've got a decent amount of contrast, but they're not super contrasty. They have a little bit of veiling glare. They have that swirling sort of focus fall off around the edges that



people like; it is especially exaggerated on these lenses. Everybody loves the K35s in Full Frame, but with this larger sensor, it's even more beautiful. It's portraiture.

## Any zooms?

We also had a Camtec Custom (Angénieux) Optimo 12:1 Full Frame 36-435mm T4.2 Zoom.

## Did you have filters on the lenses?

I used an LED color contrast filter from Camtec called a Color-Con. With the sensor being so large, every lens naturally has a bit of shading toward the edges of frame. The Color-Con filter exaggerates that. I could focus more LED light on the center of the filter. So it's a little bit brighter in the center and that enhances the shading. Depending on our stop, some shots almost look like there's a hole punch while others are very gentle.

*[The Color-Con consists of a diffusion filter surrounded by LEDs in a filter holder that occupies two spaces in your mattebox. In addition to controlling color and contrast, the LEDs can create a controllable, directional hot spot. It is like a modern version of the Lightflex that Freddie Francis, BSC used on The French Lieutenant's Woman (1981 film) and ARRI's Varicon.]*

## What were your recording settings?

65mm format; 2:1 aspect ratio; 10,752 x 5360 resolution; 46.77 x 23.32 mm sensor area; 52.26 mm diagonal; full sensor height). It's

in the 8K menu settings but it's actually 10K.

## Were the producers worried about more resolution and perhaps the perception of larger amounts of data?

They were. However, we chose Q3 compression, which is a variable bitrate to keep the quality constant. Bitrate is determined by how much information is happening in the frame. We were getting over an hour of recording time for each 1 terabyte CFexpress card. On the last show, I shot 35mm format and was getting about 46 minutes per terabyte. So we're getting more recording time from a camera with a sensor that is 2.6 times larger. It took our data manager only 20 minutes after wrap to download footage from our CFexpress cards.

Our Color-Con effectively replaces having to shoot with a lot of smoke on set. It reduces a lot of detail in the shadows. I think that might affect the file sizes and make it even smaller.

## Blackmagic RAW is pretty economical.

Yeah, it's incredible. There were no issues with the quality. I was concerned with dropped frames or dead pixels, all the stuff that comes with new gear. There was none of that. And the data rate was fantastic.

## Why Q3 and not Q0, the highest constant quality setting?

After testing, my colorist and I couldn't see a difference. Maybe if you're projecting theatrically, you'd see the difference. We keyed



things, we brought highlights down, stretched it and pulled it, and tried to pull it apart. And he said, “This is just as good as every camera we see.”

### **What ISO did you set the cameras at?**

Pretty much every scene, day or night, was rated at 2000 or 2,500 ISO—even the day exteriors, to hold all the highlight details of practical lights and windows.

### **I expect a producer asked why you need 8K or 10K on a 17K camera if you’re delivering in 4K?**

My argument is about data rate. It really doesn’t matter about the Ks. Nobody cares. It’s really about the compression, the color space and how it can be manipulated. The main thing that most studios care about is data rate so that they can archive the shows to their LTO tapes. That’s really the bottom line. Remember five or six years ago when they told us we could only shoot 1920 x 1080?

### **Why did they think it’s more expensive?**

Someone told me it was because of the LTO tapes that they use for backups and archiving. But why wouldn’t you want to future-proof your show for a few thousand dollars when you’re spending millions per episode?

### **How much can an LTO tape cost? Maybe \$35 for 1.5TB. But LTO data rates are slow—around 170 MB/s. You can buy a 2TB**

### **SSD with a 1000 MB/s write speed for about \$320.**

It’s archaic thinking from those who buy by the numbers: this is what our budget says; we can only do this many hours.

### **So, your rental house is Camtec?**

I made the switch to Kavon Elhami at Camtec because he had been a friendly person and I heard good things about his company. Matty Libatique and some other friends like them as well. They have good customer support. They are willing to do custom stuff.

### **Are you controlling the Color-Con remotely?**

Yes, they made a Wi-Fi version. I have a little box with 8-bit RGB values. They made us a new one with even finer controls that are 16-bit. So instead of going from 1 to 255 in values, it goes from 1 to 65,000.

### **Did you have it on every shot?**

Every shot.

### **It’s amazing you were able to get the URSA 65 cameras for Rooster.**

Blackmagic made it seem so easy and didn’t make it feel like it was a big ask. I don’t think I realized how lucky we were. I just assumed they were all just rolling out a thousand of them. Camtec bought three URSA 65 cameras from Band Pro. Band Pro kept a

## Blake McClure, ASC: Putting the camera in the right place.



fourth one on standby in case we had any issues, and then Camtec ended up buying that one because we needed all four cameras.

### **How did you rig the four cameras?**

The “A” camera lived on the DJI Ronin. We could slide it off and put it on a Steadicam.

### **What does it do on the Ronin?**

It acts as a remote head. I’ve put the “A” camera on a Ronin 2 since 2018 when the DJI Master Wheels first came out. It’s a fantastic tool. You don’t have to take the time to go to underslung mode on a traditional remote head to get low angle shots. You just flip it over and it’s ready to go. I own the Ronin and Master Wheels. We carry a short modular jib arm, so we’re always able to make moves. The producers love it; it’s an affordable remote head setup that works incredibly well.

### **Since you said that you don’t like to shoot with the same thing twice, I guess your next job might include a Ronin 4D?**

That is what can happen. I hope that DJI is going to come out with a new dedicated remote head, but I haven’t heard any hints.

### **Pretend you’re pitching 65mm format to a director or producer. What do you say?**

I use Cadrage, the directors viewfinder app, and show them a setup with the URSA 65 compared to a Full Frame or Super35

camera—using the same focal length lens. The 65mm format gives you a frame that’s about 1.7 times wider than Full Frame. So that means you get a wider shot in the same spot, and you get a wider field of view with the longer focal length, which also means you can be closer to your actors, with less distortion and greater separation from the background.

A big challenge with shooting 65mm format or anamorphic is how tricky it is to get a tight eye line. For example, we want our camera to be four feet away from the actors, but when you get there with two operators, where’s the light coming from? You’re blocking all of the space that’s right in front of the actor’s face. It’s taken the actors a little bit of getting used to.

The first time Connie Britton was doing a closeup, she was amazed how close the cameras were in front of her. That’s what I like about the 65mm format: you can get in there closer so it feels more intimate and you don’t have to do it on an 18mm lens.

People have shot 65mm before, but typically you think of it for sweeping landscapes or *Lawrence of Arabia*. I like the idea of treating it like Large Format or Medium Format still photography. That’s the easiest way to think about it. That’s what I told the producers. It’s an intimacy thing where the camera’s closer and you feel it.

One of our jobs as a DP is to put the camera in the right place.

# AJA BRIDGE LIVE IP with SMPTE ST 2110 I/O



Front



Rear

AJA Video Systems introduced BRIDGE LIVE IP on April 9, 2026. It is made specifically for 10/25 GbE ST 2110. And it provides most of the remote production, streaming, multi-bit-rate/multi-format delivery and synchronous multi-channel video capabilities as other AJA BRIDGE LIVE SDI-based models.

AJA BRIDGE LIVE IP provides bi-directional SMPTE ST 2110 conversion to and from popular IP video and audio codecs. It fits in a single 1RU rack space. Its flexible encoding, decoding and transcoding simplifies the integration of compressed media for live event production, ST 2110 broadcast and streaming.

BRIDGE LIVE IP transmits and receives up to four channels of UltraHD 3840x2160 60p or up to eight channels of HD 1920x1080 60p.

Built in collaboration with Comprimato, it supports a wide range of applications: live and remote production, multi-camera podcasts, security and surveillance, e-sports, and over-the-top (OTT) content delivery. It can bring almost any flavor of IP video onto an ST 2110 network, including H.262, H.264, and H.265 — with MPEG-TS, HLS, RTMP, RTMPS and SRT formats. NDI, JPEG XS, and JPEG 2000 are supported through optional licenses.

Enabling secure, reliable multi-channel video backhaul over the public internet, BRIDGE LIVE IP offers a cost-efficient alternative to satellite services, dedicated lines and fiber networks. It can also be used to simplify multi-camera streaming to popular content delivery networks (CDNs) or to encode produced content for high-end IPTV and OTT distribution.

AJA President Nick Rashby said, “As more productions invest in ST 2110, they need to be able to quickly move multiple media types into and out of their network infrastructures. BRIDGE LIVE IP answers this growing market demand, enabling high-end producers to use compressed IP video while also providing scalable delivery of uncompressed ST 2110 streams. An enterprise-class device built to provide more flexibility for hybrid IP productions, BRIDGE LIVE IP represents the next evolution for modern broadcast systems.”

