Jon Fauer, ASC www.fdtimes.com June 2025 Issue 131

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 (list below).

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Cover

Kanamé Onoyama, AFC on location in Paris, filming ABOUT LOVE with new Sigma Aizu Prime Line lenses.

20th Anniversary of FDTimes

The very first edition of Film and Digital Times appeared at Cine Gear Expo 2005. It was a 16-page newsletter at the beginning of the digital age of film with a 235 camera on the cover.

The concept of focusing on technique, technology and art came from Volker Bahnemann, President of ARRI USA at the time. The idea hatched at an ASC Publications Committee meeting and then during a regatta in Helsinki where an America's Cup skipper was taking notes on a laptop for his newsletter about advanced sailboat racing. The first edition was supported by just four sponsors: ARRI, Sony, Kodak and JL Fisher. Great thanks to them and to all the readers, subscribers and companies who have enabled FDTimes to grow into a real magazine. It is now 64 to 96 pages long, still ad-free, made possible by about 100 educational partners worldwide. This would not have been such an exciting adventure without your support and friendship.

Visit FDTimes in Stage 30 at Cine Gear Expo 2025: Booth S3039-3.

Jon Fauer's

MAY / JUNE 2005 ☐ ISSUE 1

FILM AND DIGITAL TIMES

The how-to newsletter of high-end technique and technology in film, video and digital production

PREMIERE ISSUE

Secrets of the Pros

Here's the first issue of our secrets-of-the-pros, nuts and bolts, how-to newsletter on techniques and tools, style and strategies, tips and trends for Cinematographers, Photographers, Videographers, Directors, Producers, Camera Assistants, Camera Operators, Grips, Gaffers, Crews, Rental Houses, Manufacturers and Students.

Stay on Top of the Biz

Inside-the-industry information for professionals from professionals, written by writers who shoot, direct, light, design, build, edit and work in the business.

We'll talk about products and procedures in practical production—here's the job at hand: how do we use these tools and techniques to get the results we want? How do we get an image, does it look good, what helps us get there, how does it work, and how did they do that?

Coming to you every two months, you can stay on top of the business and on top of new ideas. We'll publish on paper since most stages and locations lack hotspots like Starbucks.

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Jon Fauer, ASC is an award-winning Director of Photography and Director who has written 10 best-selling books, famous for their user-friendly way of explaining things as if you're right there on location with him. Over 120,000 of his books on cameras, cinematography, film and digital video have been printed.

Think of this bimonthly newsletter as Fauer's 11th book—arriving a year early, with up-to-the minute information brought to you in episodic format.

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What's Inside?

Sigma Aizu Prime Line T1.3 Large Format Cine Lenses

The Academy Museum. Los Angeles. June 3, 2025.

Sigma Corporation introduces their Aizu Prime Line of 12 cine lenses with a consistent T1.3 aperture across the entire range from 18mm to 125mm. The initial core series includes 8 lenses with focal lengths from 25mm to 75mm.

Sigma describes the Aizu Prime Line (slightly edited by FDT to fit) as "the world's first lineup of Large Format cinema lenses to achieve a maximum aperture value of T1.3 across all focal lengths. They combine modern sharpness with an organic, smooth and natural look, bringing rich texture and depth to visuals.

"With unparalleled brightness, refined expression and reliable performance, the Aizu Prime Line embodies the proven technology and quality of 'Made in Aizu, Japan.'

Consistent T1.3 across all Focal Lengths

"The T1.3 aperture enables exceptionally shallow depth of field and graceful bokeh, seamlessly separating the subject while preserving a natural sense of depth and dimensionality. This refined visual language draws the viewer into the frame with a subtle yet powerful presence. The very short minimum focus distance of the Aizu Prime Series enables extreme close-ups.

Optical Design

"All lenses in the Aizu Prime lineup have an optical system designed specifically for cinema applications. They provide quiet elegance and depth to the image, with distortion and focus breathing carefully minimized. Consistency of color balance, contrast, and flare characteristics ensures a high level of harmony to the entire visual narrative provided by Aizu Prime Lenses. The initial introduction of 8 core lenses will be followed by 18mm and 21mm wide-angle lenses, and 100mm and 125mm telephoto lenses.

Ø46.3 mm image circle

"The large 46.3 mm diameter image circle ensures full coverage not only for Full Frame and Super35 formats, but also for popular Large Format sensor areas such as ARRI ALEXA Mini LF Open Gate and RED 8K VV. This capability enables uncompromised filmmaking across a diverse range of projects.

Mechanical Design

"Despite having Large Format coverage and a super-fast T1.3 aperture, the Aizu Prime lenses are remarkably lightweight. This rare balance of exceptional speed and mobility offers the flexibility and creative freedom demanded by modern productions—from dolly and Steadicam to gimbal and handheld operation.

"The Aizu Prime lenses are exceptionally durable and easy to maintain. Every mechanical detail—from the wide focus rotation angle to the equal-pitch aperture ring—embodies the engineering experience cultivated from the Sigma High Speed Prime series.

ZEISS eXtended Data

"The Aizu Prime lenses support ZEISS eXtended Data, offering real-time lens metadata during shooting. It also enables the export of distortion and shading correction data, streamlining VFX post-production."

sigma-global.com *sigmaphoto.com*

Cine Gear LA booth 518.

Sigma Aizu Prime Line

Photos taken with Aizu Primes on a Sigma BF camera by Samuel Renollet, RVZ

Sigma Aizu Prime T1.3 Large Format Prime Lens Lineup

Focal Length	Maximum Aperture	Close Focus	Front Diameter	Length (for PL Mount)	Weight f(or PL Mount)	Image Circle	Lens Mounts
18mm	T1.3	TBD				46.3 mm Ø	PL and Sony E-mount
21mm	T1.3	TBD					
25mm	T1.3	0.31 m / 1'0"	95 mm / 3.7"	125 mm / 5"	1.7 kg / 3.6 lb		
27mm	T1.3	0.33 m / 1'1"	95 mm / 3.7"	125.4 mm / 5"	1.7 kg / 3.6 lb		
32mm	T1.3	0.34 m / 1'2"	95 mm / 3.7"	128.5 mm / 5.1"	1.7 kg / 3.7 lb		
35mm	T1.3	0.35 m / 1'2"	95 mm / 3.7"	128.6 mm / 5.1"	1.6 kg / 3.6 lb		
40mm	T1.3	0.38 m / 1'3"	95 mm / 3.7"	128.8 mm / 5.1"	1.6 kg / 3.5 lb		
50mm	T1.3	0.48 m / 1'7"	95 mm / 3.7"	126.3 mm / 5"	1.7 kg / 3.7 lb		
65mm	T1.3	0.61 m / 2'0"	95 mm / 3.7"	125 mm / 5"	1.6 kg / 3.6 lb		
75mm	T1.3	0.73 m / 2'5"	95 mm / 3.7"	128.1 mm / 5.1"	1.7 kg / 3.8 lb		
100mm	T1.3	TBD					
125mm	T1.3	TBD					

Kazuto Yamaki introduces Sigma Aizu Prime Line

Kazuto Yamaki, CEO of Sigma Corporation

Jon: When and where did the idea for Sigma Aizu Prime Line begin?

Kazuto: We entered the cine industry with our FF High Speed Prime Line and one FF Zoom Line lens. Also, we had two High Speed Zoom Line lenses which are compatible with Super 35mm format. All of them used the same optics as our still photography lenses. These lenses were extremely well accepted by many cinematographers, which has been a great pleasure for us. But in order to live long-term in this cine world, I strongly believed that we should develop a new series of lenses from scratch, dedicated only for cine. We started designing them in 2022—three years ago. But I had been thinking about the concept for almost five years.

How did you come up with the name "Aizu Prime Line?"

Our factory is in Aizu, a beautiful region about 300 km north of Tokyo. More than 1,700 people work in the modern 89,000 square meter facility. We do almost everything ourselves: processing the glass, molding, grinding, polishing, centering, smoothing, coating, edge blacking, cementing and assembling. So, our new lenses are named for the area in which they are crafted.

Sigma lenses and cameras have interesting names: Aizu, fp L (fortissimo pianissimo) and BF (beautiful foolishness). How is the Sigma BF camera doing since the launch in February?

It's doing overwhelmingly well. We have been running our factory in Aizu at full capacity and still have over five months of back orders. I would like to express our regrets to customers who are waiting for the cameras.

That's a good problem to have. I expect the demand for Aizu Primes will be equally large. Since the lenses are not milled from a solid block of aluminum like the Beautifully Fun BF Camera, cinematographers hopefully will not have to wait.

We are announcing 12 lenses: 18, 21, 25, 27, 32, 35, 40, 50, 65, 75, 100 and 125. All of them have a maximum aperture of T1.3.

We will deliver lenses from 25mm to 75mm (25, 27, 32, 35, 40, 50, 65 and 75 mm) in 2025. The rest will be in 2026 (18, 21, 100 and 125 mm).

All the lenses open to T1.3? Even the 18mm and 125mm?

Correct—all T1.3. The widest and narrowest have a slightly greater length, but we made the entire set small and compact. These days, customers do not accept big, bulky, heavy lenses.

How were you able to keep Aizu Prime lenses small?

It's a combination of many technologies that we have developed for all our lenses—cine and stills. We have many methods of implementing the highest optical quality while keeping the size small and light. Actually, the pressure to make lenses compact and lightweight has been stronger on the consumer side, especially because mirrorless camera bodies are smaller than DSLRs.

We have taken on the challenge to achieve both high optical quality and compact lightweight designs. Of course, newer glass materials help us a lot. Suppliers like Hoya, Ohara and Schott offer many different types of optical glass that achieve specific characteristics and higher optical performance by using new types of exotic glass. Our newer lens designs are supported by these glass materials.

Aizu Primes come in PL or E-mount? Can users swap them?

In addition to PL, we see an increasing demand for Sony E-mount. However, users cannot swap the mounts because the circuit boards and contact pins are only compatible with each system (eXtended data for PL and Sony protocol for E-mount).

Were there challenges making the Aizu Prime Line all T1.3?

We have already made many F1.4 and F1.2 prime lenses for still cameras and as a result have a large library of optical designs in our company. Despite some differences, there are also some similarities that we can utilize.

Will there be Aizu Zoom lenses as well?

I don't know. Right now, we are focusing on the Aizu Primes. But we will also announce updated information about our AF Cine Zoom lenses. They are not for PL Mount cameras, but rather for Sony E-mount and L-Mount.

We will have working samples of the 28-45mm T2 FF from the AF Cine Line at our official launch event in Los Angeles on June 3rd. Also, we will have a development announcement of our 28-105mm T3 FF from the AF Cine Line. Perhaps after we have completed the whole set of Aizu Primes, we can consider PL Mount Full Frame Aizu Zoom lenses.

But in the meantime, we will release the AF Cine Zooms, which use similar optics as our still photography zoom lenses for mirrorless cameras. We plan to start shipping the 28-45mm T2 FF this November. The 28-105mm T3 FF is expected to ship in Spring 2026.

Sigma Factory in Aizu, Japan with Mount Bando in background. Photo courtesy of Sigma.

For which market are the Aizu Primes intended?

The Aizu Primes are intended for high-end filmmakers. Thanks to the T1.3 maximum aperture and image quality, they provide a distinctive look. But the price won't be crazy. The mid-range price point can be useful not only for feature films but also for a wide variety of productions, including commercials, music videos and corporate films.

How would you describe the differences in designing a still lens compared to a cine lens?

In still photography, you are probably looking at a static image for a long time. Users tend to check the optical performance very critically, even to the extreme edges of the frame, . So we have to be very careful about that. Also, there is a lot of competition among manufacturers and users. Even if the differences are small, we need to make our still lenses sharper, with higher contrast and fewer flares.

However, when it comes to cine lenses, there are many other considerations. For example, we have to consider not one single lens, but the entire series. We have to make them in similar sizes and weights. There has to be a consistent look and the feel, including the color rendition. Therefore, the Aizu Prime Line was designed by the same optical and mechanical design teams. Each lens is very consistent in terms of the look and also mechanical feel.

How do the Aizu Primes handle flares?

I know that some filmmakers prefer flares and ghosting. But we believe it's important to control them in many filming situations and therefore we try to control them. Of course, all lenses have some degree of ghosting and flare if the light comes into the frame. So, we only leave the natural ghosts and flares and eliminate the unnatural or unpleasing effects. We have a dedicated ghost and flare team of five or six people. We call them ghostbusters, and they always take a huge number of pictures.

Did you and your team talk to cinematographers while you were developing these lenses?

Yes, we got feedback from DPs, focus pullers, camera assistants and rental houses. Samuel Renollet at RVZ Paris was very vocal. In 2022, our engineers visited rental houses and we had many discussions with cinematographers about what they wanted. I sincerely hope they enjoy the designs of our Aizu Prime Line.

How would you describe the look of these lenses?

The Aizu Primes achieve a nice balance between modern and classic: modern, clean, pristine—but not clinical or too sharp. Actually, we needed to make the Aizu Primes compact and so they are not as super sharp as our latest lenses for mirrorless cameras. We intentionally made the color a little bit warmer than modern lenses to help create a natural look.

Thanks to the T1.3 maximum aperture, they provide very large, creamy bokeh. Our intention was to make Aizu Primes become the industry standard lens for the present and for years to come. We didn't want to make just another nostalgic lens.

As Kanamé Onoyama, AFC has said, please watch the images on screen and find out. I hope cinematographers will enjoy these lenses wide open. And then, when you stop down, you can have very pleasant details.

Kanamé Onoyama, AFC on Sigma Aizu Primes

Kanamé Onoyama, AFC on location at the river Seine in Paris, filming *ABOUT LOVE.*

ABOUT LOVE *is a short film using the new Sigma Aizu Prime Line that was directed and filmed by Kanamé Onoyama, AFC in Los Angeles, Paris and Japan. The film opens at the Academy Museum in LA on June 3rd at the launch event for these lenses.*

Jon: How did the Sigma Aizu Prime Line project begin for you?

Kanamé: The head of the camera department at RVZ, Samuel Renollet, asked if I was interested in testing a new set of lenses. He introduced me to Yamaki-san, the CEO of Sigma. I think Sigma always had great products with excellent Japanese quality and beautiful images. As DPs, we are always trying different ways to capture the strong emotions happening in front of the camera through interesting lenses. That's the most important thing about being a DP. The directors I work with consider this as well: how we can transcribe human emotions through cine lenses.

It's difficult to define what is cinematic and what is emotional visually. I know that Sigma makes the greatest quality lenses in terms of definition, contrast, colors and everything. But, I think the whole point of doing this sort of lens test and launch film is to discover how we can capture images emotionally. That was my curiosity as a cinematographer. I wanted to try something very subjective, ambiguous, cinematic and, above all, emotional. That was the starting point of this project. The title is *ABOUT LOVE.*

How did these concepts evolve?

The theme is love. Our short *ABOUT LOVE* explores universal emotions with situations such as a couple, a family, parents and children. I was interested in showing the diversity of different people in different countries. I was already shooting a commercial in America at the time. I told Mr. Yamaki that I could stay a bit longer in Los Angeles, taking a documentary approach. Then I could return to Paris to try a different style with a larger crew. Mr. Yamaki agreed and suggested Japan as a third location.

What cameras were you using?

I decided to work with lightweight setups. It started in LA just with my Sony FX3 and a PL adapter to shoot six different scenes. In Paris, we filmed for four days with a VENICE 2 provided by Samuel at RVZ. It was a minimal crew, almost like a documentary: just me, a friend who is a camera assistant, and a production coordinator. We did not use the RIALTO, but even so, I was surprised and pleased how small the VENICE setup can be—discrete enough so people were not asking what we were doing. I could be in the middle of Paris in quite touristy areas.

RVZ also lent me a Sony BURANO to take to Japan. First, I visited my parents' place. I have a friend from primary school who is a farmer and father of two daughters. We filmed scenes of their family love in the countryside. Then, I went to Tokyo.

Were you handheld?

Yes. Many scenes in Paris were handheld. Sometimes I used a tripod for the interior locations with actors.

Filming outdoors in Paris with lightweight equipment and quick setups reminds me of the origins of the Nouvelle Vague. Raoul Coutard told me how the French New Wave was influenced by their inability to get film permits, so they couldn't have a tripod, and therefore had to go handheld.

Yes. Nouvelle Vague was one of the main reasons why I decided to come to France in the first place.

Graded framegrab. Colorist: Vincent Amor.

What about lighting?

I was turning off lights more than switching them on. I embraced natural lighting conditions and chose locations thinking about daylight, sunset and even night. I always checked where the street lamps were and if I could control them.

Did you have a focus puller?

I had a focus puller in Paris. But because of the minimal crew size in LA and Japan, I did the focus by myself. Having been a solo cameraman at the beginning of my career helped. The muscle memory of focus pulling still remains. It's like a focus ballet.

Were you filming with the Aizu Primes wide open at a T1.3?

Not always. It depended on the setup. My "hero lens" was the Sigma 35mm T1.3 LF from the Aizu Prime Line, which was a great lens for everything. I also worked with the other focal lengths: 35 and 50 mm in Los Angeles; 25, 35, 50 and 75 mm in Paris; and 27, 35, 40 and 65mm in Japan.

What are your impressions of the Sigma Aizu Prime lenses? How would you describe them?

I'm pleasantly surprised by the quality of the images captured with Aizu Prime Line lenses. They are similar in size to other contemporary lenses. But even though the size is similar, these are among the only ones that open to T1.3. They are really brighter, which you see immediately on a lens projector. Even at T1.3, you don't see deterioration happening anywhere. There is minimal darkening at the edges and almost no breathing.

I was amazed by how beautiful these lenses are. They have a modern concept of sharpness and contrast, very smooth skin tones, pleasing focus fall-off. I could capture everything and not miss anything: tears, special moments. With the camera's variable NDs, I could choose the amount of bokeh as well.

Have you used the Sigma FF High Speed Prime Line lenses that came before the Aizu Primes?

Yes. I used them a lot because Sigma introduced them quite quickly when Full Frame digital cinematography started. There were very few lenses available at the time, especially wide angle focal lengths. Sigma had the beautiful 14mm T2 FF and 20mm T1.5 FF. These were lenses that I always added to the top of my equipment list whenever I was doing a commercial. They were very helpful, especially at the beginning of the Full Frame wide angle trend in commercial filmmaking.

What are the next trends?

I was interested in flares a while ago, but now I do not like them so much. It's funny, I think flares were in fashion because of feedback from the set: make it happen because otherwise it was not "cinematic" enough. But those trends change all the time and it went on to anamorphic. Today, I feel that we're after wide angle scenes and also sharper images. We are no longer afraid of clarity. *Disclaimer* and *Tár* are good examples.

Sometimes, a defined and modern look in cinematography with modern lenses is something to enjoy and not be afraid of. It's just the way we use those lenses and light the scene. Recently, I enjoy capturing natural looking images.

As with fashion trends, the pendulum swings from one style to another, from one extreme to the next.

It is always moving. Sometimes I use vintage. It depends on project. When I first started using modern lenses, it was almost prohibited. People were afraid of using digital cameras and contemporary lenses together.

As cameras get higher resolution sensors and more advanced technology, the images actually seem to appear smoother, with fewer digital-looking artifacts and less pointillism that the older "vintage" lenses tried to hide.

Actually, images now look more interesting than they did before. We don't have the same surprises as the first time we used HD cameras, where you needed more light and more makeup. So yes, I can capture beautiful images with the Sigma Aizu Primes and I'm super happy with them.

How would you describe the look of the Aizu Primes?

It's really difficult to talk about lenses because there's the reality of the technical aspects, but also the impression that they give you and then the combination of subject, lighting, framing, composition, size and distance. There is always a different chemistry through the same lens. The color is amazing as well. The Sigma Aizu Primes are excellent choices for cinematography, for sure.

But when describing Aizu Primes to our colleagues, if you say "sharp," some people might get scared. Especially in France where I always hear the dreaded words "break the image."

Especially in France. It is funny. It's different and difficult to describe in words how an image looks. The imagery through these lenses can be epic. They can be very human and perhaps sometimes very humble—as in our film: all those faces, closeups, people hugging and kissing.

That's important because maybe 90% — or at least the majority of most movies are actors and faces.

Yes, exactly. When filming starts, I'm free. There are many things going on behind the camera, but I always feel something very beautiful and magical happening in front of us on set. I hope in the end I can be really proud of presenting our Aizu Prime Line short film *ABOUT LOVE*.

Rather than trying to describe the lenses, the images speak for themselves.

Yes, without judging anything, I tried to capture emotional scenes happening in front of us. And then we will discover the results together while watching the images on screen. But, for sure, I was amazed by what we could achieve through these lenses and I'm really happy with the look they contributed and the images they provided.

How did you get into the film business?

I was born near Osaka. We moved to Okayama, which is in the countryside and didn't have movie theaters. I attended boarding school for six years, beginning at age 12. For me, the movie industry was something very remote.

My Dad gave me my first still camera when I left home in 2000 to attend Keio University in Tokyo. I studied Japanese and French literature and wasn't into photography yet. But, as soon as I arrived in Tokyo, I watched movies in the theaters of Shibuya. That is where I discovered many independent European movies.

After graduating from Keio, I wanted to study filmmaking in Paris. I enrolled in ESRA (École supérieure de réalisation audiovisuelle — a private film school in Paris) in 2004 and graduated in 2007. We learned about budgeting, production management, the work of the First AD, doing sound, and so on. Almost everybody wanted to be a director, but I was very focused on cinematography. My first camera there was an Aaton XTR Prod. Soon, I became the guy doing the DP work for most of the other student films. ESRA was also a fantastic place for me to learn French because almost nobody spoke English or Japanese.

How did you get your first jobs after film school?

I was an intern at rental companies in Paris. Then I met Phillippe Guillemain at RVZ Rentals. He was always helping me out to learn everything. I became a lighting trainee, camera trainee, camera AC. At the same time, I was always doing student films, event videos or whatever I could do just to survive as a DP.

When the financial crisis arrived in 2008, the economic situation was uncertain, as it is now. That was also the time when RED ONE and Canon EOS 5D Mark II were introduced. New technologies and smaller equipment started to be accepted. That is when I seriously decided to be a DP. I think I was one of the first to use the 5D Mark II on a professional set. I started to find my little space in the new age of digital content. At the same time, I was always dreaming about making good, artistic movies one day. That's how everything started.

Feature / narrative credits of Kanamé Onoyama, AFC include: Say Nothing, Get Millie Black, Inshallah a Boy, Top Boy, etc.
kanameonoyama.com

RVZ's Samuel Renollet on Sigma Aizu Primes

Photo taken with Sigma BF
by Samuel Renollet, RVZ.

Samuel Renollet knows a thing or two about lenses and cameras. Actually, he knows so much, his number is on the FDT First to Call about lenses list. After all, Sam is Head of the Camera Rental Department at RVZ Paris. Before RVZ, Sam was a busy Camera Assistant and Focus Puller.

Sam introduced Kanamé Onoyama to Kazuto Yamaki and RVZ supplied the equipment for the film ABOUT LOVE. Here are Samuel Renollet's comments about the new Sigma Aizu Prime Line:

"From what I've seen and tested, they have a unique look. They are modern lenses but do not feel too modern to me. As a Frenchman, it is difficult to explain that in English. But for me, it's a good mix of what you love in a lens. It's like precision and also character. Especially when you use them wide open, you get a feeling reminiscent of rehoused lenses from the eighties.