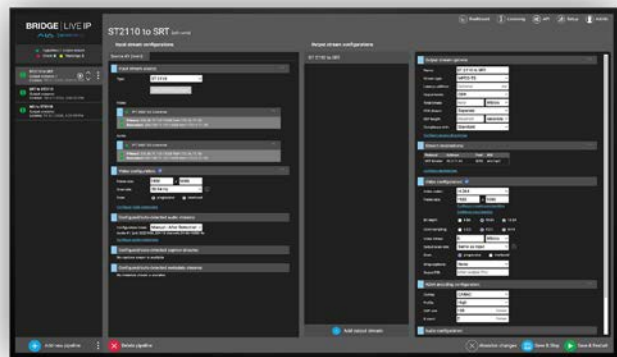
## BRIDGE LIVE IP Details

- Pure IP transcode capability enables bi-directional ST 2110 I/O to/from NDI, H.262, H.264, H.265, JPEG XS TR07, JPEG 2000 TR01, MPEG-TS, HLS, RTMP, RTMPS, and SRT.

- Support for four UltraHD 3840x2160 60p or up to eight channels of HD 1920x1080 60p.
- Bi-directional NDI-SMPTE ST 2110 conversion, accessible through an optional NDI license, lets users receive NDI and decode to ST 2110 or encode incoming ST 2110 sources as NDI. Remote NDI and non-NDI equipment can be integrated via RTP/UDP/SRT and tap into the ST 2110 network for a conduit between CDNs and other delivery mechanisms.
- HLS input and output allows users to deliver to a CDN or for consumption on popular devices and software such as iOS, iPadOS, and tvOS.

## Price and Availability

- BRIDGE LIVE IP will be available soon through AJA's worldwide reseller network for \$17,999 US MSRP.
- Users can activate NDI capabilities at any time with the purchase of a BLVE-NDI perpetual license for \$499 US MSRP per device. Optional JPEG 2000 and JPEG XS licenses start at \$1,555 US MSRP.
- Try demo units at NAB 2026 from April 19-22, 2026 at the AJA booth in North Hall, N1927.



AJA Bridge Live IP with its Monitor UI

# AJA IP25-R v2.0 Firmware Update



AJA Video Systems has a free firmware update for the IP25-R SMPTE ST 2110 Mini-Converter. The v2.0 update expands IP25-R's capabilities with a new Tx (transmit) mode for 12G-SDI to ST 2110 or HDMI conversion. Switching between Tx and Rx (receive) modes is a simple and quick drop-down menu choice.

*Quick review: The AJA IP25-R is an IP Mini-Converter that bridges SMPTE ST 2110 IP video networks with traditional SDI and HDMI equipment.*

IP25-R v2.0 answers growing market demand for robust, cost-efficient baseband/ST 2110 conversion. The firmware update unlocks more affordable stream conversions in Rx mode and increases the supported video and audio channel counts from four to six streams. Because it is so compact, three IP25-Rs easily fit into a 1RU rack space for up to 18 channels of ST 2110 to 12G-SDI/HDMI conversion, or 12 channels of 12G-SDI to ST 2110/HDMI conversion.

Nick Rashby explains, "Bridging the worlds of 2110 IP and baseband, this latest v2.0 update brings transmit functions to the existing receive functions on the powerful IP25-R Mini-Converter. AJA has a long history of providing incredible value, and this free update backs that up by massively expanding the feature set of IP25-R."

## IP25-R v2.0 firmware Details

- New Tx mode for SDI input to ST 2110 and HDMI output unlocks the ability to convert 12G-SDI and HDMI 2.0 outputs for integration into IP networks.
- Updated Rx mode expands channel support to six channels.
- ST 2110-20 up to six Rx with ST 2022-7 redundancy.
- ST 2110-30 up to 24 Rx, with multi-audio stream per video, providing options between 1x16, 2x8, and 4x4 with ST 2022-7 redundancy.
- ST 2110-40 ANC data up to six Rx with ST 2022-7 redundancy.
- Integrated test signal generator for ST 2110 network setup and troubleshooting simplifies setup and operation, providing up to 4 unique test signals with tone in the ST 2110 network
- Free update for all IP25-R owners.

# AJA OG-GEN10 HD/SD Sync Generator



AJA Video Systems has launched OG-GEN10—a new openGear compatible HD/SD/AES-11 sync generator card.

It solves common timing challenges in production, post, broadcast, and proAV setups. The card has nine HD/SD reference outputs and one AES-11 reference output so users can lock more equipment to a master clock for reliable audio and video synchronization.

Whereas AJA's GEN10 is a Mini-Converter box, this new OG-GEN10 is a card that provides more reference outputs, redundant power, remote configuration and control through Ross Dashboard software. Simultaneous HD tri-level and SD sync is supported. You can toggle between HD formats for HD sync and Color Black or Color Bars for SD sync.

## OG-GEN10 Details

- 9x HD/SD reference outputs.
- AES-11 digital audio reference output that is switchable between silent and tone.
- Ability to assign reference to two banks for simultaneous HD tri-level sync generation and SD color black or color bar sync generation from one source.
- Ease of installation and integration because it's openGear.
- Intuitive control of sync output options via Dashboard software.
- Five-year warranty and access to AJA's support.

Here's the ever-popular Nick Rashby weighing in with an articulate summary: "OG-GEN10 provides exceptional sync generator flexibility as the growing openGear market drives demand for more broadcast, proAV and post tools in this popular form factor. It provides cost-efficient and steady sync for today's increasingly sophisticated multi-source systems, ensuring that video and audio timing seamlessly align across devices."

## Price and Availability

AJA OG-GEN10 will be available soon for purchase through AJA's worldwide reseller network for \$795 US MSRP.

For full product specifications, go to [aja.com/og-gen10](http://aja.com/og-gen10)

See it work at NAB 2026 in AJA's booth N1927.

## Claudia Raschke, ASC — Explorer of Light



*Claudia Raschke first danced on the pages of FDTimes in February 2022, discussing documentaries, Canon cameras and lenses. She is now Claudia Raschke, ASC—welcomed as a member of the American Society of Cinematographers in October 2025. Claudia is also a Canon Explorer of Light, accomplished cinematographer, with Oscar-nominated and Emmy-winning credits that include Julia; Fauci; RBG; Cracking the Code; Phil Sharp and the Biotech Revolution; and Kevin Costner's series The West.*

### **Jon: What is involved in being a Canon Explorer of Light?**

Claudia: The Canon Explorer of Light Program has been in existence since 1994. Two years ago, they expanded it to filmmakers and cinematographers and chose six of us to be part of it. The purpose is to share knowledge, teach workshops to showcase professional techniques, and to foster creativity within the imaging community. That's how I really got involved with Canon. Certainly Canon cameras have been a workhorse for the documentary world. There have been many iterations since the EOS C300 came out and I had them all.

### **What cameras and lenses are you using now?**

Canon has been incredibly supportive. I am so grateful, not only because they invited me to be part of the Explorers of Light (EOL) program but also because I've been relying on their cameras, lenses and excellent technology for so many years.

The Canon EOS C400 is my go-to camera these days. I'm shooting two projects with it now. It has a Full Frame 6K backside illuminated stacked CMOS sensor with wide dynamic range and

a beautiful roll-off for highlights. Furthermore, it offers triple base ISO and the ability to record 6K RAW internally. It has an RF Mount. But I can also add an RF to EF Adapter. I really appreciate Canon's lenses. I enjoy their contrast and sharpness, designed with a warmer natural expression, tuned to the sensor for a cinematic look, especially skin tones. The craftsmanship is amazing—created by artisans and assembled by highly skilled human hands. The attention to detail is most impressive. Therefore, I choose to shoot with Canon CN-E, CN-R and Sumire Prime lenses.

The Sumire lenses are absolutely gorgeous, especially wide open with wonderful bokeh. But I also go to the Canon CN-E lenses regularly. They're reliable and I can swap them across rigs without worrying about consistency. It is always exciting to test a variety of lenses and filters to achieve distinctive looks. At the moment I'm investigating older lenses in combination with diffusion filters to create a 1980s-1990s feel.

Part of being an EOL is to share my work experience and techniques at different universities for the Canon education program. These hands-on and fun Canon workshops have a mission to help the next generation of visual artists connect with inspirational filmmakers and cinematographers in the field. I think I've been to six different universities with that program. It's coordinated and produced by Lou Desiderio and Scott Heath.

### **How did you get into film?**

I'm from Hamburg, Germany. I studied fine art, sculpting, painting, music and still photography. I started dancing late because my family did not approve of dance as an art. When I fell into cinematography, it was coincidence. I was in New York, studying and dancing at Martha Graham. I didn't know where my path was going to go. I was working in a café and there was a part-time bartender who was also a part-time cinematography instructor at Columbia University. His name was Jim Jones. He saw my still photographs because I was sending some home to show my family how life was in New York. He said, "You have a really good eye for composition. Have you ever thought about cinematography?"