"When you stop down, things become cleaner, but not really neutral. It's really a good mix. I think it's what a lot of people are looking for: smooth, almost soft skin tones, not too precise, but with sharp eyelashes and eyebrows. Also, there's good correction of aberrations and good character in the out-of-focus areas.

"The Aizu Primes are a really good evolution from the first Full Frame High Speed Prime cine lenses by Sigma. Those were more neutral and clean. These Aizu Primes definitely have much more character. Especially the way they go out of focus—to me, that's very cinematic. It's not like a photo lens where you have the focus at one place and then it goes out very quickly. Focus fall-off on an Aizu Prime seems progressive on the face. It's not like you have the actor's eye in focus and then everything else goes out of focus really quickly, like falling off a cliff. It's more progressive and more cinematic this way. I feel they are slighlty detuned, perhaps to lose resolution a bit.

"I think Sigma managed to do something that is really the best of both worlds: the best of vintage and the best of modern, what people like in almost every situation. The Aizu Prime lenses have a color rendition that is slightly warm and very pleasing. The wider focal lengths like the 27, 32 and 35 mm are really beautiful. I think that on modern sensors with more resolution, the Aizu Primes work especially well. They're not too precious or precise.

"It has been a while since we had T1.3 prime lenses: ZEISS Super Speeds and ARRI/ZEISS Master Primes for Super35 format. But now, you really feel the difference at T1.3 in Full Frame / Large Format when you put the Aizu Primes on a lens projector and then on a camera. We're not used to it anymore. It's almost another world. The image feels brighter, almost luminous and the way the focus falls off is very gentle. I think the approach that Sigma has taken with the Aizu Primes is excellent."

rvz.fr

35mm Sigma Aizu Prime Wide Open at T1.3

"I see the Sigma Aizu Primes as smooth and gentle, like an Impressionist painting. But sharp where you want sharpness—eyelashes or stars in a night sky where you don't want details to go mushy.

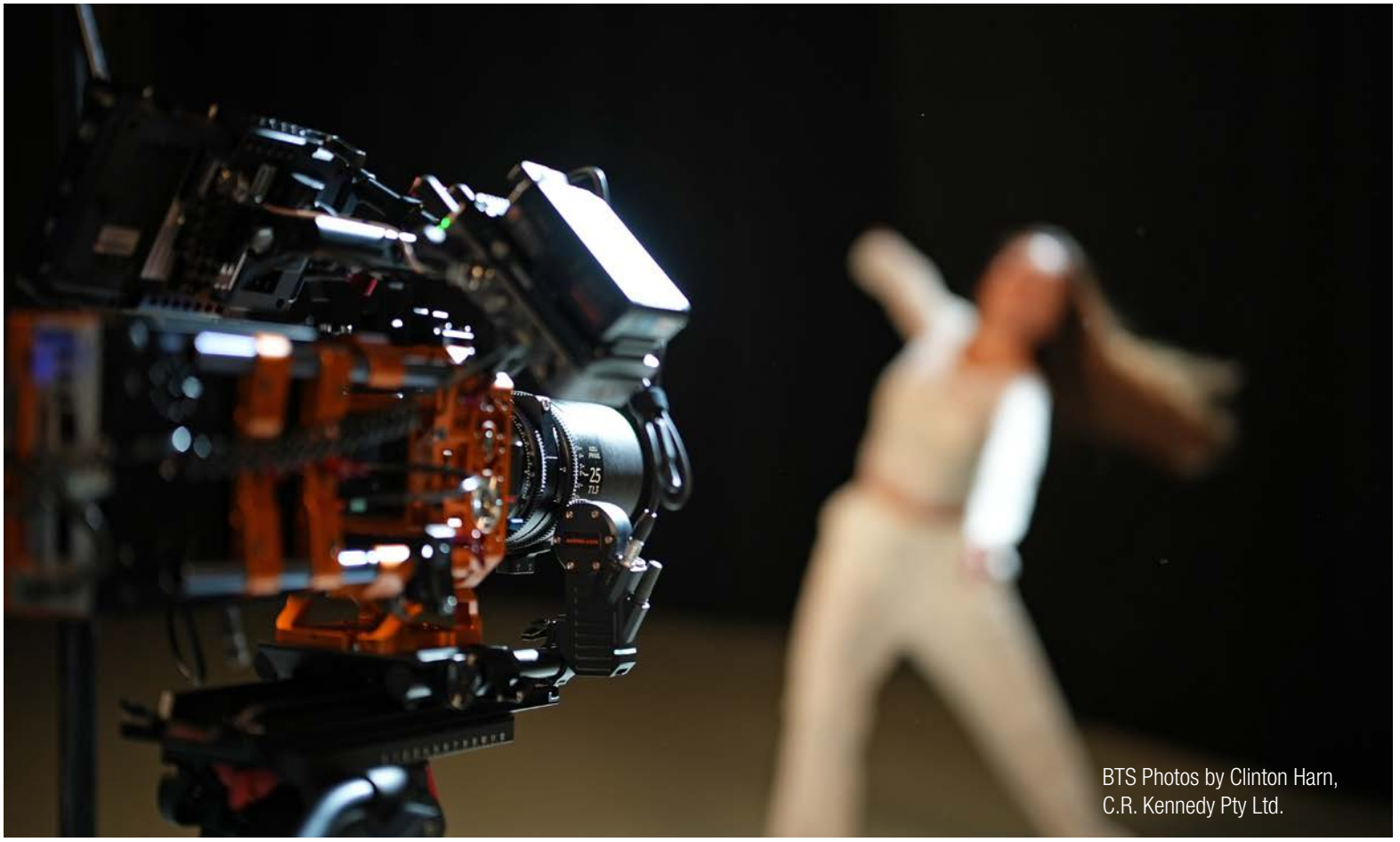
"Filmed with the Aizu Primes, especially wide open at T1.3, the look is painterly, smooth and gentle. Backgrounds sometimes have a swirly out-of-focus character, with beautiful bokeh. At every aperture, skin tones are silky. Faces are smooth and not clinical, with a gradual focus fall-off. Landscapes, trees, flowers and nature have fine detail. And focus is breathless from ECU to far away.

"These images were taken with a 35mm Sigma Aizu Prime wide open at T1.3 on a Sigma fp L camera."

— Jon Fauer, ASC

35mm Sigma Aizu Prime Wide Open at T1.3

Pawel Achtel ACS on Aizu Primes & Sigma 15mm Fisheye



BTS Photos by Clinton Harn, C.R. Kennedy Pty Ltd.

Pawel Achtel ACS started out filming wildlife underwater. These days, he has made his way onshore, filming all genres: features, commercials and music videos. After developing his 9x7 Digital Cine Camera, Pawel has mainly been doing VFX work, background plates and immersive cinema where extremely high resolution and sharpness is required. His production company in Australia is Achtel Pty Limited.

Jon: What were you doing with the new Sigma Aizu Prime Line lenses?

Pawel: I had an opportunity to test them here in Sydney. I filmed a short dance performance piece that required many different camera angles, closeups, skin tones, great detail, and also a lot of motion.

Leading question: what camera were you using?

I was using our 9x7 Digital Cinema Camera (sharp to the edge). It is designed for VFX, VR, IMAX and giant screens because its global shutter 4:3 29.9 x 22.4 mm sensor has 65 million photosites for resolutions of 9K x 7K with very high data rates up to 11 gigabytes per second. (*achtel.com/9x7/*)

How would you describe the new Sigma Aizu Primes?

They are exceptionally well made. These are serious, high-end cinema lenses. They are sharp, with pretty high micro contrast, so details are very nicely rendered. Despite their sharpness they render facial features and skin tones beautifully. The look is very smooth, but at the same time detailed. It's a very interesting balance. It is smooth, but at the same time detailed. It's difficult to describe. When you look at the images, you see what I mean. I haven't done any softening in post-production. The images are sharp at the same time. You can see the detail in the hair, in the eyelashes, but the skin is smooth.

At BSC Expo this year, you told me about a custom lens that Sigma made for your camera.

Sigma very kindly made five 15mm fisheye lenses for me. They are based on the Sigma 15mm F1.4 DG DN DIAGONAL FISHEYE | Art lens, with a PL mount, rehoused and with manual, geared focus and iris rings. This is by far the sharpest lens I've ever tested, of any type, at any price.

What's remarkable is how sharp it is corner to corner, even fully wide open. Yes, it is a fisheye, but it's an equidistant fisheye—pretty much the way we see with our own eyes and essentially non-distorting when displayed on a curved or a dome screen, which is very important for VFX and immersive cinema because you don't need to do extra mapping.

When you go beyond 4K and up to 18K, the lens is exceptionally sharp and resolves up to 400 line pairs per millimeter. I've never seen anything like it.

Why is it so important to have super sharpness for background plates? In VFX work, don't backgrounds often go softer and slightly out of focus because they are, after all, backgrounds behind actors and things that are the objects of our attention?

It's because quite often a small portion of the frame is extracted. Here's an example with our 9x7 camera and the Sigma 15mm fish-

eye lens. Imagine a car driving off a cliff and crashing down to the river below. There are two ways of doing it. One is with a fluid head and long lens and "ready when you are CB." Oops, I tilted down too late. Sorry. Can we crash another car please? Another way is to set up a camera like the 9 x 7 with the Sigma 15mm fish-eye lens that covers the entire area from the top of the cliff to the river below. In post, you track the car's descent digitally from top to bottom. You can crop into less than 5% of the image and still have enough resolution for 4K. It's a dream lens for VFX.

How does a DP like you wind up building a super high resolution camera and working with Sigma lenses?

I studied physics and math at university in Gdansk, Poland and have a master's degree in engineering, which helped me in designing and producing a camera. As an engineer I can fully appreciate the precision and the design of the Sigma Aizu Prime lenses. They are really well thought through. They are very small, compact, lightweight, yet they are T1.3. It's just incredible how they managed to achieve all these things.

There is practically no breathing, no fall off. It's just an engineering marvel. It is a modern look, a very refined look. I think "refined" may be the word that best describes the Aizu Primes.

Sigma Aizu Prime Line Core Set Specifications

Focal Length	25mm	27mm	32mm	35mm	40mm	50mm	65mm	75mm
T-stop	T1.3 -T22							
Close Focus [1]	0.31 m 1'0"	0.33 m 1'1"	0.34 m 1'2"	0.35 m 1'2	0.38 m 1'3	0.48 m 1'7	0.61 m 2'0	0.73 m 2'5
Close Magnification Ratio	1:6.5	1:6.9	1:6.3	1:6.1	1:6.1	1:7.1	1:7.6	1:8.2
Image Circle	46.3 mm							
Front Diameter	95 mm I 3.7"							
Lens Mounts	PL Mount, Sony E-mount							
Length with PL Mount [2]	125 mm 5"	125.4 mm 5"	128.5 mm 5.1"	128.6 mm 5.1"	128.8 mm 5.1"	126.3 mm 5"	125 mm 5"	128.1 mm 5.1"
Length with Sony E-mount	159 mm 6.3"	159.4 mm 6.3"	162.5 mm 6.4"	162.6 mm 6.5"	162.8 mm 6.5"	160.3 mm 6.4"	159 mm 6.3"	162.1 mm 6.4"
Weight with PL Mount	1.7 kg 3.6 lb	1.7 kg 3.6 lb	1.7 kg 3.7 lb	1.6 kg 3.6 lb	1.6 kg 3.5 lb	1.7 kg 3.7 lb	1.6 kg 3.6 lb	1.7 kg 3.8 lb
Weight with Sony E-mount [3]	1.7 kg 3.7 lb	1.7 kg 3.8 lb	1.8 kg 3.8 lb	1.7 kg 3.7 lb	1.7 kg 3.7 lb	1.8 kg 3.9 lb	1.7 kg 3.7 lb	1.8 kg 4 lb
Angle of View LF Open Gate [4]	72.6°	68.4°	59.7°	55.3°	49.3°	40.3°	31.5°	27.5°
Angle of View Full Frame [5]	71.5°	67.4°	58.7°	54.4°	48.5°	39.6°	31°	27°
Angle of View Super 35 [6]	52.9°	49.5°	42.5°	39.2°	34.6°	28°	21.7°	18.9°
Focus Rotation	270°							
Iris Rotation	70°							
Number of Iris Blades	13							
Lens Support Foot	SF-61							
Protocol: PL Mount	Supports ZEISS eXtended Data output (via /i Technology-compatible lens mount or 4-pin LEMO connector)							
Protocol: Sony E-mount	Compatible with Sony E-mount communication protocol, enables transmission and recording of lens metadata to supported camera bodies.							

1. Close focus measured from image plane.

2. Length measured from front of lens to mount flange.

3. Without lens support foot.

4. Horizontal AOV for ARRI LF Open Gate —1.5:1 aspect ratio, dimensions of 36.70 x 24.54 mm.

5. Horizontal angle of view for a Full Frame cine camera with a 1.5:1 aspect ratio, dimensions of 36 x 24 mm.

6. Horizontal angle of view for a Super35 cine camera with a 1.33:1 aspect ratio, dimensions of 24.9 x 18.7 mm.

Sigma AF / Manual Cine Zoom Lenses

Shown under glass at earlier trade shows, Sigma Corporation is expected to reveal additional developments in their AF Cine Line. The new Sigma 28-45mm T2 FF and Sigma 28-105mm T3 FF Zoom lenses join Sigma's CINE LENS series.

As Sigma's first AF-compatible cine lenses, the Sigma AF Cine Line brings the best of Auto Focus / Geared Manual Focus to cinematographers. The AF Cine Line builds on the optical designs of Sigma's Art series photo lenses, described as being "designed and engineered to provide photographers and filmmakers with outstanding optical quality and unmatched creative potential."

The new 28-45 and 28-105 Full Frame Zooms take this a step further, with highly accurate autofocus and manual focus, precise tracking and industry-standard M0.8 pitch geared focus, zoom and clickless iris rings. The lens goes from autofocus and auto iris to manual control by simply sliding a switch. Also unusual and very welcome: manual focus has hard stops and repeatable focus marks. This is not an easy thing to have achieved.

Why do you want these AF Cine Line Lenses?

Picture this. You bought the lens for solo documentary and interview filmmaking. Autofocus has been very helpful and good. So good, in fact, that a producer hires you for a streaming dramatic series with an ensemble cast. Of course you need a focus puller and traditional wireless lens control. You can use the same Sigma AF Cine Line Zoom Lens in manual mode.

Sigma representatives at CP+ and BSC Expo said that they expect "the AF Cine Line, which embodies Sigma's latest technology, to expand the possibilities of visual expression and bring new possibilities to future film production."

The Sigma 28-45mm T2 FF and Sigma 28-105mm T3 FF incorporate the optical designs of the Sigma 28-45mm F1.8 DG DN | Art and the Sigma 28-105mm F2.8 DG DN | Art photo lenses. Manufactured in Sigma's Aizu factory, these lenses deliver exceptional resolution and beautiful bokeh at all focal lengths, along with a clean look and minimal flare or ghosting.

Sigma AF Cine Line	28- 45mm T2 FF	28-105mm T3 FF
Lens Mount	L-Mount, Sony E-mount	
Focal Length	28- 45 mm	28-105 mm
T-stop	T2 -T16	T3 - T22
Diaphragm Blades	11	12
Close Focus from image plane	0.3 m / 1'0	0.4 m / 1'4
Magnification Ratio	1:4	1:3.1
Front Diameter	95 mm / 3.7"	
Front Filter	M82 x 0.75 mm	
Length w L-Mount (front to flange)	151.3 mm / 6"	157.9 mm / 6.2"
Length w Sony E-mount (front to flange	153.3 mm / 6.1"	159.9 mm / 6.3"
Weight	TBD	
Focus Ring Rotation	200°	200°
Zoom Ring Rotation	60°	70°
Iris Ring Rotation	57°	54°
Lens Support Foot	SF-91	

Early prototype of 28-45 shown under glass at IBC 2024, with focus, iris and zoom marks on top. Now they are cine style, on the side.

Angénieux honors Dion Beebe, ASC, ACS at Cannes

Dion Beebe, ACS, ASC on location at Nazaré, Portugal — filming the opening sequence of *The Little Mermaid*

For the 12th year in a row, Angénieux honored a prominent cinematographer at the Cannes Film Festival. Dion Beebe, ASC, ACS received the Pierre Angénieux Tribute on Friday, May 23, 2025 in the Buñuel Theatre of the Palais des Festivals. Dion has won many awards for his work, including a Best Cinematography Oscar and a BAFTA in 2006 for Memoirs of a Geisha. *Additional credits include:* Chicago *(directed by Rob Marshall, 2002);* Collateral *(Michael Mann, 2004);* Miami Vice *(Michael Mann, 2006);* Gemini Man *(Ang Lee, 2019);* The Little Mermaid *(Rob Marshall, 2023); and many more. Dion is currently working on* Michael*, directed by Antoine Fuqua.*

Jon: Congratulations on your Pierre Angénieux Tribute at Cannes. You endured earlier interviews with me — in 2005 for *Cinematographer Style* and last year for FDTimes.

Dion: It's been good practice. Looking back at them, a lot is still relevant. We spoke about film and style.

Let's begin with style. Ralph Gibson recently said that great photographers have a visual signature, a definable style that is instantly recognizable, that sets them apart from everyone else. "I can recognize a Lartigue or a Cartier-Bresson from a hundred feet away," he said.

I think that is more true for the stills photographer with hands on the camera in a very direct way. For the cinematographer we require more participation from the people around us. Our style and approach will also change depending on the material, the story, the script. Your collaborations are so important with all the people you're working with on a set—the director, production designer, costuming, lighting, etc. What becomes important in the journey of making a film is to define your style, to define the atmosphere and the look that you are after. You're going to have to collaborate with a lot of people to get there. Of course, the lighting approach that you have, your use of color or camera movement will become distinguishable to someone who's following the cinematographer's work. But I do think there is a difference between the influence that the stills photographer has over style versus the process of collaborating on a film.

With a stills photographer, it's often one person, perhaps with an assistant, and a small camera. I remember your saying that the camera is only as good as the crew behind it or around it.

Absolutely. I remember when I started on *Memoirs of a Geisha,* I wanted to shoot anamorphic film with the lens extremely wide open for shallow depth of field. I started testing that process; it is incredibly demanding on the focus puller. I can have all of all the best intentions in the world about the style, but if I'm going into dailies and things are soft or important scenes are not registering properly, you really have to adapt to that.

I was very fortunate to have a brilliant team, but you are often only as good as your team. It's not me picking up a camera and pointing it. Sometimes I do not even have my hands on the camera—the camera operators do. It's a dance between all these people to capture images in this sometimes enormously frustrating

process of what we do. If you have a team and a language between them, then you are already ahead before you start.

However, because I started in stills photography, I often fantasize about being out on my own with a camera in my hand and not having to deal with 150 people.

How did you get into film?

I was born in Brisbane, Australia, moved to South Africa. My parents were pretty adventurous. Australian dad, South African mom. One of my brothers was born in the UK, two were born in South Africa and two of us were born in Australia, so they were dragging us around. We bounced around: Zimbabwe for a moment, and then Cape Town. I pretty much did all my schooling there and then left for film school at 18 in Australia.

My dad was actually a dentist, but a frustrated photographer. My mom raised five boys. And then she had a very big career as a makeup artist doing photo fashion work and editorial after she got a couple of us out of the house. Dad set up his practice in Cape Town and he worked in the townships as well. It was assisting him in the townships where I discovered I definitely didn't want to do dentistry.

What was your first camera?

My dad had a range of Pentax cameras and mostly zooms. There was a good bohemian photography arts scene in Cape Town at that time. He was into fashion photography and worked on the side doing headshots for models. I'm not sure if it was the photography or the women, which probably motivated me to do the same thing. You see a guy with the camera getting all the attention. That looked like a profession to try.

Are any of your brothers in the film business?

Yes, Damien Beebe is a director of photography and camera operator. He has operated for me on most of the movies I've done in the UK. Another brother, who we went to film school with me, went into directing and now he teaches in Sydney. Another brother is a metal sculptor. So clearly we all were influenced by our dad's frustration about wanting to be in the arts. So four of us ended up "without real jobs."

Being honored at Cannes surely beats working for a living.

It's been a long time since I've been there. I went with my first film. I had two shorts that screened at Cannes when I was still in film school and then my first feature film, *Crush*, directed by Alison McLean was accepted in competition. I don't think it really registered how amazing that was and in the end it was my wife who insisted I go. It was pretty inspiring to step into that world as a 24 year old filmmaker.

Since you're at Cannes receiving the Pierre Angénieux award, it would be nice to talk about their lenses. Ironically, some of your predecessors said they didn't know Angénieux had a long history making primes nor did they use zooms.

've used zoom lenses since I started, always being an important part of my package due to their versatility. Starting out at AFTRS

Dion Beebe, ACS, ASC honored at Cannes. Photo © Pauline Maillet.

(Australian Film, Television and Radio School) in Sydney, and graduating to low budget Australian features, being able to move fast and efficiently was essential. Our crews were small and we were shooting movies in weeks not months. When we could afford it, the object of desire was always the Angénieux 10:1 35mm format zoom (25-250) which is an incredible lens. I could seldom afford to have it for the entire job so we would often rent it as needed by the day because as a line item, it was too expensive for these one million dollar movies we were making.

It seems a large part of the business is heading back into that direction, especially streamers and series from all over the world, budgeted at a million dollars.

It is interesting. Everything is on the table right now in terms of production and budgets. The contraction of streaming has meant that everyone's had to really step up in terms of how they're going to meet the demand. The days of making anything and everything with unlimited budgets are behind us. We're at an interesting juncture because there's still a huge demand for content and it has opened up to the world in terms of who is making that content and where it is being made. It's an interesting time and having a son coming into the film industry at this point in time is exciting, challenging and definitely interesting.

Are you still using zoom lenses on your current jobs?

Yes. I'm currently working on *Michael*, which is the Michael Jackson movie. We've been doing a lot of arena concerts, set pieces, songs of Michael's, and the Angénieux 12:1 (36-435 mm) is absolutely essential. When there are a thousand extras in the crowd and you're trying to shoot as efficiently as possible with complex lighting cues and performance on stage, the flexibility of something like the 12:1 zoom is something that I end up relying on quite a lot.

My current package includes two of the 12:1 Optimo Zooms. I also use the Angénieux EZ Zoom series. They are very lightweight and go on Steadicam and handheld setups. They're very compact, lightweight, and have amazing close focus. They are incredibly versatile: you can adapt them to Super35 or Full Frame. We carry the EZ 1 (15-40) and EZ 2 (30-90). The movie covers 3 decades of Michael's life.

What cameras are you using?

We're on the VENICE 2 for *Michael*. When I'm in handheld newsreel mode, I've been shooting a lot of 16mm on a little Canon Scoopic.

Wow. I remember those 100' daylight spools.

Yes, the little daylight loads. It's funny, we've been trying to mess up some of the B-roll 16mm footage. We opened the camera door and tried to get light leaks onto the film. But it was difficult to get any random light onto the negative unless it was coming directly through the lens. It's crazy.

They did a good job making that camera. And the daylight spools.

I assume you use a zoom lens when you have to work quickly or you have a lot of setups, as opposed to primes. However, some people say they still prefer prime lenses in those situations.

However, do primes slow you down?