He took me to a film set and it was an epiphany: cinematography is like dancing with a camera, painting with shadow and light on set. Dialogue is like music because it reflects emotions in different intensities. The jigsaw puzzle was falling into place with all of the things that I had dabbled in and studied. I made friends with many students in the Columbia film department and shot their films. Susan Seidelman, who directed *Desperately Seeking Susan*, was presenting the thesis films at Columbia. I had filmed four of them. Every time my name appeared in the credits, she made a comment from the stage, "Oh wow, look at this: filmed by another woman." The next day I got a call from the Gersh agency and they signed me up. That's how I started shooting feature films.

### **Who represents you now?**

I don't have an agent now. I just have an entertainment lawyer. And I'm part of the Kamera Kollektiv NYC that I founded with Wolfgang Held, ASC and Thorsten Thielow. Shortly after, Tom Hurwitz, ASC, Axel Bauman, and Martina Radwan joined our team. Very often in documentary filmmaking, you meet someone with a passion project. It is vital to support that passion to make a great film. It calls for figuring out the budget needs together. We create our own contract that addresses our needs.

# Claudia Raschke, ASC Dancing with Camera



## Does your collective share equipment?

We started out that way. We all had our own packages of camera equipment. We still help each other out, swapping equipment when needed. Often, we collaborate on projects or cover each other on shoots if we have a conflict with scheduling. It has been amazing when we get a chance to collaborate with each other on a project like *Boys State*.

## Tell us about ergonomics for documentaries.

You find your own way. Obviously, we use extra camera accessories and rigs to alleviate the fatigue on long takes, verité or following somebody. You make the camera work so that you can play it like an instrument. I know where my buttons are, I know how to adjust it quickly on the fly, but it has to be within reach and it cannot be awkward because then you have lifelong neck, back and shoulder pains. As a dancer, I know how to adjust my frame when I feel the fatigue. It's "Pull up, stand tall, relax your neck and shoulders."

Some cameras these days are notoriously like boxes. How do you hold a box? You have all these rigs that put it on your shoulder, but it's front heavy, too high or too unbalanced which prevents moving freely with the talent. When I'm operating, I cannot sustain looking up at the LCD when it's mounted too high. Over time, the strain will force your neck muscles to cramp. Without the correct alignment of the EVF or LCD and good weight balance of the camera, you'll end up fighting the rig. Therefore, I set my camera rig up to align with my eye-neck-shoulder coordinates.

Every camera person has a different alignment. For best handheld performance and smooth Tai Chi movements, one needs to be present, engaged and playful. If you are struggling with the rig to get the shot, you will mess up. Taking in a long deep breath also helps reduce muscle tension. Another thing is to view with an EVF rather than an LCD monitor. LCDs are great for inside shoots but getting caught outside with it makes focusing difficult to see. Especially when annoyingly bright reflections hit the screen. With the EVF, I rely on my peripheral vision. You need to be able to move backwards, look around for obstacles or look down to step off the sidewalk or around furniture.

## You prefer a viewfinder rather than a monitor when operating?

I love the feel of the viewfinder because when I need to, I can look around with my left eye. Usually my left eye is closed, and so I'm really in the environment with the character and I just try to explore. A fascinating thing about documentaries is that the end result is only a fraction of what we experience on set, what we experience with the characters, and the many revelations they offer. The duality of being an explorer of a topic and also crafting the story becomes important for the audience. That is what resonates for me about documentary filmmaking. You are an explorer of humanity.

## You probably started your career with the ergonomic, cat on the shoulder Aaton cameras?

Also the Eclair ACL and Moviecam Compact. They had really good handheld setups. But I'm very happy with the Canon cameras because they're very lightweight.

## And I gather you prefer prime lenses?

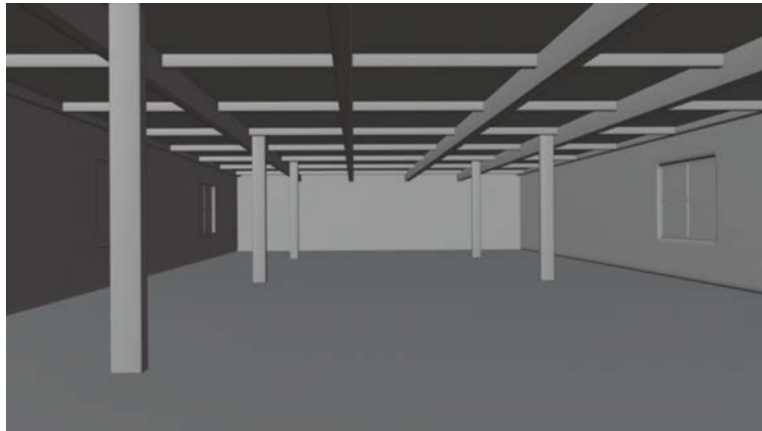
These days, most of my shoots are multi-camera, Full Frame. I often work with the 35mm or 50mm prime when shooting handheld. For interviews, I prefer the "A" camera with a 50mm. By the way, that happens to be my favorite Canon CN-E lens. Then we have an 85mm or 135mm on the "B" camera and a 24mm for a wide shot on the "C" camera.

## Do you usually work with a focus puller?

It depends on the situation. When we're out in the field, there's usually no focus puller. I do it myself. The timing of when to rack focus or when to delay it depends on what's happening in front of the camera. For docs it is a powerful cinematic tool. When I'm in the studio or doing verité with spontaneous encounters, then I have focus pullers with wireless lens controls.

## Walking backwards with a handheld camera, you mentioned "having to keep a lookout." Please explain.

Handheld work has many variations depending on whether the camera is shoulder mounted, having it at hip level or holding it in front at chest level. Remember Ginger Rogers who did everything Fred Astaire did, but backwards? As a cinematographer trying to capture what's going on, you're reading body language while simultaneously using your peripheral vision to check whether there's a person or obstacle behind you. Scanning your location before any handheld work is essential. It sets the tone for how dangerous it might be, whether you might trip, or whether you'll need a spotter. My sound person often grabs me by the belt or nudges me to the side. That teamwork is tremendously helpful. But handheld work has really changed for me.



Blender: Rough 3D rendering of architecture.



Blender: Surface textures are added. Then lighting.

### How has handheld camera operating changed?

Traditional handheld work was always great because it's human—same size, same height, matching the eyeline and the motion. Lately, handheld style has shifted from observational to something more direct and active, especially with new camera devices. These days, I am doing a lot of handheld gimbal work with the Ronin 4D. The Ronin 4D eliminates the complex setup of traditional rigs. It unifies the camera, gimbal, motor and sensor in a lightweight package that enables quick and spontaneous usage. The gimbal camera and lens head rotates, tilts and pans. It's attached to an articulating Z axis. It stabilizes the images in the most beautiful and elegant way. It's wonderful when you're hanging out of a car. But sometimes the director falls in love with it so much, because it's so elegant, that I've been asked to do interviews with the Ronin 4D even when there's no movement of the characters.

Handheld work is best when it matches the movement of the people in front of the camera. For me, it's like choreography. As you might remember, I used to dance. My background is heavily in modern dance. And so, the blocking that you traditionally do in feature films, which I certainly did for 10 years, moving into documentary, is all about negotiating the best access to the story point in that particular moment, being very quick on your feet. So I'm constantly scanning, where can I go? Where's the obstacle? What's the story point? Now I can move in. It becomes a very intuitive reaction to what the characters are doing. But when someone is seated, the work shifts from choreography to something more feature-like. You start reading the emotional arc. You circle in below the eyeline to give the person a sense of power. You break into their intimate space to solicit something more vulnerable. It's fascinating — but sustaining it for two hours is physically demanding.

### How do you hold the camera for two hours?

Doing traditional handheld work, you're moving with your entire body and the weight is distributed. Holding the Ronin 4D in front of you, just with your hands, requires support after a while. You look for camera resting places—docking stations like a table, the back of a chair, a bookcase while the director is asking questions. Then I'll float according to what they're saying, matching the rhythm of what they're talking about. You get the intimacy when it happens. These are moving documentary elements rather than being static on somebody. You're really trying

to solicit a more accessible point of view. It's as if you're sitting next to somebody on the couch and it's a more free-form style of capturing their story.

### How do you control focus?

I do it myself using the Ronin 4D Automated Manual Focus (AMF) mode. It has autofocus with LiDAR and manual override with the focus knob on the right handgrip. I use the left handgrip to control exposure. You can “tell” the camera to lock onto a character and maintain focus.