Absolutely. A zoom allows you to change and adapt to varying situations. A lot of movies that I do have a lot of action or are quite kinetic. I'm often into four or five camera setups and there's an an energy and a chaos that comes with that. The big zooms are really handy for capturing that action.

I know Roger Deakins's feelings on zooms and that he is reluctant to change the focal length in order to get a tighter shot. He is very much about primes and moving the camera if you want to get closer. That's absolutely a relevant way to work and there's a discipline to that. Yes, you can stage action and do it in a very choreographed way.

But if I'm working with Doug Liman or Michael Bay, there's a energy on the set that you have to capture and adapt to. Otherwise, it can become a bit of a freight train, this slow moving thing where every time you've got to change your setup or swing a lens everything grinds to a halt. Whereas some directors just want to roll. No waiting. As the cinematographer I want to be able to deliver and capture that energy. So you want that ability to be able to crash in on the zoom, follow the action and fuel a lot of that chaos and energy on a set.

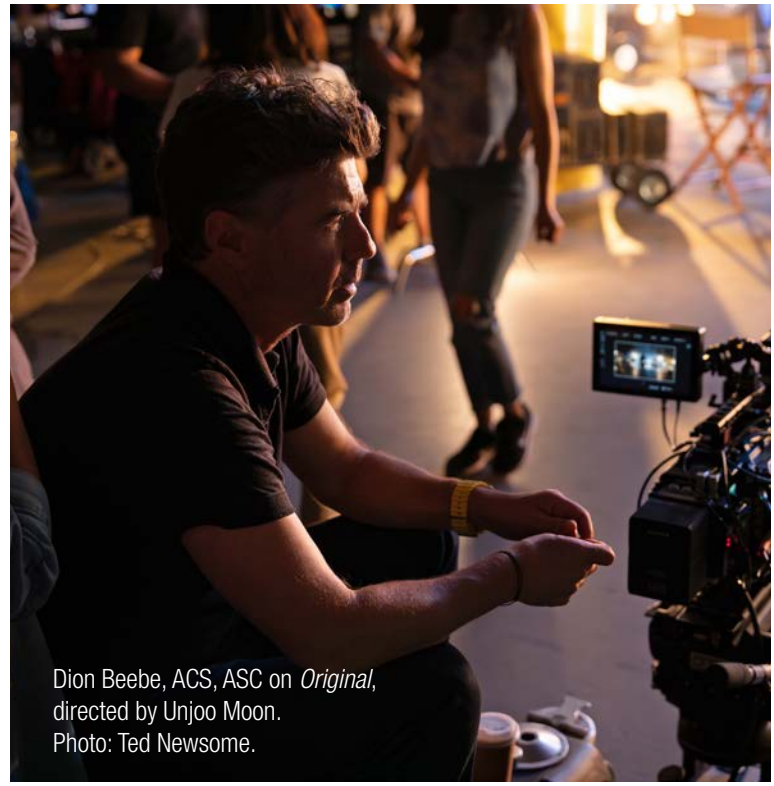
It is not just about convenience. Yes, the zoom lens is a convenience, but it's about momentum on a set. It's about an actor in a very emotional scene and you want the closeup, but "Hang on, give me a moment. Let me change the lens, hold that emotion, hold that thought, give me five minutes." And the director is on set having an emotional moment of their own.

These are concepts beyond not having discipline and changing your lens size because you can't be bothered to move the camera. I'm sure that happens, but if you know you're going into heavy action, which is tightly choreographed or not, or loose and random, then yes, I absolutely will use zooms to make sure I don't miss the moment.

I've been on set many times where a scene suddenly becomes very emotional, the actor starts to go into a performance that none of us were expecting, and I'll get on the zoom control and slowly tighten up the shot because now you've got something special happening. At that point, the actual focal length of the lens is unimportant. What matters most to me is getting the performance. It's no longer, "Oh, I can't do that because I would never be on that focal length." It's like "Get the performance." As much as we cinematographers want to control those aspects and choices, there are moments that will and should overwhelm those choices, especially when comes to performance.

That's a very articulate and interesting explanation of zooms. But they are not necessarily documentary style?

No, not at all. Everyone knows you put a zoom on a camera for a documentary because you often don't control the situation. If you are in a very fluid and changing environment, stopping to change a lens is a problem. And we are now in this amazing place when we shoot digitally where we can roll for an hour without cutting. These tools help create very fluid environments on set for actors and directors. Sometimes those tools can be abused, like, the camera keeps rolling in the hopes of catching something. But it can also be magical because suddenly you keep rolling and you watch the actors finding a place and something does evolve



Dion Beebe, ACS, ASC on *Original*, directed by Unjoo Moon. Photo: Ted Newsome.

because you're allowing that process to develop. Bringing those flexible tools like a zoom lens and digital cameras have transformed documentary filmmaking. We can now roll for an hour and suddenly things will happen in the frame. You're not in the changing bag desperately trying to load the film in the middle of some amazing moment.

In one of our interviews you quoted Gabriel Bauer, inventor of the Moviecam, saying a camera is just a box with a lens on it. Cameras and lenses are tools. The question is: what are we looking at, what are we trying to achieve? What are we trying to capture? What is the essence of this moment? As the cinematographer, certainly my thought process is how can I help achieve that moment?

On *Memoirs of a Geisha*, which was filmed with anamorphic prime lenses, with super shallow depth of field, the approach was very disciplined and could not be random. Everything had to be art directed and every frame had to be carefully considered and lit. Compare that to something like *Edge of Tomorrow* or *13 Hours: The Secret Soldiers of Benghazi,* directed by Michael Bay, where there's a kinetic energy of those movies. If I had approached them in the same ways as *Memoirs*, it would have been a disaster.

I see that as an important part of the collaboration with the director—guiding the story with the right tools. If it is right to be on primes, keep a distance and be more observational, then fine. It's often much easier to be in these carefully considered frames then dealing with the chaos of 360 degree action with multiple cameras.

If you're on multiple cameras, are you operating one of them or how are you adjusting the zooms?

I came up operating my own camera in Australia. That's how you did it. And it was important to me too, because coming out of stills, composition has always been very important. As I started


Photo: Gordon Dooley.

working in the US and the films got bigger, that didn't really make sense anymore. I still occasionally get on a camera and when I'm shooting smaller things, I will operate myself, but with the bigger features, it allows me to be with the director more and to stand back and look at what the cameras are getting. If one of the cameras is on a zoom I will sometimes run the zoom control to my monitor and use that to enhance movement or imperceptibly zoom in on a performance.

Or I will communicate with my operators via headset and make super subtle adjustments during a take, making sure not to draw attention to the zoom. Communication between all members of my camera team is key as we all need to be working in synchronicity, wether that's complimenting movement or composition or timing a focus pull, we all need to be on the same page.

And the dialog about vintage lenses versus modern lenses?

We've reached a point where the camera systems are capturing at such a high resolution and in a lot of different formats, whether we're Super35 or Full Frame, that I do understand how looking at lenses as a way to manipulate the image now has become the cinematographer's go-to way to influence the look, feel and tone. You're capturing so much data. It's brilliant and amazing.

But then if you want soft highlights or you want to fall off here or there, or you may want to even feel a bit of the vignetting with the lens, or you're reaching for an older style or feel—then, yes, vintage glass has become very popular as a way for the cinematographer to manipulate the image. It also goes to the fact that with digital processing and grading there is so much post-production influencing the image that cinematographers try to do what they can up front. Often, that means turning to vintage glass to do it.

I will say that the Angénieux Optimo Primes are really interesting because those primes are adaptable. You are able to change elements inside the lens. Take a set of Angénieux Optimo Primes, which is some of the best glass you're going to find, but maybe it's a little too clean for the look you are after on a particular film. Maybe you're looking at something that's period and you want to lean into a different look. Being able to adapt those lenses, whether it's about changing the vignette on the lens or altering the depth of focus, those sorts of things are becoming more and more appealing to cinematographers when we are putting our packages together.

Sort of the way Dan Sasaki is doing at Panavision? Only now, almost any rental house can adjust the look of the lens like a bespoke tailor to the DP.

Exactly. You take the lens and you customize it. Angénieux are doing that by letting you drop filters in the back, or add a different optical element inside, or changing the iris. These are the tools that cinematographers are reaching for right now. Rental houses really need to make that a valued service right now. They've got to be like, "This is your system. Take this out, put that in, mess with them a little," and that's what cinematographers want. They don't want to hear, "Oh, well, you can't touch that, and that's going to throw everything off." They want to be able to mess with the lens because everyone wants their own look and feel. Not everyone really understands the potential of the Optimo Primes.

Do you want this customization available on zooms as well?

The thing about those Angénieux zooms is that they're so well engineered, they don't breathe. When you do a subtle zoom into an actor during a scene and I've used a lot of focal lengths on a zoom to emphasize a closeup that maybe wasn't planned. So having a lens that doesn't breathe, that holds focus in those situations is absolutely critical. I don't think anyone really wants a zoom lens with too much character because you're not necessarily trying to draw attention to the fact that you're on a zoom unless you can use it to emphasize action or use it in a kinetic way. But most of the time you are supplementing your primes with the zoom.

Getting back to the original topic of individual style, when you're up for a movie and you talk to a director, do you think they see a style that flows through all your work?

Probably every cinematographer has a style. We have techniques that we probably lean on in different situations and types of lighting. I struggle to identify it, but then maybe that is because I'm in it.

Style may be unconscious but apparent to others?

If you put an object on a table and give 50 people a camera, everyone's going to photograph it differently. But if you looked at one person shooting an object over a period of time, you would probably see them doing a similar thing. I might be going low on the table or Wes Anderson would keep going into a bird's-eye view.

I would say that your style involves interesting camera moves, bold lighting— smooth operator.

Movement probably is a big part of the language that I enjoy. Sure, I've done my share of static framing. But I do see movement as being an important part of the language of the movies I do.

For more information about the Pierre Angénieux Tribute and Angénieux lenses: angenieux.com

In the US: Band Pro / Angénieux Americas — bandpro.com
At Cine Gear booth 031.

Angénieux honors Eunsoo Cho at Cannes

This year at Cannes, South Korean cinematographer Eunsoo Cho is being honored with the Angénieux Special Encouragement Tribute.

Jon: Someone once said, "Cinematographers are like the shadows in an image."

Eunsoo: Just as adding shadows to a painting gives it depth and realism, cinematographers make a film come alive with light and shadow.

Please discuss your approach to the style and look of a film.

After reading the script for the first time, I write down my initial impressions. After a day or two I read it again, imagining how the scenes would look and take more notes. Every few days I repeat this process and refine my ideas. Based on my notes, I start doing research: watching films, collecting reference images, listening to music. As the collection grows, my visual concept for the film takes shape. This process naturally evolves along with conversations with the director and other departments.

I draw inspiration from a wide range of arts—films, photography, painting, literature, architecture, video games and music. Recently, I've been especially drawn to paintings for their color and mood. They often help me find emotional tones and composition.

Are there differences in style and approach between working in Korea, the US and elsewhere?

My approach stays the same. The difference comes more from the individuals I work with and the specific conditions of each production such as budget and schedule.

How do you choose lenses for a job?

Once I have refined the visual concept for the film I start researching lenses that would serve the aesthetic we are aiming for. I select a few candidates and compare their characteristics such as flaring, contrast, their way of handling skin tones, along with availability and cost. I do lens tests with the two or three top options and then make a decision.

Have you filmed with Angénieux zoom or prime lenses?

I have worked with Angénieux zoom lenses on two films. On *I Was a Simple Man,* we used the Angénieux HR 25-250mm zoom. The HR zoom matches vintage primes well. One memorable shot was of the old man and the ghost of his late wife walking on a bridge over the ocean. We positioned the camera far away on the beach and the lens captured the mood very nicely. The other film was *The Victims*. We had several scenes where I mimicked the look of a news camera, cell phone and surveillance camera. The Optimo 16-40mm zoom was ideal for that task.

Tell us more about your career.

I studied cinematography in Korea and the US and have shot over a dozen short films, many of which screened at numerous film festivals. For about five years I worked as a multimedia manager at Good Neighbors, a non-profit organization, producing campaign videos in areas needing humanitarian support. I was lucky to have shot projects not just in Korea but also in the US, Malaysia and China. I love traveling and welcome the challenges of working beyond familiar environments.

I feel incredibly lucky because I truly love what I do. It can be demanding, both physically and mentally, but I find a lot of joy in the process. I especially value the camaraderie on set and the sense of creating something together. I am excited to keep col-

L-R at Cannes: Dominique Rouchon, Managing Director, Angénieux Int'l Sales & Mktng; Eunsoo Cho; Ji-Min Park. Photo © Pauline Maillet.

laborating and telling stories through images.

How did you become a DP?

As a child, I watched a lot of movies. I wondered how, some day, I might be able to work with my favorite directors. "Oh, cinematographers work very closely with directors, so I'll become one," I said. I focused on cinematography at the Korean National University of Arts in Seoul for four years then spent three more years getting my Masters Degree at USC School Of Cinematic Arts.

Where did you work after graduating from USC?

I worked on a few indie films as a grip and electrician and then as a DP on some corporate videos. I also worked in Korea as a B camera operator. I went back and forth. Then I met my husband on set. We got married and moved back to Korea. He's also a cinematographer.

Your cinematography on *The Last of the Sea Women* was beautiful. *(It is a 2024 documentary about the amazing haenyeo fisherwomen on Jeju Island, South Korea who free-dive for seafood.)*

Thank you. A cinematographer friend called me one day saying that an American production was looking for a female cinematographer who would work on a documentary. I had a Zoom meeting with Sue Kim, the director and then another meeting with people from Apple TV and A24. They decided to bring on two DPs with two different personalities and backgrounds: Iris Ng and myself. Iris is an experienced documentary filmmaker. I think we worked really well together—one documentary DP and one dramatic DP.

I guess it was important to have two cinematographers with whom the haenyeo women would be comfortable?

That was actually Sue's requirement. She wanted everyone on the crew, from day one, to be all female. Only the data manager, sound recordist and underwater DP were men.

Why did you decide to do this documentary mostly with primes rather than with zooms?

At first it was a challenge. But we liked the idea. It's a different approach. With a zoom, I feel like I should be changing the focal lengths to adjust the distance between the subject and myself. With primes, I have to move to change the physical distance. It feels very natural and provides continuity within the scene because it's the same perspective.

Since there were two cameras, one was on a wider angle and the other was telephoto. We had zooms for the longer lens setups.

It felt calm and more dramatic than documentary in a way.

We took enough time to stay in one place and we'll at each other, nod and then switch positions.

Tell us about movie production in Korea.

During Covid, it was insanely busy. Everyone I know worked. But last year, the number of productions dropped. Now there is a backlog of many movies that were done during that time and are now sitting in storage waiting for distribution. That kind of stopped production on big budget films. What's interesting is that now they're making a lot of low budget movies and micro movies, because the studios see low budget films as consistently profitable.

How does that work?

The movie is released in theaters first. Then they go to streaming companies and on demand platforms. I hope that does not sound as if there is no risk in making low budget films. There is always risk.

Up until about two years ago, many crew members had shifted to series work with cable television and streaming platforms, as those productions were rapidly expanding. But now, with streaming services scaling back and film productions still scarce, overall job opportunities in the industry have noticeably declined. Box office performance remains low, which discourages investment in new films. But people are still trying to make films even if it means with a much tighter budget. I think people still believe in the work and so do I.

Typically, does equipment come from rental companies, production companies or crew members?

Mostly from rental companies. There are a few large ones and many small ones. They have a large amount of good equipment.

Some credits:

- *Killing time (feature)*
- *The Last of the sea women (documentary feature)*
- *News From Nowhere: Freedom Village (short)*
- *I Was a Simple Man (feature)*
- *Victim(s) (feature)*
- *August at Akiko's (feature)*
- *Haerwha (English title: Love, lies) (feature)*
- *Hyup-nyeo (Memories of the Sword) (feature: B camera)*

Easyrigs for Camera, Sound and Light

Jayme Roy with Easyrig Boom at left; Adriano Roy with Easyrig Minimax and C400 camera at right.

Above: Jayme Roy with Easyrig Boom in low mode.

Easyrig crew at HQ in Umeå, Sweden with Boom Rig for audio at left and for lighting at right.

Jayme Roy has been bouncing back and forth between camera and sound for many years. After all, the Roy family are famous filmmakers: Richard (dad) in documentaries, Marc (brother) is a sound recordist, and Adriano (his son) is also a DP. Jayme's long list of credits include 87 episodes of *Ancient Aliens*, *Stories from the Cutting Edge of Recorded Music* and documentaries with Michael Moore.

With that much work and so many hours handholding a camera or balancing a boom pole while mixing audio with the other hand, having an Easyrig really helps. By now, everyone knows about Easyrigs (Minimax, Cinema 3, Vario, etc) that have saved the backs of thousands of camera operators worldwide.

Now, Johan Hellsten and the happy crew designing and building Easyrigs in northern Sweden have come up with the Easyrig Boom Rig for microphones and lights.

Pontus Jonnson explains, "It's the same rig. We've made no changes to it whatsoever. You can hang a light fixture on the boom instead of a microphone. But, we recommend that you remove the mixer holders if you're just using it for lights."

Jayme Roy said, "The new Boom Rig is different from the Easyrig for Cameras. The Easyrig Boom Rig articulates from just behind your head, about shoulder height, sort of where a Buoyancy Compensator Device would go if you're a scuba diver. It pivots for regular or low angle boom pole work. Especially on reality shows, where they just keep on rolling, I can even hold the boom with one hand and mix audio with the other. I use the Easyrig counterweight to balance the boom, which further reduces the strain on my body. It's hinged at the point where you can pivot up and down and it articulates so you can key forward and back about 6 to 8 inches. That allows you to get the microphone from one person to the other with your boom.

"You can pull down the lower arm and attach it to the hip belt of the Boom Rig, you can then walk around freely without worrying that the upper arm will bang someone in the head. They call it the "coffee break loop." When you're ready to go, it just unhooks and you're up and running, ready to roll sound."

Worldwide: *easyrig.se*
In the US: *16x9inc.com*
At Cine Gear booth 031

Naoki Sakakibara on *La Grande Maison Paris*

La Grande Maison Paris *is a Japanese feature produced by TBS Sparkle and distributed by Toho and Sony Pictures Entertainment in Japan. The film opened theatrically in Japan and France in December 2024 and January 2025 respectively The story is a sequel to the television series* La Grande Maison Tokyo *(available on Netflix) and La Grande Maison Tokyo Special.*

Ayuko Tsukahara directed La Grande Maison Paris. *Takuya Kimura continues his role from Grande Maison Tokyo as beleaguered chef Natsuki Obana. (He had his hair dyed blonde in honor of real-life Chef Kei Kobayashi.)*

This interview took place in February at NAC Rentals in Tokyo. Yasuaki Mitsuwa (Manager of Global Sales & Business Development at NAC) set up the discussion and did the translations. Thanks also to Tomohito Kanamaru (NAC Rentals), Arato Ogura and Masako Misaki (ZEISS Cine Asia / Oceania). BTS photos by Arato Ogura.

Jon Fauer: Because *La Grande Maison Paris* has not yet been released in the United States, I watched it at Toho Cinemas in Hibiya. The cinematography, faces and food are beautiful. I was interested because here in Japan "Film and Digital Times" has sometimes been called "Film and Delicious Times" because of comparisons I make between food and filming, cinematographers and chefs.

Jon: How did you get started as a cinematographer?

Naoki Sakakibara: When I was a kid, I liked watching movies and TV dramas. I didn't expect to be a cinematographer and my first job was completely different. After I graduated from high school, I mainly worked restoring cars with spray paint.

After some years, I realized that was not my life's ambition. My desire was to work in the film industry. So I entered film school: Nikkatsu Visual Arts Academy in Tokyo. It is run by Nikkatsu Studios at Chofu, one of the biggest film studios in Japan, about 30 to 40 minutes to the west of downtown Tokyo. Toho Studios is also located nearby. I spent two years there. We learned both technique and theory. They had good equipment, including ARRI 16SR3 film cameras and many video cameras.

After film school, I worked as a trainee at NAC Rentals from 2006 to 2007. I still remember the ARRIFLEX 16SR-3, 535B, 435, and others. Then, I joined a company and worked as a camera assistant for 12 to 13 years. My first big job as a DP was a TV drama series.

How did you join the *Grande Maison Paris* feature production?

I was hired by Ayuko Tsukahara. She is a very popular director. We had already done several other projects together.

Did you shoot the series *Grande Maison Tokyo* as well?

No. *Grande Maison Tokyo* is the original TV drama series produced in 2019 by TBS *(a studio across the street from NAC Camera Rentals where this interview took place)*. The two-hour sequel episode was released last December. It is the story about how the team of *Grande Maison Tokyo* decided to go to Paris. It aired a day before the release of the feature film *Grande Maison Paris*. I shot that sequel as well as the feature film.

Naoki Sakakibara on *La Grande Maison Paris*

Photos: Arato Ogura

Where did you shoot *Grand Maison Paris*?

We were in Tokyo and Paris. The restaurant set was at Toho Studios. I stayed in Paris for 3 weeks and the actual shooting was maybe 10 days. We had many exterior locations and the interiors of a fancy restaurant. And then we worked in Tokyo for one month — about 20 shooting days. The sequel TV drama started in Tokyo on January 10, 2024. And the feature film started in February. We flew to Paris and started there on February 25, 2024. I remember it was very cold in Paris, colder than Tokyo.

How did you decide on cameras and lenses?

We had two Sony VENICE 2 cameras and ZEISS Supreme Prime lenses. We recorded 6K Full Frame, X-OCN ST at 24fps, 1.85:1 aspect ratio. We brought the cameras, lenses, Steadicam, slider and Ronin from Japan. We rented some support equipment locally in Paris. I didn't use filters on this the project except for the built-in internal ND filters of VENICE 2 which were very helpful.

For this project, it was very important to shoot food beautifully. I chose the lenses from that point of view. We had one set of ZEISS Supreme primes that we shared between the two cameras: 18, 21, 25, 29, 35, 40, 50, 65, 85, 100, 135 and 200 mm. Some scenes on location were filmed with longer focal lengths.

We also had ZEISS CZ.2 Compact Zooms: 28-80mm and 70-200mm. I also brought an ARRI Macro 100mm. We were often wide open, with the Supremes at around T 2.2 for shallow depth of field.

How did you decide on NAC Rental to supply the equipment?

When I worked at NAC Rental as a trainee, Key Account Manager Masaki Honda was my workmate at that time. He knows a lot about cameras and lenses and always helps me to arrange the appropriate gear for each project.

Do you operate the camera yourself?

Yes. I operate the camera and also do the Steadicam work. I actually own the Steadicam Archer2 with Volt. I also have some additional equipment.

Yas Mitsuwa from NAC added: Now, more and more DPs have their own equipment. It's getting popular in Japan.

What were your references for the look and style of the film?

One of our references was the Netflix documentary series *Chef's Table*. Their food cinematography looks beautiful, fresh and delicious. Although our film is a drama, I tried to have a kind of documentary style. I used an OConnor 2565 fluid head and a Solid Grip Systems Twindolly slider to move the camera smoothly.

When you operate, do you use the eyepiece or a monitor?

I normally use the viewfinder. With the slider system, I use a monitor but most of the time I prefer the viewfinder.

Let's talk about lighting.

In Paris, we used natural lighting from the restaurant as well as Aputure spot and tube fixtures. We shot on a day when the res-

Focus puller Yusuke Shimada.

taurant was closed and had to complete all the filming within that one day. I diffused the light with large frames of diffusion. I work in a typical Japanese film shooting style. We have a lighting director who takes care of lighting. The DP mainly takes care of the cameras. We discuss how it should look. Typically, the director takes care of the acting—actors and actresses, as well as the style, art and set design.

There is a Japanese chef who was the first to get three Michelin stars in Paris. His story is actually the model for this drama. We went to his restaurant in Paris. It is named "Kei." In the later part of the film, there is a scene where French course dishes are served. These were cooked by Kei Kobayashi and also filmed in his restaurant. He also has a restaurant in Tokyo, "Heritage by Kei Kobayashi" on a high floor of the Ritz Carlton hotel in Tokyo. They even have a special "Grande Maison Paris" menu based on the movie. *(Of course, Film and Delicious Times tried to make a reservation but it was fully booked.)*

Who did the food preparation in the studio in Tokyo?

The food in the film *La Grande Maison Paris* was supervised by Mr. Kobayashi. The dishes filmed on set in Japan were prepared by staff from Hattori Nutrition College. When they built the kitchen set in Toho Studios, it was realistic, but rather small. That limited where we could set up and how we could move the cameras.

What size crew did you have in Tokyo?

The camera crew members included me as DP/Camera Operator, the B camera operator, chief assistant, second assistant (focus), and a third assistant. The third assistant takes care of the media, like a loader did in the film era. They also take care of the camera settings. The chief assistant is a leader of the other assistants. On the set, they take care of the exposure and measure brightness with a light meter. The Japanese system is a bit different from yours. We had on grip for the dolly. And six electricians for lighting. The electricians take care of placing the cutters, gels and diffusion frames. And we have makeup, hair, wardrobe, script, etc.

On location: Place de la Concorde, Paris.

You had a very good focus puller.

Yes. Focus pulling is very important.

How large a crew did you have in Paris?

We were a small crew from Japan in Paris: the director, myself, 2 camera operators, and 2 focus pullers. We had 2 French assistants and one person to take care of the on-set monitor.

Please tell us more about how you achieved the look of the film.

I didn't use filters on the lenses because they would have influenced the sharper images of the food. However, I took great care of the actors' skin tones and softened those images slightly in grading and post-production. Our colorist worked in Baselight and did a good job with that.

I really took great care about how to present the delicious dishes beautifully. I chose the camera and the lenses for that purpose. Also, you probably noticed how the Supreme Prime lenses achieve very smooth and pretty skin tones on the actors. It was interesting—the food had to be sharp but the images of people has to look gentle.

ARRI Camera Companion App (CCA)

Focus Puller with a Hi-5, SmallHD monitor and iPad Mini running CCA. Photos courtesy of ARRI.

The ARRI Camera Companion App (CCA) for iPhone, iPad, and Mac is really good. It provides full (not fool) control of one or many ALEXA 265, ALEXA 35, ALEXA 35 Live, ALEXA Mini LF, ALEXA Mini and AMIRA cameras. Download the ARRI CCA from the Apple App Store. It runs on iPhones and iPads with iOS 16.0 or later, and Apple Silicon Mac computers with MacOS 13 and M1 chips or later. First, try the free demo version for single-camera control, camera menu access, and free Standard and Premium trial periods.

CCA includes a simulated camera or you can connect to a real ARRI via WiFi or Ethernet. Of course, you'll love the CCA and will be ready for a Standard Subscription to control one or two cameras,. The Premium Subscription supports unlimited cameras and MIDI controls.

The ever-popular team of Merten and Dooley were kind enough to take us on a deep dive to plumb the depths of the CCA. Frederic André Merten is a Product Manager for ARRI Cameras. Sean Dooley is Product Marketing Manager at ARRI.

What, When, Where, Why?

Fred: We launched the Camera Companion App to beta testers a while ago and it is ready for official release now. The idea was to have one flexible, wireless and remote control interface for all our modern cameras. A major thing is the app's ability for users to customize and configure it by choosing the functions you need for the camera setups currently in play. The idea came up after talking to many different camera assistants and DITs. Michael Jonas led the initial development and coding. Over the years, we made a lot of additions. Now it is ready with a very powerful feature set.

Two Kinds of Camera Assistants

Sean: The nice thing about many of the camera crews I know is that there tend to be two types. We have assistants who are amazing managers of the team, really focused on pulling focus, and would rather leave fussing with menus to the Second AC or DIT. And then you have the camera assistants who are usually super techy and are the ones who always call us with suggestions.

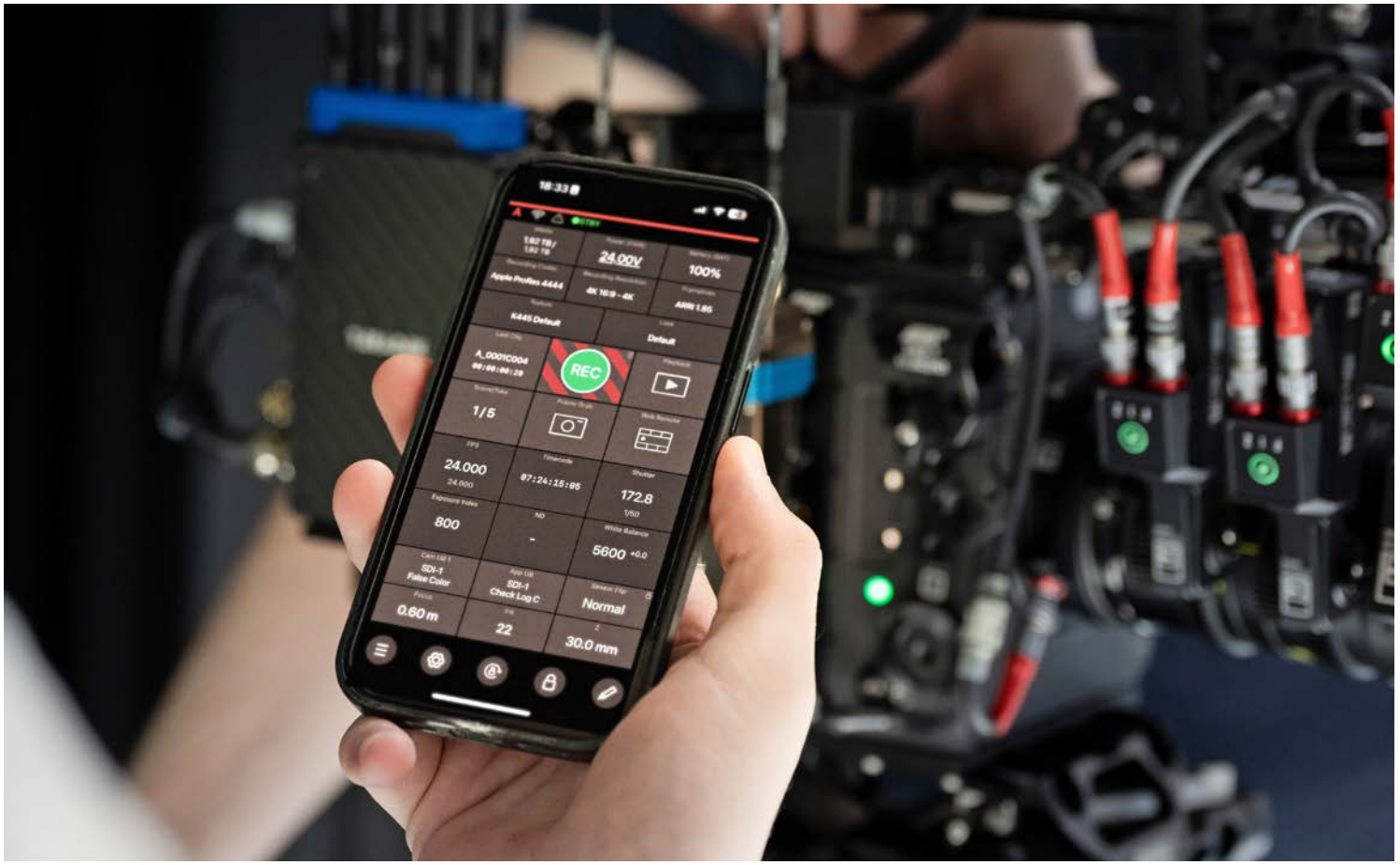
Fred: These are the ACs and DITs who will enjoy controlling the CCA app with a MIDI device. The most useful ones have buttons and knobs to activate and deactivate, for example, a user button or to switch between cameras or to go up and down with an ND filter. The knobs are great for white balance and tint settings. There are many of these MIDI devices, often used for music, and they're pretty affordable. We have tried Loupedeck and Elgato Stream Deck controllers.

Sean: We haven't seen anyone using a Keytar yet, the 1980s keyboard that looks like a guitar. The other thing we want to try is an electronic drum kit that would absolutely work with the app. So this is the challenge to any musical MIDI DIT out there.

Fred: And for non-musical Camera Assistants, a small device such as the iPhone fits in your pocket. You can just take it out, see what the recording media status is, check the battery level of the camera, or change the internal ND filter setting.

Connecting CCA to the camera

Fred: You can use an Ethernet cable if you like, but nearly everyone is using WiFi. It's straightforward to set up. You can have a



CCA running on an iPhone.

large number of cameras on one WiFi network, and the app can see all and control them all.

Working with ARRI Hi-5 Hand Unit

Sean: *(see photo at the top of the opposite page—with the focus puller using a Hi-5, a SmallHD monitor and an iPad Mini.)* The Hi-5 connects via its radio to the camera. The iPad is connected through WiFi to the camera. So, there are two different radios and you could have control from both of them. They work in parallel.

The distinction that I really see there is that the Hi-5 uses a radio with very low latency and it's a very consistent experience with buttons at your fingertips if you need to change anything while you're rolling. The CCA offers a many more different types of settings that you can change, but you would probably want change them while you're in standby or moving to another setup.

Fred: Theoretically, if you were connected by Ethernet, you could also control the camera from a place on the far side of world. Because the CCA uses an IP interface, you can have anything network related in between it and the camera. You could be using a private VPN, and according to the camera and the device, they then look like they're on the same network and it doesn't actually matter where you are.

Framegrabs

Fred: The CCA links its framegrab files app to a file folder on your iOS devices or Mac. Also, that is where all of your other CCA-related files are located—such as custom layouts or project settings. And then, you can share these framegrabs via AirDrop, iMessage, email, etc. It is a great way to send frames directly from the camera to your colorist or the dailies person.

Sean: Another cool thing that I like about the framegrab tool is that you can also apply any of the looks that you have installed on the iPad and preview them. You can see all of the Look Library looks that are included with every subscription for the Camera Companion App. You can toggle on and off the framelines that you had in the framegrab and you can send multiple versions of the same framegrab to your colorist or anyone else. You can view the framegrab in full screen, do A-B comparisons, and more.

Fred: We had thousands of people using the beta version of the app. We got an amazing amount of feedback, and we are very excited now that the full version of the app is out there. We are already planning some exciting updates.

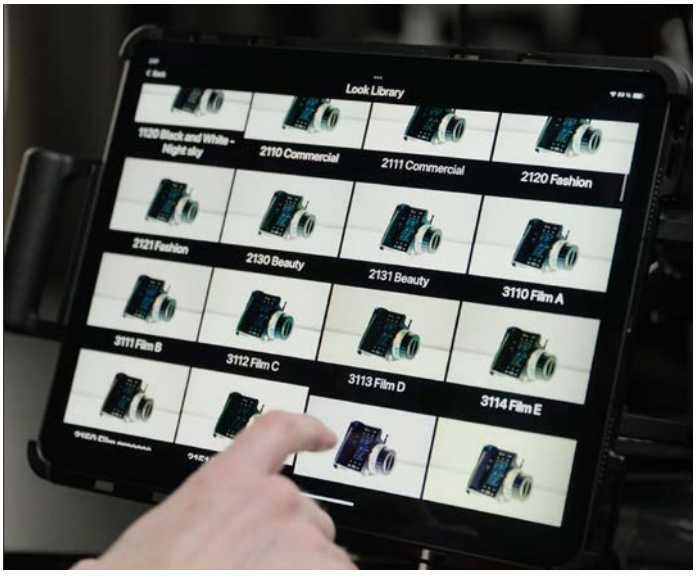
Sean: Even though it took a while, we'd really like to thank everyone's patience and help. CCA is here, now. Even if you don't subscribe, that's totally fine. It's very useful to have in your pocket. With the free version, you can still control every function of the camera with the menu interface. We would also like to reiterate that we love getting feedback about the app. We have a dedicated email address for feedback, user stories, suggestions and BTS photos. We would love to be in contact with as many users as possible. Please contact us about CCA at:
companionapp (at) arri.de

arri.com/CCA
Cine Gear booth S3249 - in Stage 32.

ARRI Camera Companion App (CCA)

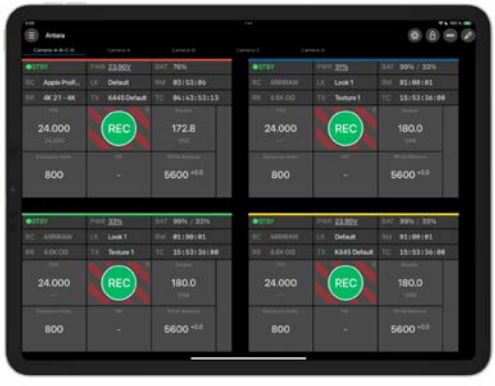
Above: CCA on a Silicon Mac on the DIT cart, connected to a MIDI control device and viewing 4 cameras simultaneously.

Right: CCA on an iPad on a DIT cart with single camera setup.

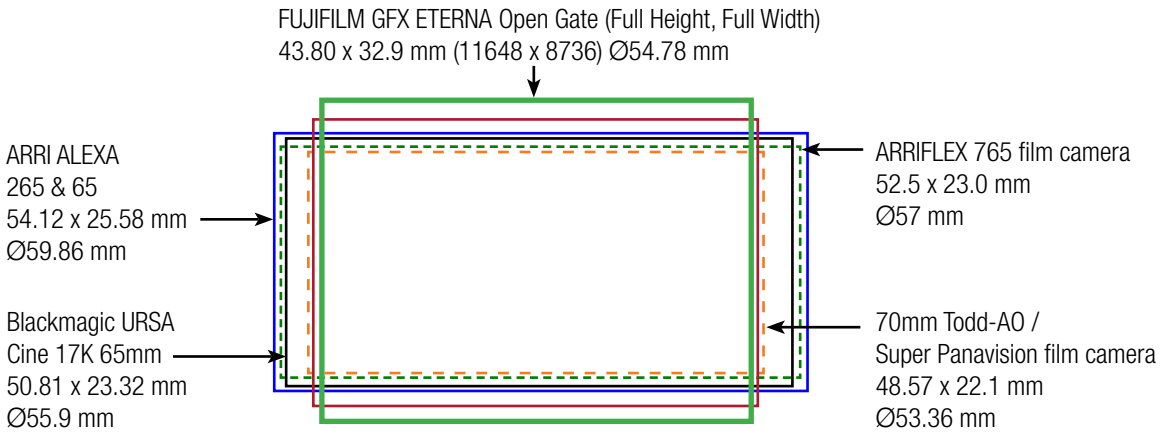


Framegrabs on an iPad with the ARRI Look Library applied.

Missed the camera-right menu of the ALEXA Classic? Attach an iPhone.



FUJIFILM GFX ETERNA Ø55mm



What's this? 55mm?

"In some ways, we think there is a lot of validity in exploring the sensor diagonal as a standard in establishing a way to talk about this because it often comes to the central question of lens coverage and how it can impact a cinematographer's image," said Yuji Igarashi, Fujifilm General Manager Professional Imaging Group.

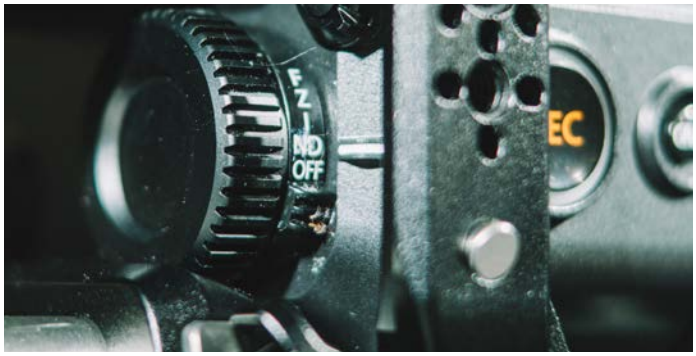
Identifying the camera by its image sensor diagonal will help restrain FDTimes from variously, vicariously and vaguely calling cameras larger format, larger-than-large, giant format, medium, 65mm, etc. After all, the name 65mm refers to the width of the actual film negative, not the picture area.

And so, let's call it the Fujifilm GFX ETERNA 55mm digital cine camera — 55 rounded up from its 54.78mm image diagonal. The camera continues to evolve. The latest working prototype appeared under glass at NAB 2025, following appearances at BSC Expo London and CP+ Yokohama in February 2025. The camera was working and remaining on for the duration of the entire show, with its onboard touchscreen monitor displaying a live image.

Since then, more updates and innovations have been revealed or deduced. ETERNA will record Open Gate—full width and full height of the entire sensor area (43.8 mm wide x 32.9 mm high). That makes it the tallest sensor in the 65mm format family. Its image diagonal of 54.78mm is approximately 1.7 times larger than Full Frame (Leica Format, 36 x 24 mm, Ø43.3 mm).

GFX ETERNA Open Gate will be 4K, with a classic 1.33:1 (4:3) aspect ratio. Of course, you can crop to any other aspect ratio, spherical or anamorphic.

But wait, is that a dial in front, camera left side, that says "OFF-ND"? And is that a menu item: "ND and CLEAR?" Clearly there might be internal Clear and ND filters.



Above: CLEAR-ND-Iris-Focus-Zoom selector switch and dial in front.

Below: GRAB button in front for stills.

On the camera right side bottom, just above RECORD, there's a GRAB button. So the GFX ETERNA will probably take stills.

The GFX ETERNA was looking through a working Fujinon 32-90 T3.5 PZ zoom lens, with GF Mount, that covers the entire ETERNA sensor. It has geared focus, iris and zoom rings. Flip two slide switches, and you have autofocus and auto iris. Another slide switch toggles between Servo and Manual zoom control. Focus, iris and zoom all have internal motors.

There are menu screens with controls on both sides of the camera—a very thoughtful, helpful feature. Connections at the rear include SDI, HDMI (full size), Timecode, Genlock, External DC In, Mic, Headphone, Remote, Ethernet (RS45), and USB-C. An internal battery powers the camera and enables hot-swaps of an external rear battery. The media bay has slots for a CFexpress type B and an SD card.

The native GF mount has a 26.7mm flange focal depth. A new Fujifilm GF mount to PL adapter was under glass as well. It has contacts to send /i lens metadata into the camera via the GF mount pogo pins. Expect more announcements around Cine Gear time in LA. *Fujifilm Cine Gear booth 032.*

Internal battery and media bay, with a Wooden Camera D-Box and Anton/Bauer battery plate in back.

SDI, HDMI, TC, Genlock, DC In, Mic, Headphone, Remote, Ethernet, USB-C.

Matthew Lewis and Lee David Brown on *Adolescence*

(L to R) Matthew Lewis; Stephen Graham as Eddie Miller; Amélie Pease as Lisa Miller, on *Adolescence*. Photo: Ben Blackall © Netflix.

This is the story of story concept driving equipment choices: DJI Ronin 4D camera, video and focus systems, Cooke SP3 T2.4 prime lens, Tilta Variable ND, Tilta Float, Raptor Magnet, and lots more.

Adolescence *is a British series in four episodes, each lasting about one hour. Directed Philip Barantini, written by Jack Thorne and Stephen Graham, it's about a 13-year-old schoolboy who is arrested for the murder of a classmate. Each episode is a "oner" — a single continuous take. It's on Netflix in the US. Matthew Lewis is the cinematographer. Lee David Brown is the Second Camera Operator.*

Matthew Lewis grew up near Brighton and studied film at Portsmouth University. Philip Barantini, director of Adolescence, acted in his graduate film. After university, Matt (working as DP) and a classmate started making short films and corporate promos. Matt's credits also include Boiling Point, Malpractice, The Responder, *etc.*

Lee David Brown started off as an actor when he was a teenager. He went on to work as a camera trainee and loader. In 2019, he took a Steadicam workshop at Optical Support in London, bought a Steadicam and a Trinity, and has been working as a busy camera operator.

Jon: How was it decided to do each episode of *Adolescence* in a single take, thereby increasing technical challenges a lot?

Matt: From the beginning it was always intended to be a single take, not stitching multiple takes together. This was after we made a successful one-take one-shot film called *Boiling Point* a few years back. First and foremost, you get incredible performances from the actors. There's no escape once you start, once the director calls "Action." It is the purest form of performance because whatever happens, happens. It's this brilliant hybrid of three-dimensional theater where you also have the creative control of being able to select how someone is perceiving the world, what lens we are on, how the camera is moving or adds to what is essentially a play.

The oner is its own genre. It was a privilege to be running alongside actors performing for an hour in real locations with all the technical stuff going on around them, but they're performing and ignoring it all. It must have been nuts for them. Sometimes I imagined being a character, for example Jade. She had to come over, have a little moment and then cross the road, while we were all running in with a drone overhead and docking the camera underneath. She has to ignore all of that, just be in the zone and perform.

Lee: The actors were amazing doing that. During rehearsals, they very much acknowledged where the camera was and how they needed to be in that scene. Obviously we only get one perspective of everything. There are no cuts to reverses or multiple angles. Everything has to be worked out with Matt, Phil and all the actors. But when it really came to it, they were so locked in that is was as if we didn't exist. At some points you'd have three boom operators darting about, Matt and I were passing the camera to each other with a bunch of grip items and things, you'd have and then the actors were right in front of the camera performing their hearts out as if nobody else was there.

Were the actors aware of your camera positions?

Matt: The blocking was quite locked in. There wasn't a lot of room for change because it was so essential to how the camera moved.

(L to R) Matthew Lewis; Owen Cooper as Jamie Miller;Erin Doherty as Briony Ariston. Photo: Ben Blackall © Netflix.

For example, if someone didn't walk into a room and say hello to someone else and the camera couldn't go from one person to the other, that would have been difficult. There was always a clear map of how everyone moved. Because you do not have the continuity issue of editing, they're able to ad-lib a lot more. Although the blocking was very strict, as it were, of what their route was through this world, the dialogue was able to be more fluid, which helped many of the scenes feel very natural.

There were no marks on the ground. It was more just a general spacing thing. They just had to understand which way they turned and how they formed a two-shot where they slightly open up to us here or where they sat on the table and which way they looked. They endured all these "little bits" of information to hold in their heads while also remembering the lines. They used little things around them as reference points, but most of the time they might just see the camera slowing down or making a move. It was a collaborative effort; our camera team took cues from them quite often and certain lines of dialog reminded us what was next.

How did you decide on the lenses?

Matt: It was actually quite late in pre-production. We were looking at different lenses and I was considering ones with lens control through the camera. I was actually looking at photography lenses whose focus and iris could be controlled through contacts in the lens mount. I thought we'd have to do iris pulls but we hadn't yet worked out a way of controlling exposure as we moved through different spaces. At first, I ruled out pure manual lenses because we only had a mount for one lens motor and although I heard of people using a second motor, this was all of us learning. We'd never heard of the DJI Ronin 4D camera before, so we were trying to figure out the best way to use it. And then, someone mentioned the Cooke SP3 primes. They had just come to market.