### Tell us about Kevin Costner's series *The West*.

It's an eight part mini-series that was released at the beginning of the year. There were three of us cinematographers: Ian Rigby, Jacques Node and me. Because it's a History Channel production, there are a lot of interviews. The concept was to have something more interesting than just a plain background.

### Something other than a white, black or an Irving Penn style mottled gray backdrop?

For example, tribal historians could be interviewed against a background reminiscent of a longhouse or a barn — architectural spaces with cultural weight. But that means building a set, working in a studio, flying talent to New York. They said we needed to have various locations. We couldn't afford them. We couldn't find a space that would be good for more than one interview. We needed to be able to conduct at least three interviews each day. Each interview would take at least three hours, then the next person would arrive. We couldn't rebuild between interviews. It became a prohibitively expensive endeavor. So they approached me about exploring virtual backgrounds as an alternative.

### Take us on a tour of the process, please.

It started in Blender — the same 3D computer graphics software used on major motion pictures like *Flow* and *Spider-Man 2*. For our documentary, which deals with the American West in the 1800s, we needed to build spaces like a saloon interior or a New York City loft. We began with rough 3D architecture, then selected textures from the software's library. At first it looked terrible — perfectly clean and lifeless. That's when the real work began.

How do you choose the patina and make textures feel three-dimensional? How do you escape the CG surface and arrive at

# Claudia Raschke, ASC on Documentary Virtual Backgrounds



View of the setup and projected background.



Framegrab of result. Images courtesy of Claudia Raschke, ASC.

something that shows the wear and tear of human life — floorboards bent and aged, shadows that look real? You adjust and refine constantly. Every light source you see in the virtual environment is a discrete unit that I place. I can add diffusion. I can use an area light or a spotlight, control intensity, throw and contrast, and hide any light entirely with a click. It's like painting with light, but in three dimensions. Once the virtual background and lighting plot is established and approved, I don't composite it in post the way you would with green screen. I project it live on set.

## Describe the projection setup.

It's front projection onto a 20-by-10-foot screen in a black box studio. The projector is mounted very high, and I light the subject carefully so they don't cast a shadow onto the screen. The subject is elevated on a 24-inch pedestal — that's the geometry that prevents the camera from seeing the floor, which of course ends at the bottom of the screen. It's pure math: controlling the distance between subject and background so the illusion holds. It's a two-camera shoot, so the background needs to accommodate both angles.

I'm on a live Zoom connection with Leonardo Conte, my 3D collaborator based in Texas. He gets a direct live feed from the set, and his output feeds directly to the projector. We spend roughly half an hour per image finessing the lighting ratio. I can reposition elements in the virtual background if necessary. Once we're satisfied, he renders a final still frame and sends it to be projected as the background during the interview.

## Does the virtual background track with the camera?

No. I can zoom freely; I can reframe. The background is a fixed projected image and any lens move is purely my decision — the background doesn't track. That actually simplifies things enormously. Because the subject is a good distance from the screen, the background falls naturally out of focus through my lens choice. We're not fighting the depth-of-field problems you get trying to force a volume panel to match.

## How does this compare to working in an LED volume?

A volume is a powerful tool, but the cost can be substantial. A traveling car shot — even a modest one — can run many thousands of dollars each day. There are many technicians operating simultaneously. They may be using Unreal Engine syncing to the camera moves. Here, it's Leo and me, working in close collabora-

tion for a week of pre-production, then one day on set. The executives and director weigh in on revisions before we shoot. It's lean, controllable, and the results hold up on screen because the out-of-focus softness comes from the lens, not from approximating bokeh in software.

## Who originally figured this out with you?

It grew out of a collaboration with Peter Bobrow, a supervising producer at Radical Media. We worked on many projects. He likes to experiment, whether it's using prisms in front of the lens to get unusual refractions or simply borrowing a projector and shining it on a conference room wall. It started with that borrowed projector and curiosity. We've been refining it ever since.

## About how much do you save doing a static virtual background compared to going on location?

I would say it becomes cheaper after 3 interviews in comparison with using real locations. The more interviews you'll have, the more affordable it gets, along with remarkable creative control.

## Wouldn't you rather enjoy happy accidents of being on location?

Shooting documentary interviews on location demands a combination of letting preconceptions go and embracing what is actually there. The lack of control of the location aesthetics, the soundscape or changing weather patterns can be very challenging. Especially if you are determined to have cinematic continuity.

On the other hand, for some documentaries it's important to lean into it, especially if it drives part of the story. In that situation the environmental holds clues and plays a bigger role to set the stage for the main characters. For these stories I prefer to be embedded in the actual environment to explore how everything interconnects and influences the outcome.

However, for many years, I've been asked to film interviews in the same room with some camera angle shifts, or in front of a black void or a backdrop cloth. These interviews often miss out on giving the viewer room to explore the world beyond the character. With the virtual 3D creation process I can invent a time, a place, or an abstraction of a place as a background image, light it virtually to match the live action interview and provide impactful cinematic continuity for the story without breaking the budget. Creatively speaking, this is huge.

## NIPROS OLED EVF



NIPROS OLED EVF is a rugged, lightweight, camera-agnostic OLED electronic viewfinder with a flip-up LCD Display. Colors are true, contrast is natural, glass elements are coated, there's an adjustable diopter and the LCD is viewable in bright light.

NIPROS is a brand of Nippon Video Systems, located in Tsushima City, southwest from Tokyo, near Nagoya.

The 0.7" 1920x1080 10-bit OLED EVF and 3.5" monitor are sealed in a splash and dust resistant magnesium body. Tactile switches and dials are where you'd expect: menu, navigation, peaking, brightness, contrast, record, and camera control.

The NIPROS Viewfinder fits onto a wide range of cameras and connects via SDI, HDI or a NIPROS VF single-cable connection. This is an excellent choice for cameras currently without EVFs like Sony BURANO, Fujifilm GFX ETERNA, etc.

See this and other innovative NIPROS products in Greg Smokler's On Program booth C6916 at NAB. [onprogr.am](http://onprogr.am)

## Angénieux 0.75x Wide Angle Adapter



The Angénieux 0.75x Wide Angle Adapter increases your Optimo Prime, Ultra Compact Zoom and EZ Zoom angle of view. With a 114mm diameter, the WA 0.75x clamps onto the front of the lens. It has a red index mark which should be positioned straight up.

WA 0.75x shortens the focal length by a factor of 0.75 without exposure loss. So there's no change in your T-Stop setting. However, you'll want to re-calibrate the focus scale markings with chart tape or on your wireless lens control hand unit.

The WA 0.75 turns an 18mm Optimo Prime into a 13.5mm and the 21mm into a 15.7mm—using a supplied 114 to 95 mm ring.

With the WA 0.75, Optimo Ultra Compact and EZ-1 and EZ-2, the zoom remains parfocal; focus is maintained throughout the zoom range. M.O.D. (Minimum Object Distance) changes to 5' / 1.52 m) — although at such wide angles, depth of field brings you much closer. Note: WA 0.75x doesn't work on the EZ-3 zoom.

The Angénieux 0.75x Wide Angle Adapter weighs 1 lb / 485 g.

[angenieux.com](http://angenieux.com) [bandpro.com](http://bandpro.com)



# Takuro Ishizaka, JSC on *Rental Family*



Takuro Ishizaka, JSC. Photo by Masatoshi Yamashiro.

*Takuro Ishizaka, JSC lives in Tokyo and Los Angeles. Credits include Rental Family, Samurai Marathon, Rurouni Kenshin Series, etc.*

## **Jon: How did you get started as a Cinematographer?**

Takuro: I was born in Kawasaki, Japan. My whole family has been involved in TV and movies. My dad Taichi Ishizaka (screen name Yamada) was a novelist and screenwriter. My sister Rieko Miyamoto is a Director. As a child, I watched a lot of Westerns. When it came time for high school, I spent three years at The Orme School, an international boarding school with its own ranch, near Sedona, Arizona. Each student could have a horse. At the end of the school day, we went horseback riding. It was a really fun time. Then, I attended University of Redlands in California. After that, I went to Chapman University and studied cinematography. I graduated in 2000.

I started working as an intern lighting technician. I learned all the union rules, how to run the power distribution properly and how to take care of the equipment. After that, I worked on and shot a lot of student films and then worked as a best boy and gaffer on bigger films. But as the jobs got bigger, so did the lights. Sometimes you'd sit in a bucket under a big light all day, not doing much.

## **So you moved to the camera department where there's never a dull moment :)**

I started as a Camera Assistant and moved up quickly. Somebody heard that my focus-pulling was pretty good and they called me to work on bigger music videos and films. That's when I started meeting producers in Hollywood. Soon, I was working for Japanese commercial productions and filmmakers shooting in LA. These bilingual jobs led me to work on *Lost in Translation* as a Second Camera Assistant and also Focus Puller on major Japanese studio films.

## **I think that's when I first met you at Otto Nemenz International maybe 15 years ago. Otto (1941-2025, R.I.P.) introduced us.**

I used to go to Otto's all the time when I was working in LA. I even used to take their film equipment to Japan for some of the feature films I shot there.

## **How did *Rental Family* start for you?**

It was a bit complicated. The original DP couldn't continue. So

they called me during the first week when they were already in production. Actually, I knew Hikari, the Director, from a long time ago. She also tried to get me onto *Tokyo Vice*, but I could not take it because of my schedule. She also tried to get me on her first film as well. I couldn't take that film, but this time it worked out. I jumped right into *Rental Family*. The timing was good. Hikari asked, "Where are you now?" I was in Okinawa on a commercial.

She said, "When can you get to Tokyo?" I replied, "Oh, I can get there tomorrow if you really need me." I flew back to Toho Studios and met with the producers. I started working the next day.

## **How many shooting days did you have?**

Principal photography was 47 days. Plus a few of days for B roll.

## **What equipment did you have on *Rental Family*?**

We used ARRI ALEXA Mini LF and Leitz HUGO prime lenses. They are really good lenses: clean, but when you're wide open, you start to have really nice bokeh all around. When you close down, it's a different lens again. You can have different expressions depending on the T-Stop. I tried to use that as much as I could. They're sharp, but not digital sharp, and they're very pleasing. HUGO lenses are based on classic Leica M lenses, rehoused, with minimum breathing, closer minimum focus distances, and they added more focal lengths. We had 18, 21, 24, 28, 35, 50, 75 and 90 mm HUGO lenses. I have been a longtime user of Leitz lenses. I worked with the Leitz Summilux-C lenses when Otto Nemenz introduced them to me. I remember he was involved in their design.

## **How did you decide on Large Format cameras and lenses on *Rental Family*?**

It was because of the tight spaces of the Japanese locations and the closeness I wanted to be with the actors. Using a longer lens at close distances felt right for this film. I also like to include the environment as much as possible in the shot, but still have the right amount of blur to separate the actor. ARRI ALEXA Mini LF is a great camera in terms of size, image quality, texture, and deep data level. I could treat ARRIRAW data like a negative, and I feel that the 4.5K resolution and sensor size gave us a nice texture. ALEXA always has a gentle feel to the image that fits this film.

## **How did you rate the camera?**

ISO 1280 had a nice balance between highlights and shadows.

## **Did you have zoom lenses on *Rental Family* as well?**

Yes, I used the Leitz Zoom 25-75 mm T2.8 and 55-125 mm T2.8 lenses as well as the Cooke Varotal 30-95 mm T2.9.

## **Did you discuss the look of the film with Hikari, the Director? Because it was beautiful.**

Thank you. She had a look-book and photos from location scouting. The beauty of Japan was the main thing. I wanted to have the camera close to the subjects, stationary, to keep looking at the actors, to observe without distracting. Of course, we moved the camera when it was warranted. Having worked on both foreign and domestic films in Japan, I have noticed the differences in lighting styles. Foreign films shot in Japan tend to be more contrasty, with darker shadows. But real-world lighting in Japan tends to be much brighter and flatter, with fluorescent lighting and lots of neon at night.

## Takuro Ishizaka, JSC: the Look of *Rental Family*



Takuro Ishizaka, JSC at left and DJI Master Wheels.  
Photo: Searchlight Pictures/James Lisle.



ALEXA Mini LF on speedrail crane with DJI Ronin 2.  
Photo: Searchlight Pictures/James Lisle.

For *Rental Family*, I wanted to have a taste of Japan, not too contrasty, but nice enough to satisfy Western audiences. I wanted to make it feel like you're in Japan. I remember when I first started returning to Japan from Hollywood, my biggest concern was how everything was over-lit. Usually the first thing I did was to turn everything off and then redo the lighting. But for this film, I wanted it to feel a bit more documentary-like, but shaped in a nice way.

**I liked that the camera was not always moving, even though you say documentary style. And your choice of lenses was refreshing. The images felt very alive and natural.**

I am constantly searching for the look that we're trying to achieve—somewhere between nicely modern digital versus film. But now there's a younger generation that has never seen real film. Looking back, it used to be much grainier than we remember. Grain feels nice to some people especially if they haven't seen it. But I've seen it, and often we were fighting the grain. So I always want to find the zone that's nice between the two. Also, I knew that our colorist Natasha Leonnet at Picture Shop would support me in finding the right balance.

### **How much time did you spend on grading?**

I requested about a week with Natasha in advance of showing it to the Director. I work that way in Japan as well, where the Director doesn't come to grading until very end. That gives us time to explore and experiment. We graded with DaVinci Resolve. If the Director is available and willing to come, I love to have him or her with me through the process too.

### **What did you tell Natasha in terms of the look?**

The key word was "gentle" and Natasha already understood that by seeing the footage. Our show LUT had a nice Kodak film look with enhanced green and magenta, not too saturated, soft contrast in the middle and finished with true black. By the second or third day in grading, I thought the shadows or blacks were a bit too dark, especially scenes where people had black hair and black suits. So I asked Natasha to change the curve in the shadows and apply that to the entire timeline in a way that we could keep the rest of the grading. We added a little bit of grain as well.

### **How big was your camera crew?**

It was basic: Camera Operator, First AC/Chief, Focus Puller/Second AC, Third AC and DIT. When we went outside of Tokyo, I operated as well, along with a second Camera Operator.

### **Was the interior of the rental agency a location?**

It was a very challenging location because we couldn't place lights on the outside of the windows and we had to fight the natural light. It was lit with original Japanese daylight fluorescents. We made a bunch of different ND snoots to control them. All the interiors were locations except the apartment of Phillip, the main character played by Brendan Fraser. That was the only studio work.

### **You had some very elegant camera moves.**

I like to put the camera on a crane. For the scene on the bridge, we set up a crane to adjust the camera position and allow the actors to go wherever they wanted. The grip department told me they didn't have the budget to keep a regular crane all the time. So they made a crane out of speed rail with a DJI Ronin 2 in front as a remote head. It worked very well. I controlled it with DJI Master Wheels.

### **Does your Focus Puller work off a monitor?**

Yes, most of the time. I was shooting wide open a few times. But usually I don't like wide open that much. I prefer T2.8-T4. Wide open with a Large Format sensor sometimes looks fake to me because the background is too separated. I wanted to capture the essence of our locations, of where we were. Of course there are times when I want to have shallower focus and I'll just go wide open. And then, you see the really nice bokeh of the HUGO lenses.

### **Where did you rent for *Rental Family*?**

We rented from Sanwa in Tokyo. I like their lenses and equipment. [Sanwa Cine Equipment Rental Co. Ltd is a leading supplier in the Japanese cinema equipment rental industry. Founded in 1955, Sanwa is also the exclusive Panavision representative in Japan. They also provide comprehensive cinematography, lighting and camera equipment from most major manufacturers.]

### **Are you interested in 65mm format?**

Yes. I heard that Masa Yasumoto, head of Sanwa, bought two ALEXA 265 cameras. I have to see them. Masa is everywhere and always buying interesting new things. I used to go to conventions

# Takuro Ishizaka, JSC: Production in Japan



Takuro Ishizaka, JSC. Photo: Searchlight Pictures/James Lisle.



Hikari at center. 2 cameras. Photo: Searchlight Pictures/Arthur To.

a lot because I always had a passion to see the new equipment. I saw him every time, everywhere, finding out what was best.

## How are the budgets in Japan for productions?

Compared to the US, budgets are lower, but we have a decent-sized market, so we get to do some bigger films. Japan is strange about budgets. Basically, I have no way of knowing the amount most of time. I don't even know the camera budget; they never tell me. It's rather curious. If you remove an item from your equipment list to pay for a different line item, you lose it. You cannot move it. That is because it is already heavily discounted. For example, if our grip department is told they cannot have a regular dolly or regular crane, we had to improvise or come up with an alternative method.

## We hear that Japan is very busy right now because of government incentives.

It's quite busy. Japan offers 50% incentives, but with a number of restrictions. You have to spend a certain amount of money in Japan and there's a time limit when you have to use it.

## Many new Japanese movies and series are streaming here in New York. But I also hear from colleagues that it's hard to get a good Focus Puller in Japan. Why?

Basically, the reason is because they don't pay Focus Pullers enough. You can't make a career out of just pulling focus. Bilingual crews are better paid, so they're in a little better position. But if you do regular Japanese shows, the pay is not that great. You dream of wanting to step up. The mentality is that focus pulling gives you the chance to get into the business, to work your way up, but not remain a Focus Puller as a career. Also, in the Japanese system, we have a First AC whom we call "Chief." And then the Focus Puller is called the Second AC. So the pay is even worse.