We had been looking at a lot of glass up to then. There was some technical requirements. They had to be light enough to work on the DJI 4D gimbal. We tested many different lenses. Some were sharp, some were a bit softer, but they all felt a bit distortion heavy when paired with the 4D's sensor. They all had a video kind of look.

And then we put the Cooke SP3 Full Frame primes on the 4D and, straight away, the camera was shooting scenes that looked fantastic. It looked really good suddenly. Obviously, we were also trying different focal lengths because I hadn't settled on exactly what size I was going to use.

The widest SP3 (18mm) starts to get slightly more distortion around the edges as you would expect. But the 32mm SP3 was a really nice place to be. Then, we found a way to control exposure with the Tilta Mirage Variable ND on the front inside of having to ride the iris. At that point, I was married to the idea. We chose the Cooke 32mm T2.4 for the entire series. I thought they looked brilliant.

Thereafter, I no longer needed to spend more time trying to work out if there's some other lens that's going to be just a fraction better because they felt perfect for this project. It's a lot of realism, so they didn't want to be anamorphic. There's a few other sets of mini cinema lenses. But the SP3 lenses have that Cooke look, so they look a somewhat creamy, not too much, but with enough

Matthew Lewis with DJI Ronin 4D, Cooke SP3, Tilta VND, Custom Easy Raptor Magnet. Photo: Ben Blackall © Netflix.

clarity for what our story was. And then, once we'd found that combination of the SP3 and a Variable ND, I knew that this was how we were going and it was time to move on to solving some of the other issues that faces us. So, the Cooke SP3 paired up brilliantly and they make the camera look really good.

You had one lens on the entire series of four episodes?

Matt: Yes. The Cooke SP3 32mm was the right combination of not being so wide that it saw where I put all of the lights on the ceilings and in the corners. It gave us a practicality in that sense, but it wasn't too long that, when we were panning quickly, it would feel as if we were flying around the space. You wanted to feel a perspective somewhere in the middle that was not too intense to watch, but also worked out for us.

One camera, one lens. Then why two camera operators?

Matt: Logistical, physical and creative reasons. After we did all the testing and we'd settled on the DJI 4D, one thing that was a massive advantage is that you can just hold it in front of you for quite a long period of time, between maybe 10 to 15 minutes if you're really trying to push it. That was a huge bonus, but it also meant we needed another operator in order to be able to pass the camera and do hand-overs. The physical limitations actually created room for some creativity as well, because if you're handing over the camera, you can do some interesting moves.

Lee: For example, we were handing it between each other over desks and through railings and through windows, which just presented opportunities that we could try and utilize. Sometimes we'd only have the camera for two minutes or so.

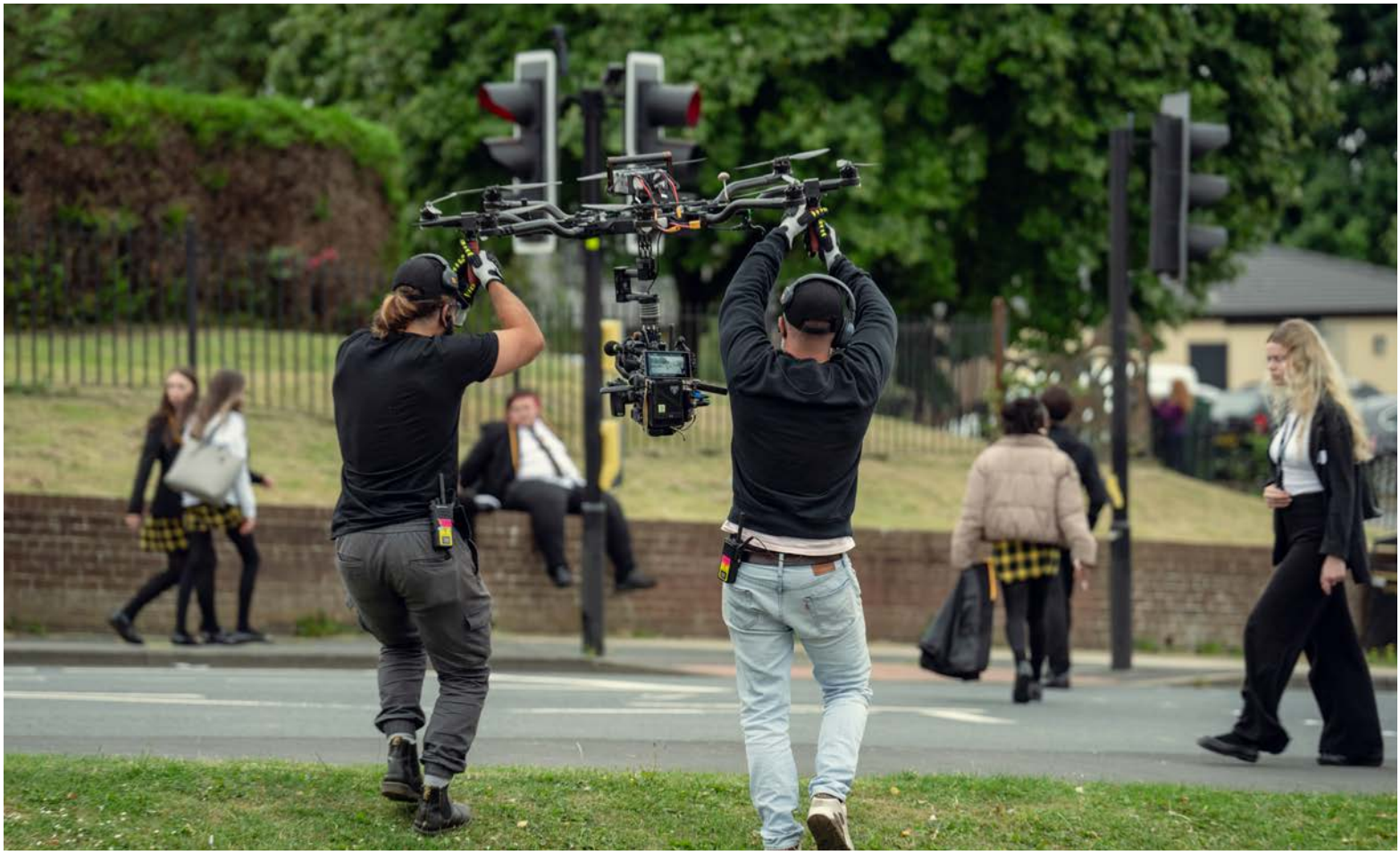
How did you manage the long dialogue scenes in the Secure Training Facility?

Matt: In the first episode, that was just me before Lee came on as second camera operator. Although we knew that one camera would be filming all the episodes, the issue was clearly the physicality of holding it for long amounts of time without any place to hide handovers, and also creatively making sure that it moved incredibly smoothly and slowly because any tiny little bump in that episode would've completely taken you out of it. You would've felt the presence of the camera operator. So it was our grip Patrick Gillespie, who suggested using the Tilta Float Handheld Gimbal Support System.

Lee: It's a vest with a stabilizing arm for lightweight cameras and it works well with the 4D which can sit on a little spigot so it can pan smoothly and it takes all of the weight off your arms. They padded out the vest to make it comfortable for the long duration of the takes and it still wasn't all that comfortable. But it worked well. It's not as powerful as what a Steadicam or Trinity can do, but it's a lightweight and compact setup.

How did you pan and tilt with the DJI Ronin 4D?

Matt: I was mostly using my body to move the camera and using the left handle's joystick to slightly adjust pan and tilt, nudging it slightly. I had a Tilta wooden handgrip on the 4D's right side.



Seamless and shake-free hand-off and on. Grips shepherding DJI Ronin 4D suspended below drone. Photo: Ben Blackall © Netflix.

Lee: There's something to say about how the 4D worked throughout every episode. It was, in a way, a learning experience of how we were going to use because there are many different functions and permutations of what can be done. To work out what was appropriate for each section was really important. The Z-axis arm stabilizes its vertical axis, which was useful for a lot of things like running and faster sections.

Matt: But there were also times in episode 3 and the end of episode 4 where it's very emotionally driven. You want to be close to the actors and so you don't want to have any vertical shifting going on during because, as Matt said, you don't want the camera to be noticeable. Testing those sort of things was really important just to make the visual as good as possible.

Leading question: what does the DJI Ronin 4D give you that other cameras do not?

Matt: There are many reasons. It's in the way the Ronin 4D moves. Having the Z axis isolated (being able to enable or disable) solved a lot of the things we would have encountered. For example, a Ronin 2 with a bigger camera would have been too massive to get through doorways. All the other issues start to layer up. If you're trying to use a "regular" cinema camera, you need this giant ecosystem to make it work. You need to external transmission systems and questions about battery life. Nothing else was as reliable.

To hand it over someone's head and onto their shoulder is quite a tricky thing to do. When Pat suggested the 4D, from the first time I picked it up I realized how interesting it was — quite a small unit that you can pass. We weren't onto the job then. I didn't know if it was going to be just me operating or if I was going to need other operators. Testing happened at the very beginning of prep. We were 12 weeks out from the shoot, the director had just scouted the locations, the team had just started and I started at the same time. And then the week later we went straight into camera testing. If we picked up another system, it would've been completely different.

The DJI 4D opened up our visual language. The list is quite possibly endless. It genuinely was so well suited for doing *Adolescence*. We would've had a totally different and much less interesting project if we hadn't used this camera system.

Above: Lee David Brown on the DJI Master Wheels on Episode 4, prepping for a driving rehearsal. Photos courtesy of Netflix ©2024.

Sean Beasley, Focus Puller on *Adolescence*

Sean Beasley with DJI Focus Pro, Monitor and Transmission System.

Jon: How did you get started in the business, by the way?

Sean: I just clawed my way in really. I went to film school and then worked as a runner. You call them PAs in the US. I met people that way and just kept trying. I became a focus puller almost by accident. I was a loader for six years and people started offering me small jobs: "We know you're a loader, but can you come and focus this job?" Soon, I was just focusing all the time. I don't think I was the best loader.

I was a terrible loader. Panic in the changing bag.

The administrative duties, all the organization and document keeping—it's even more intense now.

You're listed somewhere as not only the focus puller on *Adolescence* but also a DJI Ronin 4D technician. How is that?

I'm primarily a focus puller, but we always work with Ronins all the time. I would say that every focus puller and loader nowadays is probably a Ronin technician as well because it can't be avoided. People who work on higher budget shows will probably be able to get someone dedicated to that, but I've always had to do it myself and muddle through. The resources online quite often are videos with basic information. But, there's very little on what to do when things go wrong. You just end up figuring those things out and how to dial in the settings. "Adolescence" made me into a Ronin 4D tech because we had to know it inside out. We did a lot of testing, more testing than I've ever had on anything before. I worked a few days a week for a few months because we had to do proof of concepts for everything.

Where did you test the equipment?

The lenses, Ronin 4D and all the camera equipment was rented from Focus Canning ("bespoke optical and camera joy"). We tested at Focus Canning in London and at a studio called Production Park, in Yorkshire, where a lot of the show was filmed. We checked all the different aspects that were going to be difficult. We visited the Helicopter Girls who provided the drone. We practiced doing drone hand-offs, vehicle mount tests, battery duration tests. We needed to support the maximum load on the camera and see how long we could make the battery run.

How long could you get the power to last?

Long enough: about an hour and a half. The single takes lasted for an hour, but you have to build in an extra margin of time because you've got to turn over, put the clapboard on and other things messing about. We had a half hour extra margin, so one battery was sufficient for the task.

What format were you recording?

We recorded onto the Ronin 4D's 1 TB media stick. I wish it had 2 TB media to provide more recording times. We recorded ProRes RAW 422 HQ in 17:9 aspect ratio that was cropped to 2.0:1 in post. We ended up using the DJI 6K Zenmuse X9-6K camera head.

The 4D can do a lot of things that mainstream "professional" cine cameras can't do, but we had to justify its use because it was not Netflix approved. That let me to do an enormous amount of research that I hadn't previously had to do before, and I was very glad to do it. But, we couldn't have done this show on another camera and it wouldn't have been stable. You would've had to go into a world of hidden cuts. You'd never be able to operate handheld for such a long time. Gimbals are very heavy. Ronin 2 is heavy piece of kit and when you combine it with a cine camera, you've only got about two or three minutes for an operator to handhold it. You can't do hand-offs, you can't get it through small gaps. So that's why the 4D was ideal for this job. We really pushed the capabilities of the 4D—what it could do and where it could go. Its capability is absolutely unbeatable.

Matt talked about the lenses.

Matt selected Cooke SP3 primes. He had already used Cooke lenses on most of the other jobs that we've done together, and he really likes them. The SP3 lenses are small, lightweight cinema lenses, good glass, good optical qualities, creamy, clean but not too clean. The proprietary DJI lenses give you great image quality but that's not necessarily the look one might always want. Particularly nowadays, sometimes you may want dirty lenses, with aberrations and character. Actually, we did the entire series on just one focal length: the Cooke SP3 32mm T2.4. We had a whole set of the SP3 primes but we just used that one the entire time.

We also had a set of the DJI lenses on a second Ronin 4D that we used just for rehearsals and proof of concept tests. The camera and Cooke SP3 lens were set up with the DJI LiDAR Range Finder and lens motor. They work very well in tandem. The LiDAR can do autofocus. But auto focus is not intelligent enough to understand a

(L-R) Sean Beasley (Focus Puller); Adam Farquharson (ND Puller/ Loader); and Director Phillip Barantini.

narrative shot where there are wipes. It will lose focus to the nearest object, for example someone crossing in front of the main talent, or a doorway. So, obviously the first thing I asked was like, could I be replaced? And the answer is no, currently.

I used the DJI Focus Pro Hand Unit and their High Bright Remote Monitor. When used with the 4D, it doesn't have any latency. With non-DJI camera systems, you may experience some lag.

Did you benefit from the LiDAR Range Finder?

It was enormously accurate. I can read where the actor's eyes are and I can see their shoulders and their nose because it's a top-down, bird's eye view. The closer the subject gets, the more fidelity there is and their top-down silhouette becomes interesting. It is actually kind of intuitive because the closer it gets, the more critical your sharps are and the more detail comes up on the LiDAR as well. So you end up seeking the eyebrow. You can see it in the LiDAR patterns.

Watching the show, you can see where Matt does this move where he's always pushing in to an ECU and I have constant micro adjustments of focus. Without LiDAR, I am just using the eyes and the ear to track where I am, where should I be on the face, perhaps the nearest eye to the camera.

But you're always looking for a tell to show you if you're no longer on the eye that you want to be on, where are you? Is it okay? Is it still a usable shot? But the LiDAR allows you to know where everything is all the time. I can read which part of the face that I'm currently on, and also the focus scale readout is next to the image. I can do a sharps measurement in fractions of a second.

If the LiDAR view is top-down, you basically see the eye brow but not the actual eye, especially if you're wide open. Then,

how do you compensate for that?

I must admit that when I started the job, I didn't find it natural. But I'm generally looking at eye focus on the monitor and also taking into account the relationship of the depth of field with the readout.

What other accessories did you have in the camera package?

You could do a story just on the way that the video department worked because we weren't just doing one-shots. We were doing one-shots that covered very large operational areas. So you need to maintain signal. It's not just so that the director can review it. It's so that all the ADs had cues and all of the locations and traffic control people were taking those cues in order to hold traffic. In places where we were in and around roads or in vehicles, which was a lot of the time, and the drone shot, we had to lock off the road that the drone went over,. We had the scene with 300 school kids as extras. Even for the smallest episode, there were about 50 extras in the background. And they all needed cues that had to be accurate. They're all based off monitors. So you couldn't just go, "Oh, we lost picture for a few minutes, don't worry." It had to be a flawless video system as well. And that meant creating networks of receivers.

How did it work? The 4D is transmitting natively?

Yes, to me, to my handset, and then the monitor. I had a second DJI transmitter, which was attached to my backpack, sort of suspended above my head. It was on a different channel and as far away as possible from the channel that the main camera's on so that they wouldn't conflict. And then that transmitter sends to a massive network of receivers. It's being fed by a cable from my High-Bright Monitor's SDI output to the transmitter's SDI input.

The DJI video transmission is actually really good for viewing monitors because that it can connect seamlessly. It has a control mode for two-way connections to two devices and a broadcast mode for one-way transmission up to 20 receivers. My High-Bright Monitor was in control mode to the camera so that the focus system is transmitting instructions to the camera, but also receiving picture.

Our loader, who essentially became the Variable ND puller, had the other control monitor with a histogram and a Tilta hand unit connected to the Tilta Mirage variable ND that we had in front of the lens. The Tilta Variable ND consists of two pola filters with a tiny wireless motor that rotates one of them.

Matt and Lee explained the hand-offs. Please tell us more about the techniques and technology.

A lot of effort. Matt does most of his own operating. Lee was the second camera operator. They worked in tandem and did the hand-offs. For example, since the police station had a high desk, they passed the camera over the desk. They could do it through doors, through windows, into and out of vehicles, up a stairwell in their house.

Lee sometimes operated with the DJI Master Wheels.

Lee's the master of the Master Wheels. He used them on the convoy and the van journey the whole time. For example, on the car scene at the very beginning, that was on a jib and the camera was attached with a Custom Easy Raptor Magnetic mount. They were able to hand off to the jib and use the wheels in a follow.

How do you do hand-offs from handheld to car rig to helicopter and back to handheld without jiggling the camera?

The Ronin 4D Z-axis (up-down stabilization) does most of the work to absorb most bumps. That was one of the things we tested quite rigorously: getting it on and off a tripod using a Ronford quick-release plate. Even handing off from Master Wheels to other modes went smoothly. They really thought the entire system through. You turn the Master Wheels on, having already paired it, you just start using it and when you turn the Master Wheels off, the transition is seamless and smooth.

Which gimbal mode did you set the Ronin 4D for handheld?

The Ronin 4D was in PT (Pan-Tilt) follow mode, which is where it will follow the direction you aim the camera. The left handgrip joystick was used for micro headroom and framing adjustments.

I was impressed that you were able to keep everything in focus the whole time. I don't think there was a single buzz. It had to be pretty stressful—like an hour-long focus test.

I was thinking constantly about the judgment of my fellow focus pullers and was determined to avoid even a single buzz. It became progressively less stressful after the first week of rehearsals on the first episode and we worked out various connection issues with the video transmission on set. Even summoning up all the concentration you can, little distractions can build up and focus works best when you're in a good, relaxed headspace.

It's worst when you are worried about it. Performance anxiety is a bad thing with focus pulling. I had a pre-flight checklist so that everything was just so before the take started.

Were you wide open a lot of the time?

Fortunately for me it was T2.8 and T2.8 1/3 almost the whole time. On a 32mm Cooke SP3, that is not the worst.

Did you have latency issues (image lags behind the action)?

Maybe a frame or two, but I learned how to compensate for it, so I would always get ahead of a move. With the lidar, I can see where the eyebrow and the nose are. I didn't get everything right. It took a while. We had a lot of rehearsals.

I guess you shot the rehearsals?

We had technical rehearsals followed by a week of rehearsals on camera, and then full run-throughs on camera. So I had essentially 25 goes at each one. The video team worked really hard. I'll tell you a little bit about it. We had to cover almost the entire school. And then we also ran across the road and down into an alleyway. They had to rig up receivers all over the school, across different floors.

Basically they made a network that fed into a central desk. The desk had images from each of the receivers and then there was a video switcher. Once they saw a strong image come up, they'd switch the output image to that one. One of the video assistants was running around to tell them where I was. "Beasley is headed out the window. He coming, switch to four..." And then she ran across to this classroom that looked out over the road, opened the window and held the receiver out the window to get the best chance for that receiver to catch me running across the road as well. It was amazing.

Cooke Optics at Cine Gear: 102

Ponte di Rialto e mini modello di Rialto

Photos by Jonathon Brearley

Original RIALTO RIALTO Mini with PL Mount RIALTO Mini with E-mount

Before "What news on the Rialto," Shakespeare had Antonio's sailing ships: "Upon the Rialto he hath a third at Mexico, a fourth for England, and other ventures he hath squandered abroad."

How did Shakespeare, who may never have visited Venice, know that the Rialto Bridge was at the center of that city's news and gossip or that it spanned the Grand Canal, connecting San Marco and San Polo? Merchants from Venice, a major trading hub in the Elizabethan era, landed in London. In or out of love, Shakespeare likely learned about Venice from acquaintances who traveled there. And, with newspapers banned and plays censored in 1596 England, placing his Merchant in Venice helped avoid various inconveniences.

There are varying opinions after which city the Camera called Venice was named. Although Venice Beach is closer to Sony Studios in Culver City, Venice of the Canalazzo, Caneletto, Arsenale, Biennale and Festivale sounds more romantic. But we digress in this discourse on why camera crews and rental houses worldwide shorten the officially-named Sony "VENICE Extension System Mini (CBK-3621XS)" affectionately to "RIALTO Mini."

RIALTO Mini tethers directly to the VENICE cinema camera. It has a VENICE 2 8K sensor and is about 70% smaller than the original RIALTO, is significantly lighter and fits in the palm of your hand. Because it's so small, there wasn't room for internal ND filter wheels. Instead, RIALTO Mini has a clever, custom drop-in ND cartridge system with a clear and eight glass ND filters (ND0.3 - ND2.4). Yes, we are dreaming of diffusion, fog, mist, glimmer, and other behind-the-lens drop-in filters.

The design has been improved over the original. Rigging is easier. It fits in all kinds of places for handheld, stunts, skiing, sailing, etc. More mounting points have been added to attach accessories. The copper and fiber connecting cable between the RIALTO Mini and the VENICE 2 camera body is thinner and more flexible.

Sony RIALTO Mini

RIALTO Mini Details

- Official Name: VENICE Extension System Mini CBK-3621XS
- Same 8.6K Full Frame CMOS sensor as VENICE 2 8K.
- Same Sony E-mount with PL Mount Attachment.
- Compatible with both VENICE 2 6K and 8K models.
- Drop-in filter slot on top of RIALTO Mini.
- Includes 1 Clear and 8 ND drop-in filters: ND0.3, 0.6, 0.9, 1.2, 1.5, 1.8, 2.1, 2.4 (1 to 8 stops). Filter density is recognized automatically by the VENICE 2 camera.
- Compact, Lightweight Camera Head Block with approximately 70% less volume than existing models.
- Head dimensions: 63.9×103.2×60.2 mm (W×H×D). 2.5×4.1×2.4 inches.
- Weight (approx): 0.54 kg / 1.2 lb with E-mount. 1.05 kg / 2.3 lb with PL Mount.
- New 4.5 m / 14.8 ft Flexible Detachable Cable has a 7.6 mm diameter (3.3 mm thinner than the original model's 10.9 mm cable).
- Optional 12 m / 39.4 ft cable (CBK-12C3621).
- The cables are detachable, enabling easier installation of the camera head in confined spaces.
- Accepts lens metadata from E-mount and PL mount lenses. PL Mount has a 4-pin LEMO Metadata port.
- 15 mounting points around the camera head.
- Two assignable buttons for customizable functions such as record start/stop and EL Zone display toggle.
- 3-pin Fischer connector for start/stop, MDR and accessory connections.
- When two RIALTO Minis are placed side by side, the distance between the two optical centers (sensors) is approximately 64mm. This matches the average human interpupillary distance and is excellent for 3D rigs.
- Final specifications may change.
- Optional Accessories:
- If you lose or drop the ND filters, additional sets are available. They only come as a full set of 8 drop-in ND filters and a clear filter, identical to the set included with the system. Order using the official name: Camera Extension System ND Filter Kit (CBK-ND1K).
- Camera Extension System Cable 12m (CBK-12C3621).
- Available in Summer 2025.