## Wow. The Focus Puller has one of the most important jobs. I heard of productions being rejected a while ago when the distributor saw too many scenes that were out of focus.

That problem in Japan has been getting better these days. Producers are finally realizing the importance of good focus, and they started paying a little better. But if you go to the US or UK, there's always a full-time professional at every level. Second AC is a profession. First AC is a profession. But it's probably a universal

dream for many camera crew members to become a DP one day.

## What does the Chief do?

Chief coordinates the equipment and takes exposure readings.

## Oh, really? Chief has the light meter?

The reason is that a DP in Japan usually has to operate the camera. You are sitting or standing with the camera all the time. So Chief helps you to take light readings and communicates with the Gaffer. This system helps on multi-camera setups if you are operating one of the cameras. It's challenging to keep everything under control. It's a good system if the cost makes sense. I recently started working on an Indian film and found out they use the same system.

## Tell us about lighting.

It was pretty basic. 6K, 4K and other HMI fixtures. We had ARRI Orbiters and ARRI SkyPanels. Also Astera Helios and Titan tubes, and some Aputure units. Most of the time we plugged into household outlets. For the studio set of Phillip's apartment, we had an 18K coming through the window. The background was a green screen because the apartment was supposed to be in Aoyama.

## Do you own equipment?

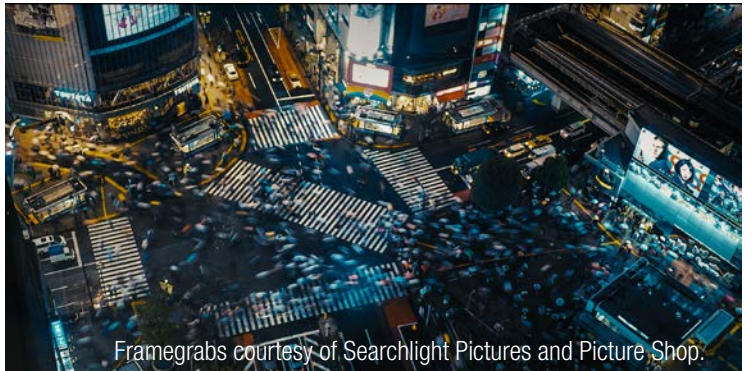
I have a RED V-RAPTOR [X] 8K VV, RED KOMODO, DJI Ronin 4D, ZEISS Supreme Primes and so on. I have done many demo films and collaborations on product launches with the manufacturers, including Canon C500, Panasonic Varicam, ZEISS Radiance lenses, DJI Ronin 4D and RED Komodo. I produced and shot *Shadow City* for the Ronin 4D.

## I remember the FDTimes article you did with Arato Ogura about your beautiful short film with ZEISS Radiance Primes, starring dancer KAKA. And your Ronin 4D *Shadow City* demo.

We spent a day doing the sword fight scenes in an abandoned warehouse in Tokyo. It was an early Ronin 4D camera model and it was fun learning what it could do. I guess because of my interest in cutting-edge camera, lens, lighting and post-production technology, I became interested in working with manufactures on a lot of new camera developments.

## We both seem to enjoy trying new equipment, often long before the instruction manuals come out.

# Rental Family Frames



Framegrabs courtesy of Searchlight Pictures and Picture Shop.

# Natasha Leonnet on Grading *Rental Family*

## **Jon: How did you get started as a colorist?**

Natasha Leonnet: I grew up in San Francisco and then attended an international high school about an hour outside of Santa Fe with students from over 70 different countries. I studied filmmaking at Brown University. Then I moved to Prague, working as a post-production supervisor. I met Biggi Klier, a colorist in Munich who was working at ARRI and did an apprenticeship with her. Then I moved to Denmark to learn how to grade features. I've been at Picture Shop for three years.

## **Was your school similar to where Takuro Ishizaka went?**

No, he went to a school for people who wanted to be rodeo riders. Or horseback riders. He has a fabulous story about walking into his dorm room and a tarantula jumped from the bed to his chest.

## **Your work grading *Rental Family* was beautiful. One of my favorite sequences was with the two women in the hotel as the camera pulls back and out the window.**

It is one of my very favorite films on which I've had the pleasure to work. That scene you describe is a moment where they put an exclamation mark on the sense of warmth to highlight the disparity between the life that Phillip (Brendan Fraser) has been living at the time, especially at the beginning, and the life that he's starting to enter into.

There is a color arc that Hikari, the Director, was very clear about from the beginning. She wanted to show that his life in many ways is gray, dreary, darker and desaturated, without access to a lot of color. This scene is the first moment where you start to see the warmth that Phillip starts to experience.

## **Please tell us more about the color arc for the entire film.**

It gets richer. The ultimate exclamation mark is when Phillip goes to the island with the elderly gentleman, Kikuo Hasegawa (played by Akira Emoto), and you see the lushness of the island—the green vegetations and the blue water. There's warm firelight at night when they're in the old home in which he had grown up.

There's a downward slope after that. When the man falls ill, we feel that grayness again. And yet, at the very end, Hikari wanted to go warmer. She breaks color continuity completely to show how Phillip has found the warmth in his life again.

That scene near the end with Mia, the young girl, was shot on an overcast day. I pushed the pink of the cherry blossoms and their skin tones as much as possible to add a sense of warmth. I think the grading works rather well because it's such a tentative scene. You don't know how the young girl is actually going to react or whether she's going to welcome him into her life again. It helps to solidify the emotional tone.

## **It's interesting that Takuro used the new Leitz HUGO lenses. They gave the film a refreshing, different look than what we've been seeing recently.**

It's very painterly. And at the same time, the lenses themselves don't feel as if they're imprinting too much of an opinion. They give the viewer a bit more distance—with a more naturalistic feel. They add a subtle elegance to the aesthetic language. It doesn't feel heavy-handed. It doesn't cry out, "This is the opinion of the film." The film is quiet and those lenses have that quietness.

## **Takuro said, "We graded at Picture Shop and I knew that Natasha was going to support us in finding the right balance." How did you work with him and the Director to find that right balance?**

I listened. It was important to know that when they walked away, they felt like it was 100% their film. Takuro's point of view was the same as those lenses. It was naturalistic. He wanted the light to feel as natural as possible. If we think of the DI suite as an extension of his set and his rigging, the approach was also extremely natural. If we did any power windows, he would've thought about them as he was working on set.

And then we just tried to make sure that any work we did was as gentle as possible, so you would never feel the DI. Interestingly enough, in terms of the saturation levels that they chose, they're very natural. Essentially, they just wanted to use the DI to make sure that they had really strong continuity.

## **How did you establish the look in advance?**

We took the Kodak LUT and then made changes to it in the DI suite. It was sent to Japan for their work on set. We softened the curve of the highlights and the low lights in the shadows. It was a Kodak look, but a bit softer. We had a few iterations. They would load it in the camera, test, send me notes and I would make changes. This is the most ideal situation—when the Director and the Cinematographer show you the look-book, work with you on the LUT, and we refine it together. By the way, Hikari (which means "light,") studied fine arts in school. We talked about the film's palette. They said they definitely wanted a film emulation. We looked at many film emulations and experimented with them.

## **Was that a Picture Shop Kodak LUT?**

Yes, we're really lucky. We have Josh Pines. It's a Picture Shop LUT that he created.

## **Oh, Josh Pines of lovely LUTs, articulate guidance, and frequent run-on sentences:) What do you use for grading?**

I work with DaVinci Resolve. The files were uploaded into our system as they were shooting so I could check them. I did a video session with Hikari in Japan, and that was great because it started to give me a sense of what it was going to be like to work with her.

Hikari came in at the very beginning to discuss strategy and set a few looks. She joined us after week one to review our work and continued to guide us. Takuro was in the grading suite for two weeks. We added a bit more warmth, which is nice in the gray scenes because even though they're gray, they don't feel too stark. Then we saturated more in the green and the magenta. That gave us beautiful skin tones and a nice basis to work from. We started out in a theater on an enormous screen. Then we graded for home video—also in the theater at first to compare the theatrical version in terms of feeling, but optimizing it for the small screen. We also did a Dolby cinema version. We lifted the shadows just slightly to get more breath into them, to get more detail, and to ensure that you could see every detail that had been captured in camera.

Hikari and Takuro were a joy to work with: so creative and thoughtful about every frame. As a colorist, it was a dream project because of the amount of intention that they brought into the grading suite.

# Chris Field on Macro Moving Pictures and Laowa Probe Zoom



really low onto the set and be millimeters above the ground to catch interesting perspectives where otherwise you would be forced to be angled up and looking down.

Also, it's fun to travel through things. The foot-long probe can move through an enclosed space and emerge on the other side. Also, I appreciate that it's waterproof and has a decent wide-open stop of T8. There's always the challenge of trying to get enough light in my studio.

**Tell us about your macro motion control, moving not only the camera but also syncing focus on the Probe Zoom.**

Chris Field is famous for macro botanical timelapse. You may ask yourself, "What's that?"

Chris is a timelapse, motion control and macro photography expert. He designs and builds the rigs that make the camera, lens, lights and virtual backgrounds move in harmony to create sequences of plants and little creatures that take a long time to grow in real life. Credits include BBC, National Geographic, History Channel, Netflix, Disney, Apple TV, etc. Chris worked on BBC's *Green Planet* for 3 years. His companies in Littleton Colorado are Biolapse for production ([biolapse.com](http://biolapse.com)) and building custom rigs for sale ([thechronosproject.com](http://thechronosproject.com)). We talked about his recent work using Laowa's Probe Zoom lens.

The Laowa Probe Zooms cover Full Frame. They have 0.8M geared focus, iris and zoom rings. The zoom is parfocal and focus is breathless from infinity to 0.2" from the front element. There are two models: 15-24mm T8 (focuses to macro 1.6x) and 15-35 T12 (macro 2.3x). There are 4 probes: Direct (straight), 35°, 90° and Periscope. Laowa Probe Zooms are available individually, in bundles of 2, 4 or as a complete set of 8. PL Mount is standard. EF, RF, E, Z and L-Mounts are optional.

**Jon: Please explain how you work with the Laowa Probe Zoom.**

Chris: I've been using the Laowa 15-24mm T8 Periscope. It provides interesting ways to get the lens into, around and through various setups.

**When would you use a probe lens vs a traditional macro lens?**

Pretty much anytime I want to get close into the subject. I build sets and most of the things that I film are plants, mushrooms and things that are very small. Using a macro lens is normal. But the advantage of the Probe Zoom is keeping the camera a good distance from the front element of the lens. You can tuck in and get

following focus, moving the set, moving everything. Because plants grow slowly, botanical timelapse might involve having the robotic camera system work for many months just on one sequence. Motion control also lets me use one camera to work as if there were ten different multi-camera setups.

I've been doing a lot of virtual production with my macro work, so I also have a large screen LED TV as the backdrop. The pixel density of a typical LED wall is too big a background for macro work, so I just use an affordable LED consumer TV with HDMI inputs connected to Unreal Engine ([unrealengine.com](http://unrealengine.com)). DragonFrame ([dragonframe.com](http://dragonframe.com)) sends the motor positions to Unreal and coordinates with the display and the action to give us a kind of *Mandalorian* type effect on a much smaller scale.

**How do you coordinate the focus motor with the camera moves when your depth of field is a fraction of an inch?**

On some setups, I use a Kessler crane with a Cineslider and CineDrive ([kesslercrance.com](http://kesslercrance.com)). CineDrive has three additional motor ports (e.g. Focus, Iris and Zoom). It works with Dragonframe animation software to control pan, tilt, slide, focus, zoom, etc. Dragonframe tethers to the camera so I can see the results on the screen and as the camera moves from place to place, I can set key frames for the focus. Then I go through a dry run at maybe 2 or 3 frames per second to make sure that everything's behaving the way that I want.

I pioneered a fully adaptable timelapse technique that lets me re-program, adjust, and correct the camera setup so it can "chase" the growing plant. I think this is a first in botanical timelapse. Previously it was "set and forget." If the plant grew beyond the frame or outside the plane of focus, that meant a re-shoot. Now, I can adjust or pause the program. For example, if I'm doing a timelapse of something that is growing and I see that it will go out

# Chris Field and Laowa Probe Zoom



From top: Laowa 15-24mm T8 Probe Zooms:  
Direct (straight), 90°, 35°, Periscope

of focus in the future, I can pre-program the camera to where it should be in two or three weeks from now, and then I can retreat back to the current position to pick up as if nothing has ever happened with that new trajectory and the new focus target.

**Speaking of focus, I liked how good the Laowa Probe Zoom was in racking focus from super close macro to infinity without breathing. Did you notice that?**

Yes. Absolutely. Laowa's lack of focus breathing is definitely an advantage. That's something I run into a lot with my work. Focus breathing can be kind of a pain.

**Since the Probe Zoom zooms so nicely, have you done a Dolly-Zoom *Vertigo*/*Barry Lyndon*/*Go-Between* style macro shot?**

I'm actually trying that with a setup right now, filming rice underwater. I also built some setups for Laowa to demonstrate that at trade shows.

**Tell us more about your LED wall made with a consumer TV.**

It's nothing special, just an affordable Samsung 86 inch TV. It's very forgiving to be able to use TVs for this small work rather than large LED walls. Normally I don't even run them over 1080p. Everything in the background usually remains out of focus anyway. DragonFrame updates the motor position to Unreal Engine when it's running what's called an nDisplay. That gives it a window into the other world where if you see it slide too far across the side of the screen, it starts to skew and get bigger on one side. And then it's corrected to present a perfect rectangle at any orientation.

**What cameras are you using?**

I generally just use mid-level DSLRs with a 24 megapixel sensor that give me good RAW still images. Believe it or not, generally my go-to camera has been a simple Canon Rebel T7.

**Really? APS-C 24.1 MP sensor. You're doing the timelapse as frame by frame stills, not video?**

They're captured as individual RAW still frames. I have two dif-

ferent methods. If I'm pleased with how everything looks while capturing with DragonFrame, I'll export the frames to create a ProRes video sequence. However, if I feel that I need to do some grading or make other adjustments, I'll take all the RAW CR2 still images, bring them into Adobe Camera Raw, make adjustments, export them all to Adobe Premier Pro and stitch them together as a time lapse sequence.

**How do you convert the still images to ProRes?**

I use Adobe Premier Pro. You can also do it with DaVinci Resolve.

*[To create a ProRes timelapse video in DaVinci Resolve, set Media Storage from Frame Display Mode to Sequence, be sure the still photos are numbered consecutively, import the stills into the media pool, set the desired frame rate in Clip Attributes, and from the Deliver Page, export as a QuickTime ProRes file.]*

**Since macro photography has such a shallow depth of field, do you do focus stacking?**

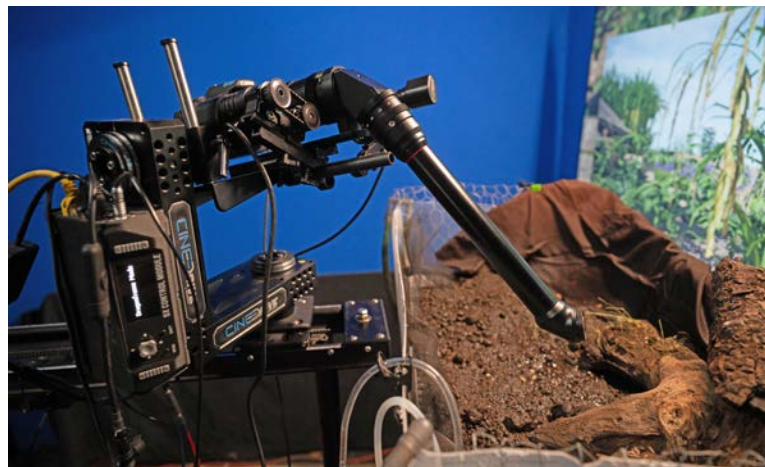
*[Focus stacking combines multiple images, each taken at different focus distances to create a composite image with the appearance of having greater depth of field.]*

Yes, I've done quite a bit of focus stacking with time-lapse, even with extremely high magnification ratios. It's a beast of a workflow because you have to stack the individual frames. If I have 1,000 images for 30 fps delivery, then there are 30,000 images that I have to process. I use a stacking app like Helicon Remote which has a batch workflow to auto-separate and generate the stack. There are some limitations because every individual stack is considered independently by the computer. If you're not careful, you can get a jelly kind of a wobble. So I try to keep the stacks relatively small, around 15 to 20 images deep.

**What's next?**

I'm continuing to work in the natural history space, including upcoming projects tied to *Green Planet II*. At the same time, I've been developing a remote cinematography platform aimed at making long-term, precision-controlled shooting more accessible and field-ready. I'm excited to see how that expands what's possible both for productions and smaller teams working in challenging environments.

[laowacine.com](http://laowacine.com) [tinyurl.com/laowa-probe-zoom](http://tinyurl.com/laowa-probe-zoom)



# NANLUX Evoke 5C



restaurant scene, to highlight a product logo, add an accent light, project a gobo pattern or backlight someone in a car.