See the Sony RIALTO Mini system at Cine Gear LA in Sony's booth S3509. *sonycine.com*

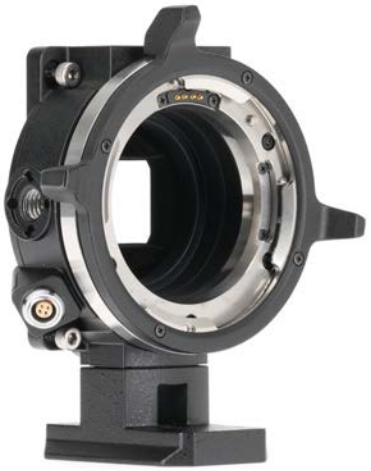
RIALTO Mini Lens Mounts

Default E-mount
(does not have locking lever as on VENICE cameras).

Sony PL Mount attaches over E-mount with four 3mm hex screws

Prototype Leitz Cine LPL Mount (will have lens data pins. Shown without lens support).

Leitz Cine LPL to PL Mount Adapter.



Sony PL Mount has 3 tabs. Careful: typically LPL mounts have had 3 tabs and are painted blue and PL Mounts have 2 tabs. Metals saws and blue enamel paint, anyone? May void warranty.

RIALTO Mini Internal Filter

There's a spring-loaded trap door on top of the camera to access the behind-the-filter holder.

Be sure the filter holder is always inside, even if it's clear.

Otherwise, the flange focal depth will be off by 1/3 the filter's thickness.

Sony RIALTO Mini Views

Front left

Front right

Rear right

Rear left

Camera Left

As shown below: You may want to remove the lens mount shoe when not subjecting Rialto to vibrations and high G-forces and if the lens weights less than 4 kg / 8.8 lb.

Camera Right

Top

Bottom

Sony RIALTO Mini Configurations

With Bright Tangerine Sliding Top Handle and KASBAH Handgrips

Front

Top

RAILTO Mini with new SIGMA AIZU lens. PL Mount.

Nanlux Evoke 5000B - 5,000 Watt LED

Photo courtesy of gaffer Tom Van den Abbeele, ICLS

NANLUX introduced the Evoke 5000B on February 12, 2025 in London. Powerful, IP66 weatherproof, this 5000 Watt LED fixture approaches the brightness of a 9kW HMI or 24kW tungsten light.

"B" is for bi-color: color temperature adjusts from 2700K-6500K with Green/Magenta correction.

The Evoke 5000B integrates the lamp head, control unit and power supply all together into one body, significantly reducing both the total weight and size compared to fixtures with separate units. With its all-in-one lamp and single cable, fixture management is simpler and more organized, improving efficiency and transportation.

The Evoke 5000B has a weatherproof IP66-rated housing made of high-strength magnesium alloy. It weighs only 46 kg / 101 lb (with yoke). It has balance-adjusting rails on both sides for flexible head positioning and to maintain a neutral center of gravity when different accessories are attached.

There's a motorized yoke with an angle display and a disc brake for precise positioning and safety. The Evoke 5000B's NL mount has a new PosiTight system in front that ensures a tighter connection between fixture and accessories. Two front and rear handles make it easy to set up and adjust, even when mounted in high places.

The Evoke 5000B has smooth dimming, especially from 0.0% to 0.1%. The newly added High Speed Mode allows the Evoke 5000B to switch from PWM to DC mode, maintaining stable and consistent brightness during high-frame-rate shooting. Even at over 10,000 frames, it is flicker-free.

The Evoke 5000B has a built-in control panel with three knobs, four buttons and a 4.3-inch display screen. The user interface has a straightforward menu and intuitive icons. It can be controlled remotely via DMX/RDM, Art-Net/sACN, LumenRadio CRMX, Nanlink App 2.0, etc. The fixture has a new cooling system that includes Smart, Full Speed, Low Speed, Off and Pause modes. The Smart mode automatically adjusts the fan speed according to the ambient temperature; the noise level is only 44 dB(A).

The light source module of the Evoke 5000B is the same physical size as the Evoke 2400B. Its NL mount makes the Evoke 5000B compatible with most accessories for the Evoke 2400B, including Fresnel attachment, reflector, parallel beam reflector and softbox. This reduces the cost of accessories.

A new, larger motorized Fresnel lens, a motorized yoke, and a wired controller for the Evoke 5000B have also been introduced. The motorized Fresnel lens has a 45 cm lens with a 16°-50° zoom range, delivering 47,970 lux at 16°.

The motorized yoke for the Evoke 5000B enables remote angle adjustments with 540° horizontal rotation and 270° vertical movement. It can be controlled via a wired control panel, DMX/RDM or Ethernet.

A wired controller is included with the fixture. It has a 3.2-inch display, three buttons, and three knobs, with a layout identical to the rear display on the Evoke 5000B. It includes an 8m connection cable, weather resistant IP66-rated housing and a magnetic back for convenient attachment to metal surfaces or the magnetic base on the fixture. *nanlux.com*

Evoke 5000B with FL-45E Motorized Fresnel Lens

Nanlite PavoTube II 6XR

NANLITE introduced the PavoTube II 6XR on April 2. It is a very versatile, 10-inch long, 8 pixel, full-color RGBWW LED tube light with CRMX control and wireless control. This is the fixture you want for soft fill, or hidden behind a computer screen, under a car dashboard, or lurking in the philosopher's fireplace of Rembrandt's painting.

The PavoTube II 6XR has five lighting modes: CCT, HSI, gel, lighting effects and pixel effects. Effects include Hue Loop, CCT Loop, Int Loop, Multi Color, Fade, Process, Scroll, Fire, Rainbow, and Driving. The color temperatures range from 2700°K to 12000°K with ±150 green/magenta adjustment. It can illuminate up to 562 lux (52 footcandles) at 0.5m (5600K). It has 8 light-engine pixels that can be controlled directly on the light, via the NANLINK App 2.0, DMX/RDM or LumenRadio CRMX.

The PavoTube II 6XR weighs a mere 270 g. It has a built-in 3200 mAh battery that recharges through its USB-C PD 3.0 port. Nanlite's excellent 8-light kit comes complete with modifiers, mounting accessories, and a custom charging case (Gutek T-230). The case can charge all eight fixtures simultaneously using AC power, a V-mount battery or a PD adapter.

See the PavoTube II 6XR at the Cine Gear booth of NANLUX / NANLITE # S3009.

Nanlite 25-45 Projection Attachment with Bowens Mount

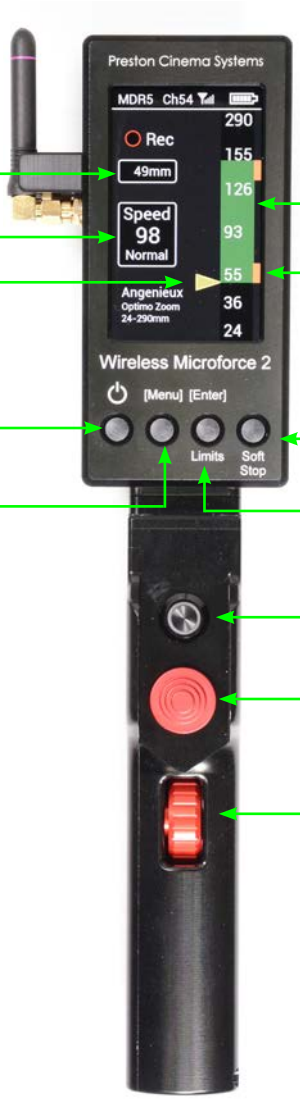
This is for precise light shaping and follow-spot work from tabletop to sets to stage. The new Nanlite Bowens Mount Projection Attachment 25°–45° (PJ-BM-25-45) attaches to fixtures under 800W, including Nanlite's Forza, FC, and FS series of LED COB lights as well as other brands fitted with Bowens Mounts.

The Projection Attachment has a coated aspherical lens to reduce distortion and chromatic aberration and provides excellent image quality with sharp edges and minimal stray light.

nanlite.com

Preston WMF2 Wireless Micro Force 2

Preston WMF2



Zoom Lens Exact Focal Length

Zoom Speed as set by Speed Control Dial

Focal Length Cursor

POWER On/Off Button

MENU Button

Set zoom limits (green area) by pressing the LIMITS Button (2nd button from right) while pressing the joystick to highlight the desired range of focal lengths.

Set soft (feathered) starts and stops by rotating the Speed Control Dial while pressing the SOFT STOP Button (further button to the right).

SOFT STOP Button

Zoom LIMITS and MENU ENTER (Set) Button

Camera R/S Start-Stop

Zoom Force Sensor / Joystick

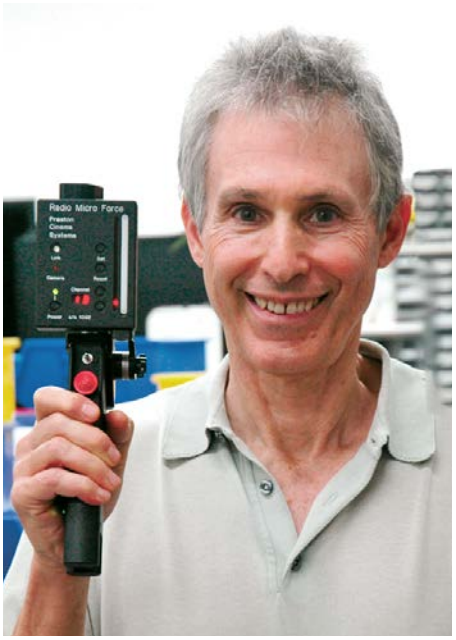
Speed Control Dial

Zoom scale calibrations transfer automatically from Preston Hand Unit 4 (HU4).

- Overall Length: 11.5” (28 cm).
- Display width: 1” (2.5 cm).
- Weight without battery: 580 g.
- Weight with battery: 670 g.
- Battery: Sony NP-FZ100 rechargeable Li-ion.
- Sunlight viewable high-bright backlit LCD display.
- Works with Preston MDR 3, 4 or 5.
- Shares same channels as Preston HU4 and MDR units. The HU4 is recommended for enhanced zoom scale accuracy.

prestoncinema.com

See the new WMF2 at Preston Cinema's Cine Gear LA booth 063



June 2025 is the 20th anniversary of the Preston Cinema Systems Radio Micro Force (RMF), introduced by Howard Preston at Cine Gear 2005.

Coincidentally, this is also the 20th anniversary of Film and Digital Times. Our first edition launched during the same Cine Gear Expo with this photo of Howard and his RMF, *at left.*

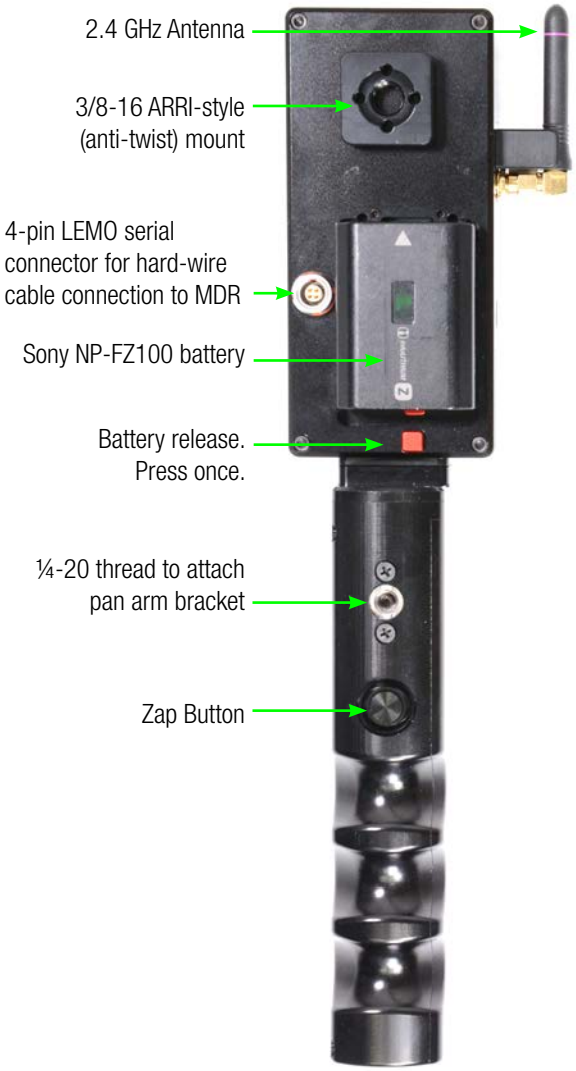
The Force has been with us for quite some time. Preston introduced the first (hard-wire) Micro Force in 1981. Its iconic design and force sensor red ribbed button became the industry standard, having been universally praised, poached or repainted.

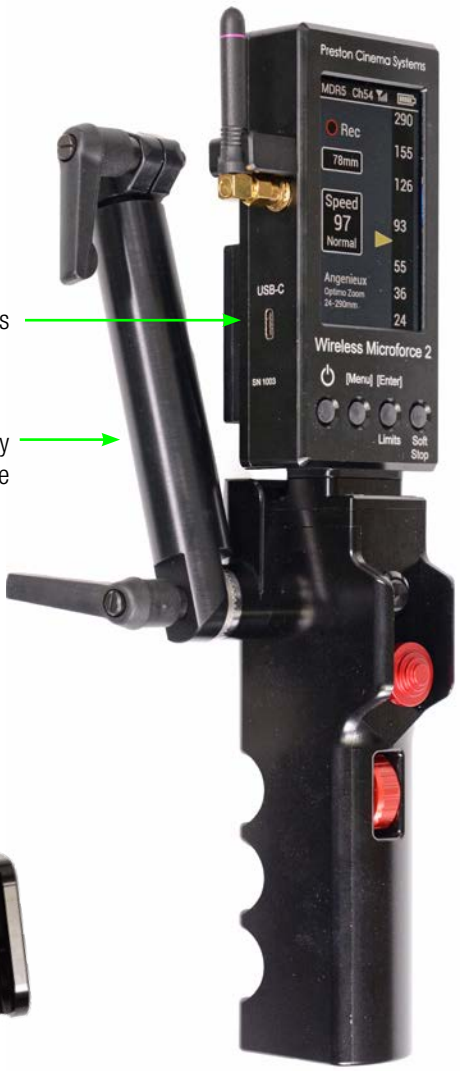
This was the zoom control that launched a thousand careers of smooth operators, DPs and camera assistants. You could hide a focal length adjustment imperceptibly. Starts and stops were nicely feathered. Zap in and out to check focus. Micro Force changed the game. Zoom lenses, previously belittled by some for feckless filmmaking, could indeed enable elegant frame adjustments and subtle push-ins during no-take-two dramatic moments.

Meanwhile, famous focus pullers and camera crews kept pleading with Preston for a more advanced display an exact focal length readout. DPs were (gasp) using zoom lenses the way they worked with primes and it was increasingly critical to be able to match sizes to the millimeter.

Enter the new Preston WMF2 —Wireless Micro Force 2. It has come a long way with a long list of enviable advancements. Let's take a tour.

Preston WMF2 Wireless Micro Force 2





Menu Operation:

1. Use the Speed Control Knob to scroll to menu item.
2. Push ENTER or tap the ZAP Button to select.
3. Use the Speed Control Knob to change a value.
4. Push ENTER or tap the ZAP Button to select.

Change motor direction here.

Normal or Inverse (white background) display modes.

Normal or Constant Zoom Speed (CZS) modes.

Inverse (White) Screen

Blackmagic URSA Cine 17K 65 Updates

Here are additional updates since previous FDTimes reports about the Blackmagic URSA Cine 17K 65 camera. The name is long so let's shorten it in this article to URSA 65.

- URSA 65 has a 65mm Format RGBW 17,520 x 8,040 resolution sensor: 50.81 mm wide x 23.32 mm high (55.9 mm Ø.) That's a native aspect ratio of 2.2:1. There are many sensor modes, resolutions and choices of framelines.
- URSA 65 provides at least 16 stops of dynamic range.
- URSA 65 records to a Blackmagic Media Module. Depending on the compression level of Blackmagic RAW on the 8TB Media Module, full sensor 17K at 3:1 records up to 1.3 hrs; at 8:1 = 3.5 hrs; at 12:1 = 5.2 hrs; and at 18:1 = 7.8hrs. Blackmagic RAW files store camera metadata, lens data, white balance, digital slate information and custom LUTs.
- Every camera also comes with an 8TB Media Module, top handle, WiFi antennas, baseplate, 24V power supply, 24V B-mount battery plate and a custom Pelican case.
- Every camera comes with interchangeable PL and LPL lens mounts that have lens data contacts. It's easy to swap mounts with just four 3mm hex screws. The mounts are shimmable.
- Of course you want a viewfinder. For a few dollars more (well spent), there's a camera + EVF package, complete with a really good adjustable viewfinder extender, brackets and USB-C cables that conduct both image and power along a single link.

Rugged and Ergonomic

The URSA 65 body is made of rugged magnesium alloy with a lightweight carbon fiber polycarbonate composite skin to endure mounting on cars, cranes, planes, Steadicams, dollies, remote heads and long night exteriors, freezing rain, scorching sun and all the usual location conditions.

5" Monitors on Both Sides

Why don't all cameras have this? The URSA 65 does not assume that there's a smart side and a dumb side.

There are two 1500 nit, 5" monitors with full menus and video—one monitor on each side of the camera. The monitor on the camera left side flips out 90° and pivots 360°. When it's closed, there's a status screen on the outside for basic settings.

The monitor on camera right is flush against the body and has a helpfully dedicated focus puller's mode with focus and iris scales, lens information and assignable focus marks. Other modes let DITs and assistants check important status parameters such as frame rates, ISO, shutter angle, codec, etc.

Power

URSA 65 comes with a 24V power supply. It also has a B-Mount on-board battery plate in back. The B-Mount battery interface is an open industry standard developed by bebob. It supplies 24V at 15 amps or more. An Anton/Bauer 26 volt plate also fits.

URSA Cine V-Lock and Gold-Mount plates are also available from Blackmagic. These can run at 24V with Core Helix batteries or 12V with standard V-Lock and Gold Mount batteries. A

minimum battery rating of 12 amps is recommended when running at 12 volts.

URSA Cine EVF, Extender, Top Handle

The URSA Cine EVF has soft-touch backlit buttons and uses a single USB-C cable for power and video. The viewfinder brackets and extender have dovetails for quick release. Its viewfinder extender works with standard eyepiece levelers. The top handle also has a dovetail mounting mechanism so you can quickly and easily remove the entire viewfinder system and the top rods.

Sensor and Anamorphic Desqueeze

Every in-camera recording format has the option of anamorphic desqueeze, with 2x, 1.8x, 1.66x, 1.6x, 1.5x, and 1.3x ratios.

Media Bay and File Formats

Flip the camera left monitor for access to the media bay. The camera ships with a Blackmagic Media Module 8TB SSD. With 16 PCI Express lanes, data rate is 5GB/s+. URSA 65 records Blackmagic RAW internally as well as simultaneous H.264 proxy files.

Remote & External Control

You can control URSA 65 (or URSA 12K LF) wirelessly from the Blackmagic Camera app. The Blackmagic Camera remote control method is convenient and fully featured on the iPhone that you probably already have in your pocket. You can also stream from the camera directly to the Blackmagic Camera iPhone app to view images while also being able to control the camera.

The Blackmagic URSA Cine EVF can trigger recording as well as camera functions assigned to the VF1, VF2, VF3, Zoom and EXP buttons. External Camera Control is supported using REST API over Ethernet, WiFi or serial communication via the 7-pin Lemo connector. Run / Stop is supported via the 3-pin Fischer and 7-pin Lemo connectors.

Prices (subject to tariffs)

Blackmagic **URSA Cine 17K 65 camera body only**: US $24,195. Includes 8TB Media Module and PL mount. (Excludes top handle, baseplate, power supply, battery plate and LPL lens mount. This is appealing to rental houses and self-accessorizers.

Blackmagic **URSA Cine 17K 65 camera system**: US $$32,995. Comes in a custom carry-on Pelican case with PL mount, Media Module 8TB, top handle, top 15mm Rod Mount, Cine Baseplate 19 for 19mm rods, B-Mount Battery Plate, LPL Mount, 24V 250W power supply, DaVinci Resolve Studio activation card, etc.

URSA Cine 17K 65 + EVF camera system: US $34,645. Comes in a larger custom Pelican case with all of the above, and URSA Cine EVF, EVF Rotating Bracket with 19mm carbon fiber rod, EVF Bracket Rod Mount, EVF Finder Extension, 2x short carbon fiber 15mm rods, 3x viewfinder cables, rubber eyecup and chamois eyecup cover.

Blackmagic Media Dock with 3 Media Module Bays is US $2,195.

Additional 8TB Blackmagic Media Modules are US $1,865 each. There is also a 16TB option.

blackmagicdesign.com/products/blackmagicursacine
Cine Gear Expo booth S3099

Blackmagic URSA Cine 17K 65 Camera Left

Camera Left - Monitor Door Closed

Camera Left - 5" LCD Monitor / Door Open

Blackmagic URSA Cine 17K 65 Camera Right & Rear

Camera Right

5" HDR LCD 1920x1080 Monitor / Menu 1500 nit Touchscreen Display on the camera right side.

Up to now, this has been derided as the "dumb side." No more. The touch-screen lets you access all camera settings.

Top-Rear USB-C port: use this when updating camera

USB-C

/i lens data contacts at standard 12 o'clock position of LPL Mount (shown here) and PL Mount.

USB-C EVF cable port. Tighten the USB-C connector with a 2mm hex driver

7-pin Lemo-style EXT connector: serial port, AKS power and start / stop.
Pin 1 = Serial 2 RX
Pin 2 = Serial 2 TX
Pin 3 = Serial 1 RX
Pin 4 = Serial 1 TX
Pin 5 = 24V DC Out
Pin 6 = Ground
Pin 7 = RS Run / Stop

DISPLAY button: Press to view status, codec, resolution, audio, etc.

LENS button: Focus Pullers, press here to cycle between rich, lean and clean views.

MENU button

RECORD button

3-pin Fisher RS connector.
Pin 1 = Ground
Pin 2 = 24V DC Out
Pin 3 = RS Run Stop

Rear

USB-C

12G-SDI A OUT

12G-SDI B OUT

Timecode IN and REF IN

RJ-45 10G Ethernet

8-pin LEMO style External Power IN. Camera comes with a 24V DC 250W power supply. Also accepts +12-34 V DC, but works best at +24 - 34 V DC.
Pins 2,3,4 = ground.
Pins 6,7,8 = DC+ power.

Camera comes with this B Mount (bebob style) plate for 24 volt onboard batteries.

Using 12-14 volt batteries limits prevents speeds above 60 fps and powering RS or EXT connectors.