As with the other fixtures in the 150W to 5000W NANLUX Evoke series, the new Evoke 5C has a Nebula C8 Light Engine (Deep Red, Red, Amber, Lime, Green, Cyan, Blue and Indigo LEDs). Adjustments can be made directly on the fixture or via the Nanlink App, DMX/RDM or LumenRadio CRMX.

With its built-in lithium battery, the Evoke 5C can run up to 2.5 hours without an external power source. It fires up instantly. The USB-C port accepts power supplies and adapters (5V/2A or higher) for convenient charging. The Evoke 5C is rated IP67, so you can take it underwater to 1 meter deep up to 30 minutes. With the optional IP68 housing, it can dive to depths up to 30 meters.

In front, Evoke 5C has a snap-fit design with magnetic mounts so you can swap modifiers and accessories quickly. These include a magnetic diffuser, soft dome, barndoor, snoot, Fresnel lens, spot beam lens, and 15°–35° projection attachment.

At the rear, magnets, lock catches and electronic contacts let you attach a CRMX module for wireless DMX control, a battery grip or an E27 screw adapter to fit an Edison bulb socket. The contacts have another clever function—you can simply slide the 5C fixture into its 8-Light case for charging.

The NANLUX Evoke 5C is available as a single Standard Kit. It also comes in an 8-Light Kit that includes modifiers and power supply accessories—all in a compact custom-designed charging case based on the GUTEK T-230. Electrical contacts in the case can charge up to eight fixtures and four battery grips. The case can be powered using AC, a V-mount battery or PD adapter.

Visit [NANLUX](http://NANLUX.com) at NAB Booth C5925.

[nanlux.com](http://nanlux.com)

This is the tiny, Inkie-like, battery-powered COB LED fixture first shown as a not-so-secret prototype at BSC Expo. The NANLUX Evoke 5C delighted DPs and Gaffers crowding the booth to try it.

The new NANLUX Evoke 5C is their smallest professional spot-light. It measures a mere 5.6x4.4x4.5 cm / 2.2x1.73x1.77" and weighs only 160 g/5.64 oz. You can use Evoke 5C handheld, mounted, rigged or discreetly hidden in plain sight. It draws 5W and at 1m delivers 496 Lux (46 Footcandles) bare bulb or 2828 Lux with a Spot Beam Lens. Use the 5C hidden behind a candle for a low light



Magnetic Fresnel Lens

Magnetic Spot Beam Lens

## Evoke 5C Details

- CCT: 1,000 to 20,000 K, with ±200 green/magenta adjustment.
- CRI is 98 and TLCI is 98.
- 6 control modes: CCT, HSI, RGBW, XY Coordinates, Gel and Effect.
- Power Consumption 5W
- Bare at 1m: 496 lux / 46 FC
- with Fresnel Lens at 1m: spot 830 lux, flood 580 lux
- with Spot Beam Lens at 1m: 2828 lux
- with Projection Attachment at 1m: 15°= 726 lux, 35°= 229 lux

# NANLUX Evoke 5C Light Kits



NANLUX  
Evoke 5C  
8-Light Kit

## Evoke 5C 8-Light Kit

### *includes:*

- Evoke 5C × 8
- Magnetic Diffuser × 8
- Magnetic Soft Dome × 4
- Magnetic CRMX Module × 8
- Magnetic Thermal Shield × 8
- 5/8" Baby Pin with 1/4"-20 Thread × 4
- Magnetic Barndoor × 4
- Magnetic Snoot × 4
- Magnetic Fresnel Lens FL-5 × 4
- Magnetic Battery Grip × 4
- Magnetic E27 Socket Adapter × 4
- Projection Attachment 15°-35° × 2
- Magnetic Spot Beam Lens × 2
- Gobo × 8
- Magnetic Yoke × 4
- AC Power Cable 1.5m × 1
- D-tap Cable × 1
- User Manual × 1
- GUTEK T-230 Case × 1

## Single Evoke 5C Standard Kit

### *includes:*

- Evoke 5C × 1
- USB-C Cable × 1
- Magnetic Diffuser × 1
- Magnetic Yoke × 1
- Magnetic Thermal Shield × 1
- User Manual × 1
- Carrying Bag × 1



Projection Attachment 15°-35°



Magnetic Soft Dome



Magnetic Yoke

# Easyrig STABIL Medium for Vario 6

This is Swiss cinematographer Stéphane Kharraji working with Easyrig's new STABIL Medium on a Vario 6.

STABIL Medium is Easyrig's latest and lighter stabilizing arm for their Vario 6 system. As the name suggests, STABIL Medium is for light and medium weight camera payloads from 4–14 kg (9–31 lb). STABIL Medium includes the support bar, camera quick release hook, spring and dampening mechanism.

In comparison, the STABIL G3 is heavier and supports payloads from 5–25 kg (11–55 lb) and STABIL Light takes camera packages from 2–7 kg (4.4–15.4 lb).

As with other STABIL arms, the Medium can be locked at 90° for non-stabilizing shots and folds up for transport and storage.

Because the Easyrig Vario 6 is a modular “Build Your Own” system, you can configure it with choices of upper arm, vest, camera hooks and accessories.

Vario 6 with STABIL Medium smooths moves, removes bumps, reduces operator fatigue and eases strain. For handheld setups, operating with gimbals and working hours on end, Easyrig have been made in Sweden and saving backs since 1994.

[easyrig.se](http://easyrig.se)



STABIL Medium

Vario 6 Power Pack with user-adjustable tension knob

Cinema Vest, Standard Size

## Christophe Casenave on Creativity, Character, Change



*By Christophe Casenave, Head of the Cinematography Business Unit at ZEISS—here's a tease of new technique and technology, a topic dear to the hearts of cinematographers who read FDTimes.*

The ZEISS team will squeeze into our ZEISS booth at Cine Gear Expo this June to introduce yet another surprise that will address some of the things we see for the future of cine production.

If we agree that AI is beginning to make strides in the way content is produced, we envision a future where the creative part, the human touch, will remain. Creativity relies on uniqueness, character and thinking differently. The recently introduced Aatma lenses, for example, offer a different character than you might have expected from us. Panoptes 65, our first set of cine lenses for the 65mm format, is on its way because cameras with even larger sensors offer distinctly different qualities. Even on VFX intensive productions, we are enabling unique cinematography with our Virtual Lens Technology that reproduces real lens looks on computer graphics.

Let's talk about new ways to work more seamlessly, to work faster, to not lose time on set. We see how our industry is developing in areas where human creativity is involved and where it will remain at the forefront. However, there are two prerequisites for creativity to remain competitive. First: it must be a hundred percent recognizable that a human created the images and it wasn't AI-generated. Second: efficiency on set has to become more and more important.

Anything that enables cinematographers to show uniqueness will be very important. That includes the creation of artistic lenses with character and the ability to fine tune the character of those lenses. I see similarities in the current disruption to the time when photography first appeared in the 19th Century. Painters were making portraits of people. Then photography appeared and you would think that all those painters would have disappeared

completely. But they didn't. They just started to paint something else or in a different style. They needed to be even more artistic than ever before. Artists who were just reproducing reality disappeared, but the ones who were more innovative, or different, became even more successful. And now, cine lenses will need to help cinematographers to be even greater artists.

On a technical level, our lenses, cameras and accessories will need to help the crew be more efficient. Anything that helps speed up prep time or lens changes on set is a benefit. For example, in this modern age, why do we still need to calibrate focus with lens motors? Why do we still need to shoot grids? All those things should be integrated into the camera/lens system in order for people to work faster and more efficiently. This is also attractive to producers because every lens change can take a couple of minutes. Up to an hour a day can be saved by using smarter lenses.

Traditional lenses are great, but you need to have lens motors, rods, cables and lots of accessories—like too many ornaments hiding a Christmas tree. Anything that's smaller or removed from the camera is important. That's how we see the cine equipment market evolving for the future.

In addition to vintage, faux vintage, true vintage and lenses with more character, there are new formats to explore. We enjoyed 16mm, 35mm and Full Frame. Bigger sensors provided the possibility of new formats. The next big thing to drive uniqueness is the 65mm format. This is something we are very interested in because it opens up new dimensions, new looks, new ways of telling stories. It will surely increase in terms of popularity. We announced the Panoptes 65 lenses at BSC Expo earlier this year. At Cine Gear Expo, we will offer a glimpse of what else might be coming for this format. Stay tuned for what's coming next.

## Art, Technique and Technology

Film and Digital Times is the guide to technique and technology, tools and how-tos for Cinematographers, Photographers, Directors, Producers, Studio Executives, Camera Assistants, Camera Operators, Grips, Gaffers, Crews, Rental Houses, and Manufacturers.

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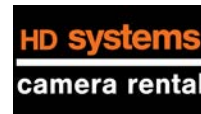
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