Headphones

Blackmagic URSA Cine 17K 65 Lens Mounts

The URSA Cine 17K 65 camera comes with a PL Mount attached.

- The PL Mount has 2 breech-lock tabs.
- The LPL Mount has 3 tabs.
- Cooke Panchro /i 65 lenses will come in LPL.
- Leitz THALIA 65 come in PL or LPL.
- Ottoblad lenses are PL.
- Most ARRI 65 lenses are LPL.

PL Mount

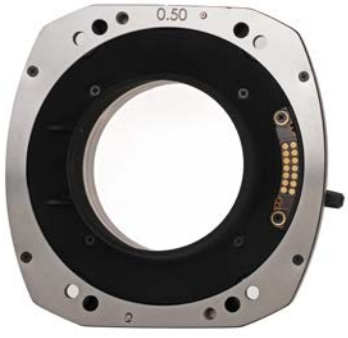
LPL Mount

To swap mounts, remove the four 3mm hex screws in front (shown with green arrows). To tighten, use a torque wrench set to 1.5N. Check flange focal depth. If it is off, your focus marks will be off. Body and mounts have shims.

This is what the front of the camera looks like with the lens mount removed.

To avoid swapping mounts, get a Leitz Cine LPL to PL Adapter. It has /i lens data pass-through from PL to LPL and into the camera.

PL Mount
front view



PL Mount
rear (toward camera) view

LPL Mount
front view

LPL Mount
rear (toward camera) view

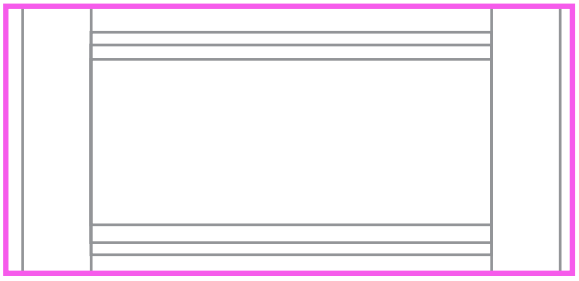
Blackmagic URSA Cine 17K 65 Handheld

Shown with Blackmagic URSA Cine EVF, URSA Cine Top Handle, URSA Cine Baseplate (available for 15mm or 19mm rods), URSA Cine Grips (come with extension arms).

Blackmagic URSA Cine 17K 65 — Formats, Aspect Ratios, Image Size, etc.

17K (65 Format) Sensor Mode

12K (Full Frame) Sensor Mode
Downscaled from 17K to match URSA Cine 12K LF



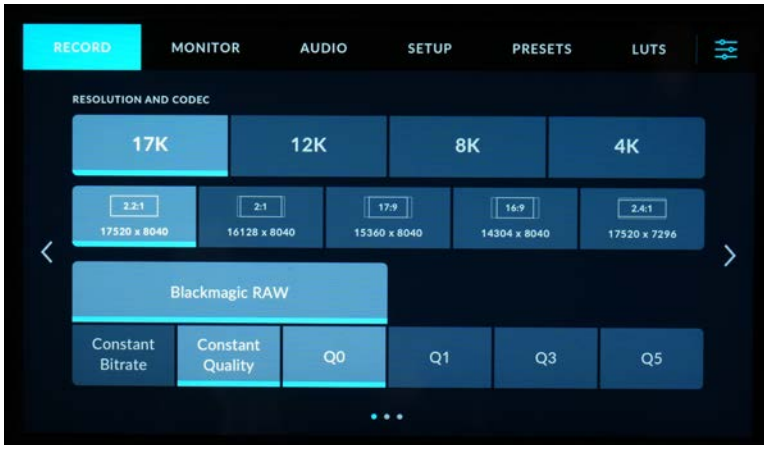
8K Sensor Mode - 65 Format Width
8K Sensor Mode - FF Format Width

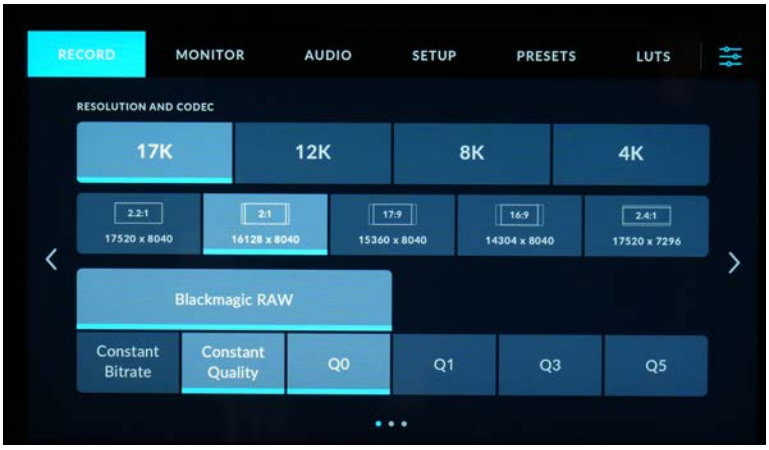
4K Sensor Mode - 65 Format Width
4K Sensor Mode - FF Format Width

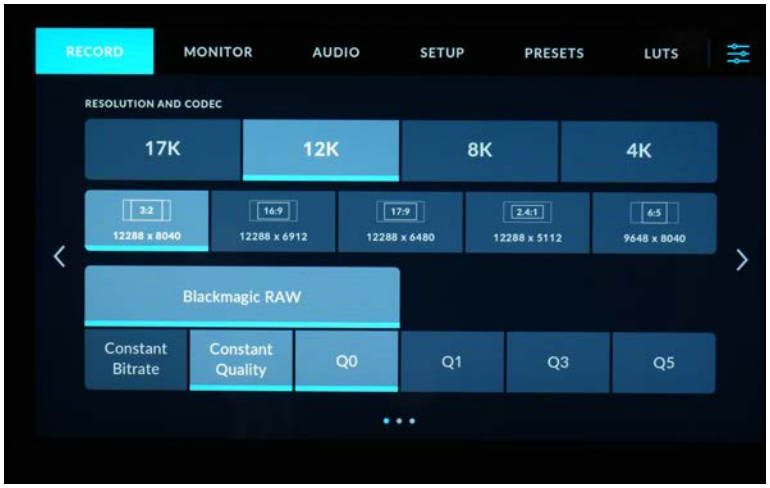
Format	Aspect Ratio	Max FPS	Resolution	Sensor Size WxH (mm)	Diagonal (mm)	Sensor area	Located in Menu Section	Readout Speed (ms)	Full or Scaled	Codec	Constant Bitrate	Constant Quality	Desqz
65mm Format	2.2:1	60	17,520 x 8,040	50.81 x 23.32	55.90	Open Gate	17K	16.40	Pixel for pixel	Blackmagic RAW	3:1, 8:1, 12:1, 18:1	Q0, Q1, Q3, Q5	None 1.3x 1.5x 1.6x 1.66 1.8x 2.0x
	2.4:1	60	17,520 x 7,296	50.81 x 21.16	55.04	Full Width	17K	14.88					
	2:1	60	16,128 x 8,040	46.77 x 23.32	52.26	Full Height	17K	16.40					
	17:9	60	15,360 x 8,040	44.54 x 23.32	50.28	Full Height	17K	16.40					
	16:9	60	14,304 x 8,040	41.48 x 23.32	47.59	Full Height	17K	16.40					
Full Frame (LF)	3:2	60	12,288 x 8,040	35.64 x 23.32	42.59	Full Height	12K	16.40	Pixel for pixel	Blackmagic RAW	3:1, 8:1, 12:1, 18:1	Q0, Q1, Q3, Q5	
	16:9	70	12,288 x 6,912	35.64 x 20.04	40.89	Cropped	12K	14.10					
	17:9	72	12,288 x 6,480	35.64 x 18.79	40.28	Cropped	12K	13.22					
	2.4:1	90	12,288 x 5,112	35.64 x 14.82	38.60	Cropped	12K	10.43					
	6:5	60	9,648 x 8,040	27.98 x 23.32	36.42	Full Height	12K	16.40					
65mm Format	2.2:1	100	11,680 x 5,360	50.81 x 23.32	55.90	Open Gate	8K	9.0	Scaled	Blackmagic RAW	3:1, 5:1, 8:1, 12:1	Q0, Q1, Q3, Q5	
	2:1	100	10,752 x 5,360	46.77 x 23.32	52.26	Full Height	8K	9.0					
Full Frame (LF)	3:2	100	8,192 x 5,360	35.64 x 23.32	42.59	Full Height	8K	9.0					
	16:9	120	8,192 x 4,608	35.64 x 20.04	40.89	Cropped	8K	7.74					
	17:9	130	8,192 x 4,320	35.64 x 18.79	40.28	Cropped	8K	7.26					
	2.4:1	170	8,192 x 3,408	35.64 x 14.82	38.60	Cropped	8K	5.73					
65mm Format	2.2:1	100	5,840 x 2,680	50.81 x 23.32	55.90	Open Gate	4K	9.0	Scaled	Blackmagic RAW	3:1, 4:1, 5:1, 6:1	Q0, Q1, Q3, Q5	
	2:1	100	5,376 x 2,680	46.77 x 23.32	52.26	Full Height	4K	9.0					
Full Frame (LF)	3:2	100	4,096 x 2,680	35.64 x 23.32	42.59	Full Height	4K	9.0					
	16:9	120	4,096 x 2,304	35.64 x 20.04	40.89	Full Width	4K	7.74					
	17:9	130	4,096 x 2,160	35.64 x 18.79	40.28	Full Width	4K	7.26					
	2.4:1	170	4,096 x 1,704	35.64 x 14.82	38.60	Full Width	4K	5.73					

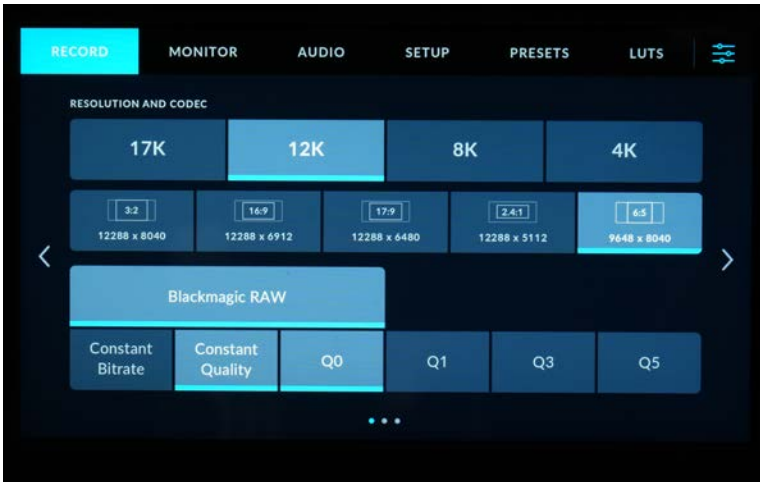
Note: This chart is an update from earlier FDTimes version. This hopefully clarifies wh, for example, 65mm Format 11,680 x 5,360 is in the 8K menu section. It's just there because of convenience in the camera's menu layout which was running out of space (see next page). It's not downsampled in camera; you can do that in DaVinci Resolve.

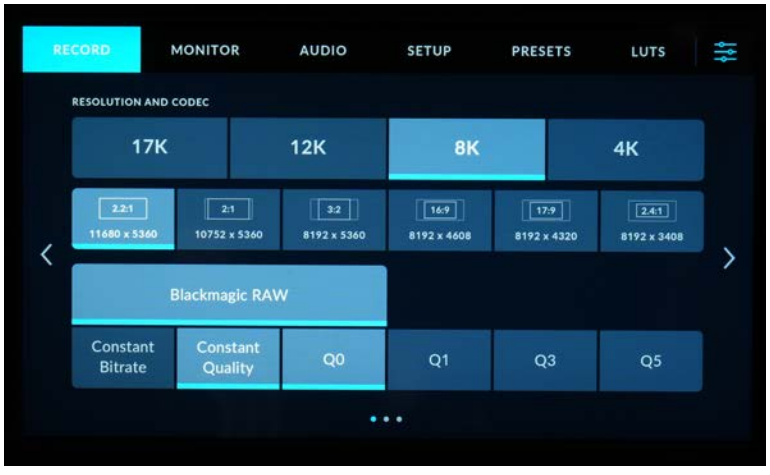
URSA 65 Recording Menus

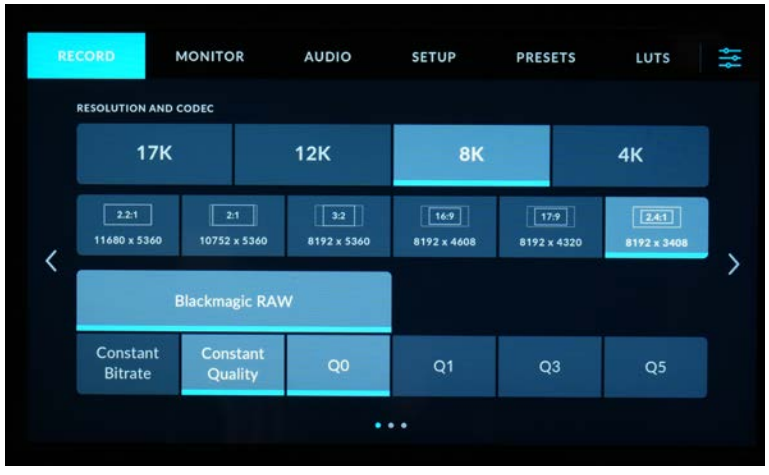


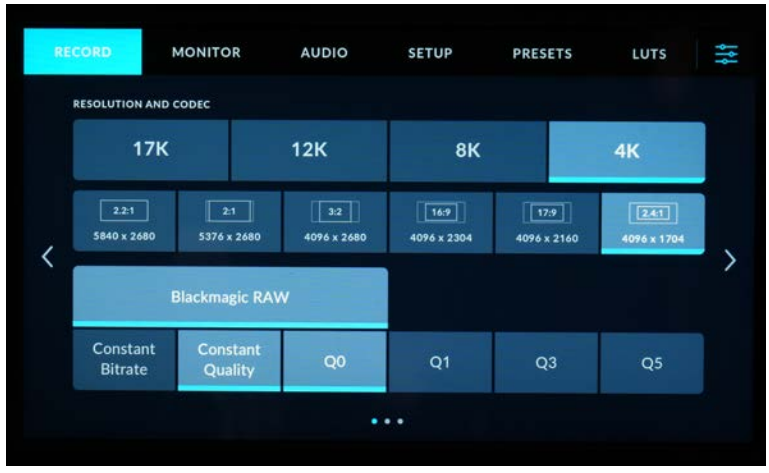




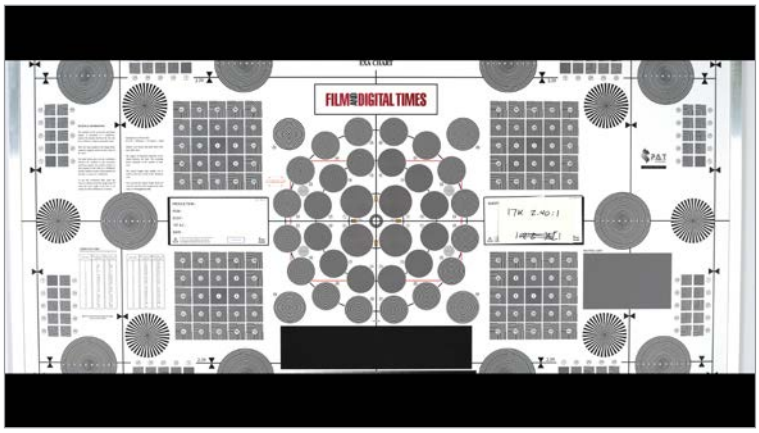




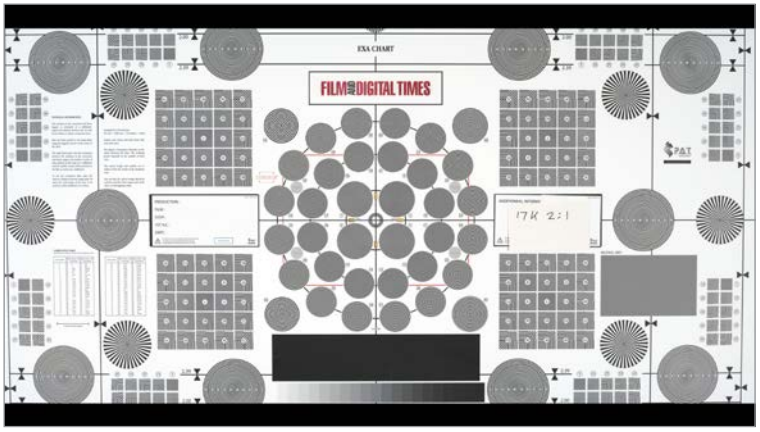




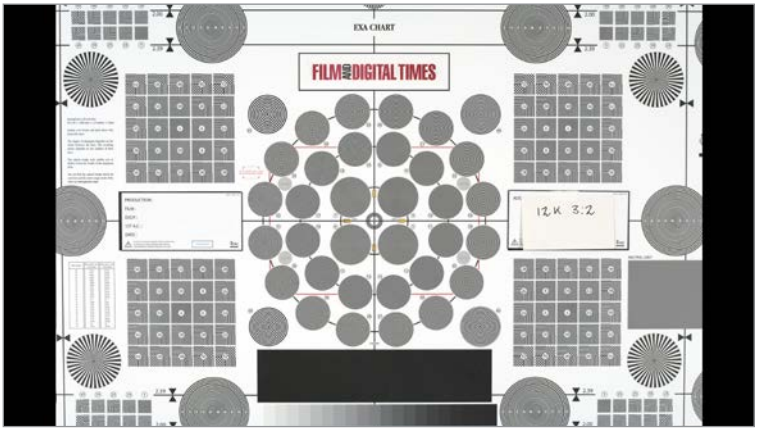
Blackmagic URSA Cine 17K 65 — Formats



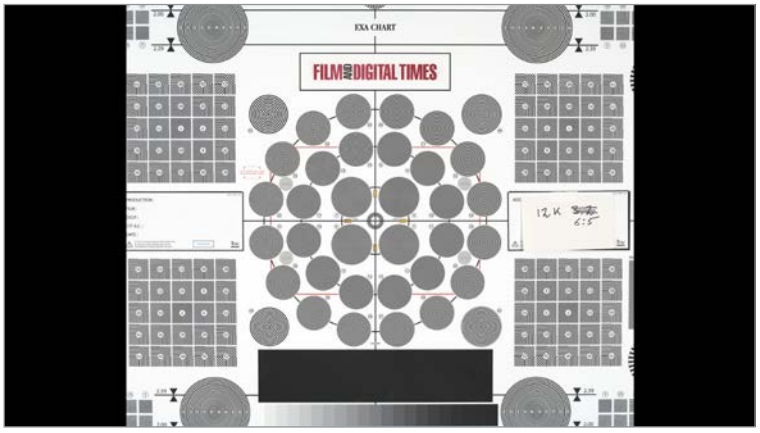
65mm Format 17K 2.4:1



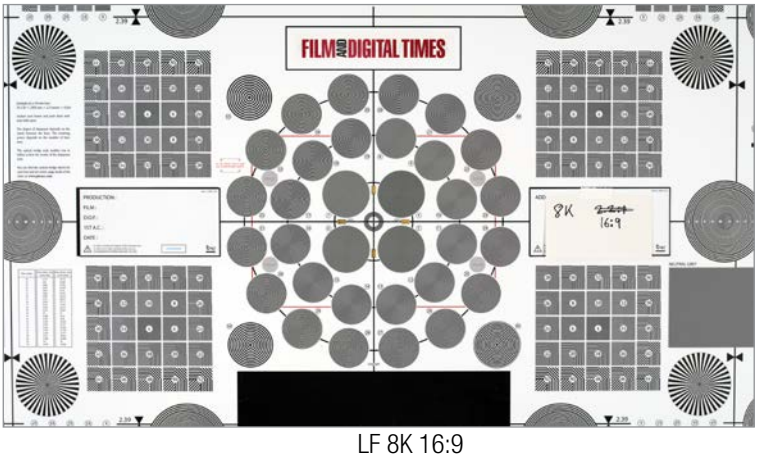
65mm Format 17K 2:1



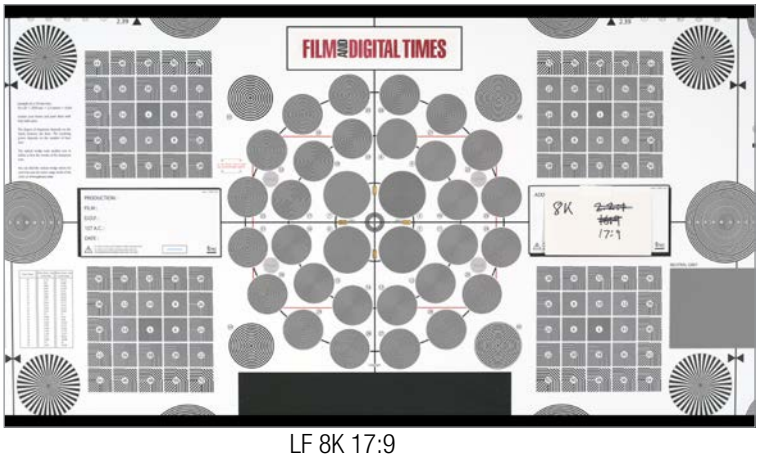
LF 12K 3:2



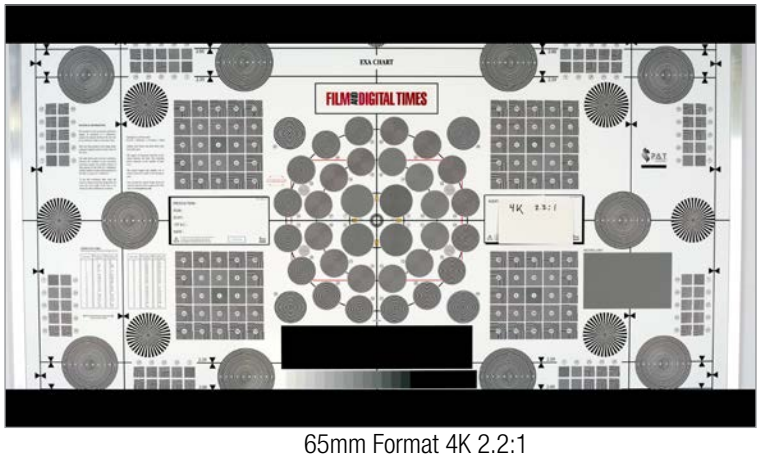
LF Format 12K 6:5 (1.2:1) classic 2x anamorphic squeeze



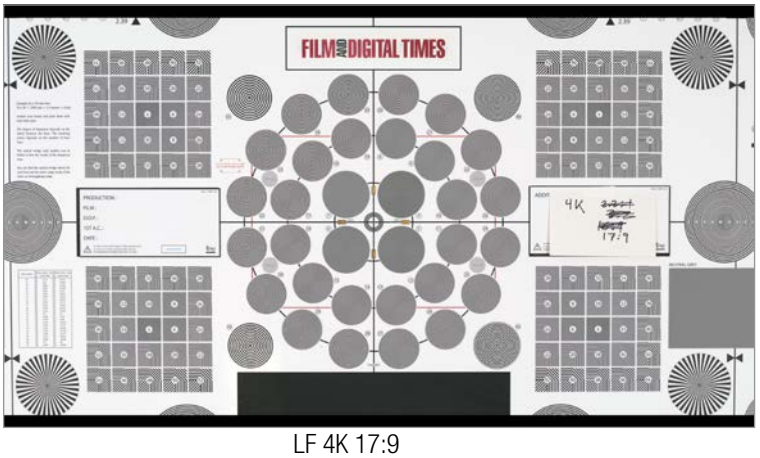
LF 8K 16:9



LF 8K 17:9



65mm Format 4K 2.2:1



LF 4K 17:9

URSA Cine 17K 65 with 3 Monitors & EVF

You'll probably never need this many monitors, we had the Blackmagic PYXIS Monitor running simultaneously with everything else. Normally, you would unplug the EVF and connect the PYXIS Monitor instead

URSA Cine 17K 65 with its 2 Onboard Monitors & EVF

Bun-G-Ring

Bun-G-Ring is a clever, compact, quick, clip-on device to test or hold filters. Using bungee cords reinforced with sailboat-racing strength Dyneema, the Bun-G-Ring is faster than a mattebox filter tray and a lot better than using gaffer tape. It's the product from a team of film professionals, including camera assistant Stevie Vos and gaffer Erno Das.

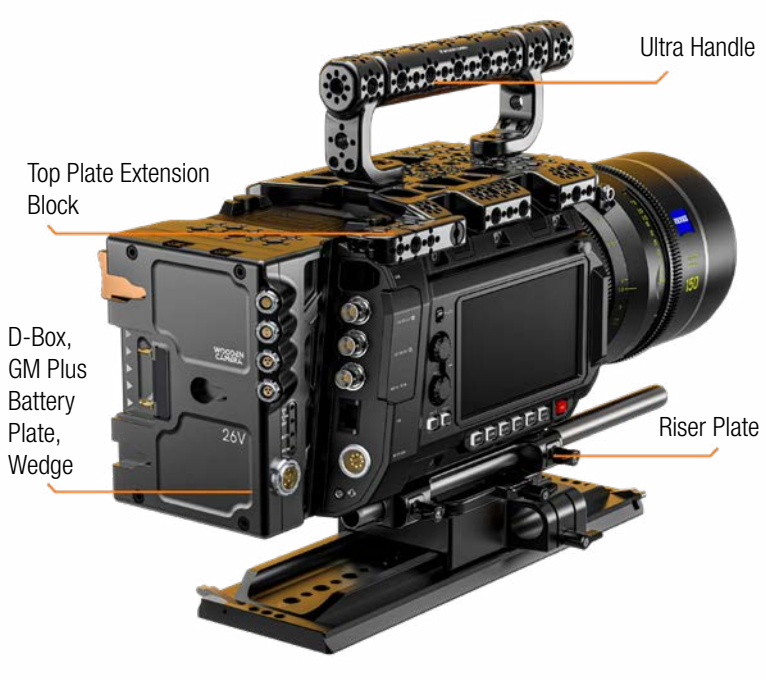
Bun-G-Ring is distributed by Second Reef.
bun-g-ring.com *Cine Gear booth 062.*

Wooden Camera AKS for URSA Cine 12K & 17K

Wooden Camera Accessory System for Blackmagic URSA Cine 12K LF and 17K 65 Cameras.

Exploded view: URSA Cine Camera, Wedge Plate, D-Box, and Anton/Bauer Gold Mount Plus Battery.

Exploded View of Base Plate System with ARCA and Studio Bases.



Wooden Camera has new accessories (AKS) Blackmagic URSA Cine 12K LF and 17K 65 cameras.

Dominick Aiello, Divisional Senior Director of Accessories at Creative Solutions, explains: "We mimicked the vent design in our ARCA Riser and Top Plate to ensure the accessories would not impede airflow. All switches and accessory I/O ports were left clear.

When we saw the camera's slanted back, we wanted to build a wedge to keep the rear battery straight for bigger builds.

"It is not that there's a problem with the URSA Cine cameras' slant back. But from all my years of building accessories in the rental world, I remember the Panaflex and ARRI magazines that caused the center of gravity to rise. Most digital cameras have flat backs which make it easy to keep the weight low even when adding accessories to the battery plates, like the MDR Cradles or Teradek Bolt Cradles. When is center of gravity important? In hand-held situations. High CG causes the camera to feel loose on the shoulder. Steadicam is the other main situation."

If you prefer not to use the URSA Cine camera's included B-mount plates, Wooden Camera has a 26V Gold Mount Plus D-Box and Wedge. Wooden Camera offers URSA Cine 12K/17K AKS as complete systems as well as a-la-carte.

The Elite Accessory System includes:

- Riser Plate
- ARCA Base Plate
- Top Plate and Top Plate Extension Block
- Top Plate Dual Rod Clamp
- Ultra Handle (3/8"-16) Standard Kit

The Core System includes the basics:

- Riser Plate
- ARCA Base Plate
- Top Plate

Cine Gear booth 822
woodencamera.com

IB/E Optics 70

Klaus Eckerl is President and CEO of IB/E Optics in Freyung, Germany. After graduating with an engineering degree, he worked in optical design for Schneider, Kodak, Zeiss, Jenaoptik and others. He founded IB/E in 2001 and built the company's large factory in Bavaria in 2012. Klaus called in to discuss their new IB/E Optics 70 series.

Klaus Eckerl:

"Interest in large format cameras and lenses is on the rise. The introduction of digital 65mm format cameras with significantly reduced prices has opened up new opportunities and makes availability much easier for customers. Cinematographers and directors now have more choices than ever before.

"From an artistic point of view, the larger format offers many advantages that are very attractive for visual capture. The 65mm format relates to how we see, with a more natural depth of field, perspective and magnification than Super35 or Full Frame.

"IB/E Optics was early to develop and produce 65mm lenses. In 2012, we began a collaboration with ARRI Rental to provide 65mm lenses for their ALEXA 65 digital camera. At the time, we looked at readily available medium format lenses from renowned manufacturers, including Hasselblad H and V, Mamiya 645, Pentax and Leica S lenses. The results were the ARRI 65, ARRI 65S and ARRI DNA rehoused lens series. TLS and other providers also rehoused 65mm format lenses.

"After the introduction of ARRI Rental lenses, IB/E decided to design and produce our own lenses from scratch. We started developing a tunable lens set early on. Even then, we wrote into our specifications that the optics should also cover large format sensors. This was the birth of the Tribe7 series of Blackwing7 optics.

"We realized how important it was to have a variety of options that offered a wider range of imaging properties. The Blackwing7 lenses were designed with apertures wider than T2.0 and with various tunings.

"The most recent Blackwing7 is the 17mm T 1.9 which covers the new Blackmagic 17K 65 and Fujifilm GFX ETERNA cameras. Until recently, the use of 65mm format was restricted to a small, limited pool of cameras. This meant that only a few films a year could be produced in 65mm format, and the unique aesthetics of this format remained largely in the domain of IMAX and ALEXA 65.

"We will continue to develop spherical and anamorphic lenses. We have found that with the growing number of sensors available to our customers, optics are playing a more important role than ever before—which is a good thing. We have therefore decided to develop a new family of lenses that will cover the larger sensors of tomorrow.

IB/E 70 Concept Announcement

"Our new lenses—we call them IB/E 70—should give us the opportunity to better understand the desires of cinematographers directors, rental houses and production companies. These new lenses have exceptional image quality with a pleasing balance of sharpness and beautiful blurs. Cooke /i metadata technology is built in. They are also capable of having tuning options. Lightweight and compact, the IB/E 70 lenses are designed, manufactured and assembled by a team of 55 people in our factory in Freyung, Germany with top quality materials and fine engineering.

"IBE Optics is pleased to announce this new set of prime lenses for 65mm format cameras at Cine Gear Expo LA on June 6-7. We will present a pre-production series of IB/E 70 lenses for the first time on an ARRI ALEXA 65 camera so users can get their own personal impressions of the optics.

"The IB/E 70 lenses cover the new generation of larger format digital sensors, including the ARRI ALEXA 265, Blackmagic URSA Cine 17K 65 and Fujifilm GFX ETERNA cameras."

IB/E Optics is in the Bavarian Pavilion at Cine Gear LA, booth 062. ibe-optics.com

IB/E Optics 70

Lens	Maximum Aperture	Minimum Focus[1]	Iris Blades	Length[2]	Weight	Front Diameter	Mount	Image Circle Ø
19mm	T1.7	TBA	9	14 cm	1.9 kg / 4.2 lb	104 mm	PL or LPL	59.8 mm
24mm	T1.7	17 cm / 6.7"	9	12.8 cm	1.6 kg / 3.5 lb			
35mm	T1.7	17 cm / 6.7"	9	12.8 cm	1.6 kg / 3.5 lb			
50mm	T1.7	22 cm / 8.6"	9	12.8 cm	1.6 kg / 3.5 lb			
75mm	T1.7	43 cm / 1'5"	TBA	12.8 cm	1.7 kg / 3.75 lb			
135mm	T1.7	88 cm / 2'10"	TBA	14 cm	1.9 kg / 4.2 lb			

Coverage: 65mm Format
Optical design: Aspheric elements, apochromatic color correction.
Lens data: Cooke /i Technology metadata via contacts in mount.
Mounts: PL and LPL.
Geared rings: Industry-standard M0.8 gears for focus and iris.
Tuning options: Flares, iris, color temperature, etc. on request.

Breathing: Less than 3% - 5 %.
Color: High Performance color correction and extremely low lateral color aberration.

1. Measured from front of lens.
2. Measured from PL mount flange.

ibe-optics.com

IB/E Optics Full Frame to 65mm Format Expanders

Available in 3 versions:
PL-PL, LPL-PL, and LPL-LPL.

If you can't wait for the IB/E Optics 70 lenses, their new PLx1.4 65-E Asph Expander is ready now. It accepts most Full Frame PL Mount and LPL Mount lenses and expands the image circle and focal length by 1.4x to cover 65mm Format up to a 60 mm image diameter. You only lose 1 stop of light.

For example, your current 14 mm T2 Full Frame Cine Lens may have a 43.3 mm image circle. With the new IB/E Expander, 14mm (FF) x 1.4 = 19.6mm in 65mm Format. The image circle math is: 43.3 mm (FF) x 1.4 = 60.62 mm diagonal (65mm Format). Since you lose 1 stop, maximum aperture is T2.8.

But, you may ask, does this Expander degrade the image? With two aspheric elements and high-index low-dispersion glass for maximum resolution and contrast, with minimal aberrations, the IB/E Expander retains the character of the original lens—even wide open. Also, exceptionally, the IB/E 1.4 65-E Asph expanders have lens metadata pass-through contacts.

- Expands Full Frame (large Format / VV) lenses to 65mm Format
- 60 mm maximum image diameter (for 65mm Format sensors).
- Lens Data pass-through (/i electronic contacts on both ends at 12 o'clock positions).
- 1.4x Magnification.
- T2.0 Max. Input T-Stop.
- 1 stop light loss.
- Weight: 0.7 kg / 1.5 lb.
- Not compatible with mirror-reflex cameras.
- High-index, low-dispersion glass, 2 aspheric elements, Extended Color Correction (APO).

Tilta Nucleus-M II Wireless Lens Control System

Tilta Variable ND in the Mirage Pro Mattebox, driven by Nucleus-M II motor

Nucleus-M II Hand Unit

This knob can control the VND

Nucleus-M II Hand Unit with Electronic Marking Disk

Tilta Left and Right Handgrips with FIZ controls

Tilta Variable ND

Tilta Mirage Pro Mattebox

Tilta Nucleus-M II Wireless Lens Control System

Left Handgrip

Nucleus-M II Hand Unit

Lens Motors

Right Handgrip with Zoom Rocker

Tilta's new Nucleus-M II System provides wireless control of up to 4 motors—Focus, Iris, Zoom as well as a 4th channel for a device like Tilta's Variable ND in the Mirage Pro Mattebox or perhaps a camera slider.

If you have worked with Tilta's first generation Nucleus-M, the new Nucleus-M II will feel familiar. It is backwards-compatible and the learning-curve is easy despite many new features.

Tilta Nucleus-M II Features

The new Nucleus-M II **Hand Unit** has 4 controls: focus knob, iris slider, zoom rocker and a dial (which we used for the VND). Each control can be set to another function. Camera menu settings such as ISO, shutter angle and white balance can be controlled for certain cameras. The knob has adjustable dampening and lens mapping can be stored in the Hand Unit's lens library.

The Nucleus-M II does not assume all focus pullers are right-handed. The focus hand wheel and zoom rocker module detaches so you can set it up on the other side of the Nucleus-M II for left-hand focus-iris-zoom control.

The new **Electronic Marking Disk** is super interesting. Simply remove your regular analog focus disk and replace it with this electronic focus disk. Its digital overlay can expand the focus scale, show depth of field and enable focus marks.

Redesigned Nucleus-M II **Lens Motors** are smaller, stronger and faster. They have higher torque and color-coded LED indicators. The radios are built in—no external motor driver unit is required. Powered from the camera or battery's D-Tap, the motors daisy-chain together.

The Hand Unit can hand off to the **Left and Right Handgrips** so the camera operator can control, for example, focus and iris with the left handgrip and zoom with the right handgrip.

The Hand Unit and Handgrips are powered by readily-available **Sony NP-F550 batteries** that should provide 8 to 12 hours of operating time.

Tilta Nucleus-M II Ultimate Kit

This Nucleus-M II Ultimate Kit comes in a waterproof peli-style case. Components inside include: Nucleus-M II Hand Unit, Electronic Focus Disk, five traditional focus disks, right and left Handgrips, two Nucleus-M II motors, a Hirth-tooth rosette adapter, one 0.5 mm and two 0.8 mm motor gears, 15 and 19 mm rod mounts, a baby-pin to mount the Hand Unit on a stand, a Hand Unit Monitor Mount, and a 7-pin to D-Tap cables.

tilta.com Cine Gear booth # 959

Blackmagic PYXIS 12K

L-R: PYXIS 12K models with PL Mount, EF Mount and L-Mount

Blackmagic introduced the PYXIS 12K at NAB 2025. It was just a year since the cute and very capable PYXIS 6K camera was a nice, big surprise in Aril 2024.

The new PYXIS 12K uses the same Full Frame RGBW sensor (35.64 x 23.32 mm) as the URSA Cine 12K LF with similar 16 stops of dynamic range. The difference is a slightly slower sensor readout speed and slower maximum fps. PYXIS 12K has dual CFexpress Type B media card slots, 10G Ethernet and Blackmagic Cloud global sync.

PYXIS 12K comes in three versions: with L-Mount, PL or Locking EF lens mount. At this time, you cannot swap mounts once they leave the factory—presumably because the lens mounts all have active electronic contacts and metadata pass-through.

- PYXIS 12K records Open Gate (full sensor width and height), 3:2 aspect ratio in 12K (12288 x 8040) up to 40 fps.
- In 8K or 4K Open Gate, top speed is 72 fps.
- 8K or 4K 2.4:1 top speed is 112 fps.

The rugged camera body is CNC-machined from aluminum. There are many ¼-20 and ⅜-16 threaded mounting points on top and bottom.

A 4" LCD 1920x1080 1500 nit monitor/menu touchscreen is built into the camera left side. It does not tilt or swing away, so you'll probably want Blackmagic's accessory URSA Cine EVF and additional PYXIS Monitor EVF Kit. The PYXIS Monitor has a 5" HDR Touchscreen display providing full camera control. The URSA Cine EVF has an excellent 1920 x 1080 OLED display with built in proximity sensor, 4 element optical diopter and rubber eyecup that accommodates standard soft chamois eyepiece covers. And don't forget Blackmagic's URSA Cine Handle that attaches to the top of the PYXIS 12K. You need it to attach the URSA Cine EVF.

The standard accessory plate on the right side of the camera is made from the same aircraft grade aluminum as the camera body and has two ¼-20 and one ⅜-16" threaded mounts.

If you want to attach an SSD drive for external recording via USB-C or a mobile phone for live streaming or a cellular cloud connection, then Blackmagic includes an SSD plate with the camera.

Of course, many camera crews will festoon the camera with handgrips, MDR, wireless video and audio, and more. That's when you want a Blackmagic PYXIS Rosette Plate that bolts onto the camera right side and provides five 1/4-20, four 3/8-20 threaded mounts, and a standard Hirth-tooth rosette handgrips and extension arms.

PYXIS 12K records 12-bit Blackmagic RAW and HD H.264 proxy files. In addition to the two internal CFexpress slots, there's a USB-C expansion port for recording directly to an external SSD.

PYXIS 12K with URSA Cine EVF

PYXIS 5" HDR Touchscreen Monitor Kit

Blackmagic PYXIS 12K

PYXIS 12K with PL Mount

PYXIS 12K with L-Mount

PYXIS 12K with EF -Mount

In addition to the Blackmagic RAW (BRAW) "camera original" file, PYXIS 12K can record an H.264 1920 x 1080, 8-bit 4:2:0 HD proxy. You can upload these small proxy file directly to Blackmagic Cloud in real time, even while the camera is recording.

This can be helpful for quick-turnaround work because the files can transfer directly to an editor's DaVinci Resolve media bin. Any editor working anywhere in the world can get to work immediately while you are filming.

When uploading to Blackmagic Cloud, you can use an Apple or Android phone to connect to the Internet. Just connect your smartphone to the camera's USB-C port and the configure the PYXIS 12K menu for mobile data. You can also connect directly via wired Ethernet using the camera's Ethernet port.

At the rear of the PYXIS 12K, you'll find a 12G-SDI output for monitoring in SDR, HDR, HD or 4K UHD. Menu settings (familiar to Blackmagic camera users) enable or disable viewing of camera status and overlays.

Blackmagic PYXIS 12K is coming in July.
blackmagicdesign.com/products/blackmagicpyxis
Cine Gear Expo booth S3099

Blackmagic PYXIS 12K Specs

- 35.64mm x 23.32mm Full Frame RGBW 12K 12288 x 8040 sensor.
- Pixel Pitch: 2.9 microns
- Choice of models with Active L-Mount, PL or locking EF lens mounts.
- Built-in 4" HDR 1500 nit LCD touchscreen.
- Records Blackmagic RAW and H.264 proxies.
- Dynamic Range: 16 Stops.
- Native ISO: 800
- Two internal CFexpress Type B media card slots.
- 10G RJ-45 Ethernet port.
- 12G-SDI output up to 2160p60.
- REF IN / Timecode IN BNC connector.
- Mini XLR audio input.
- Onboard BP-U battery port.
- +12 VDC Power Input connector.

A few of the many resolutions and frame rates:

- 12,288 x 8040 (12K 3:2 Open Gate FF) up to 40 fps
- 8688 x 4896 (9K 16:9 Super35) up to 65 fps
- 8192 x 3408 (8K 2.4:1 FF) up to 112 fps
- 8192 x 5360 (8K 3:2 open gate) up to 72 fps
- 4096 x 2680 (4K 3:2 open gate) up to 72 fps

Camera Left Side


Camera Right Side with Standard Plate

Sony ILME-FX2

A pre-production Sony FX2 (official name ILME-FX2) camera arrived without fanfare or instructions. So please forgive errors and specs that may have changed. Expect lots of fanfare upon launch. The tilting EVF viewfinder is amazing. Some cameras have had one in the past, they all should have it now. While tilting monitors at the back are great, you cannot always the image in bright daylight. The EVF on the Sony FX2 is big and its rubber eyecup keeps out stray light.

There are lots of other things to like. It has a 33 Megapixel sensor which is great for taking stills as well as video. (The FX3 sensor is 12.1 Megapixels.) Although the name FX2 suggests a step down from FX3, in many ways, I think of it as a step up.

See the Sony FX2 at Cine Gear.
Sony booth S3509. *sonycine.com*

Video: DCI 4K 17:9 - 4096 x 2160 H.264 4:2:2 24 fps

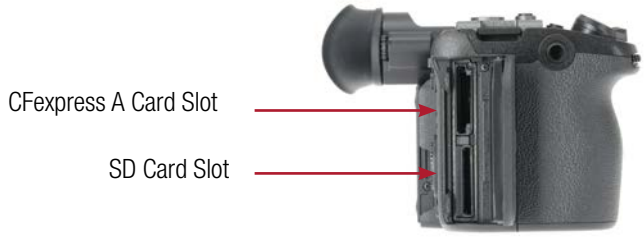
Stills: 33 Megapixel Full Frame, full height 3:2

Below, left: native E-mount. Below right: with PL Mount Adapter.

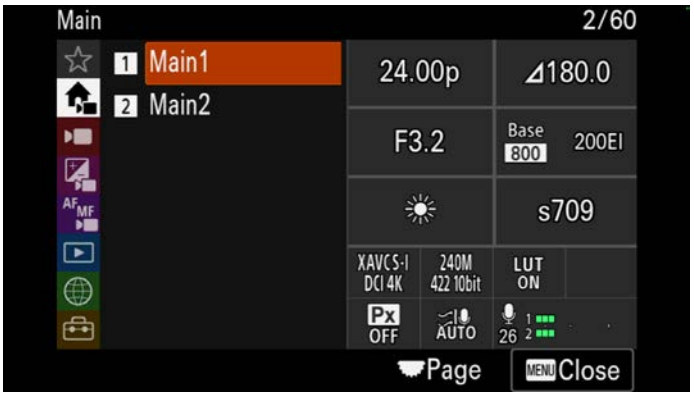
Sony FX2

This is the Sony VENICE style “Big 6” Menu

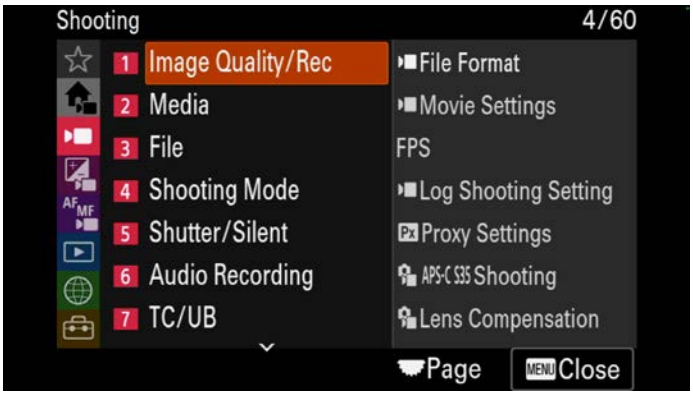
This is the Sony Alpha style menu.



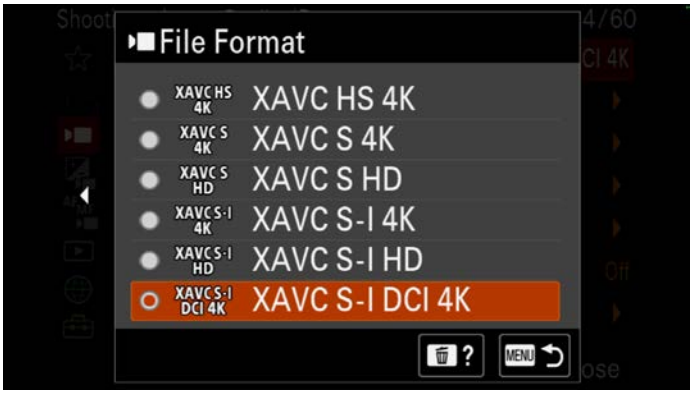
Sony FX2



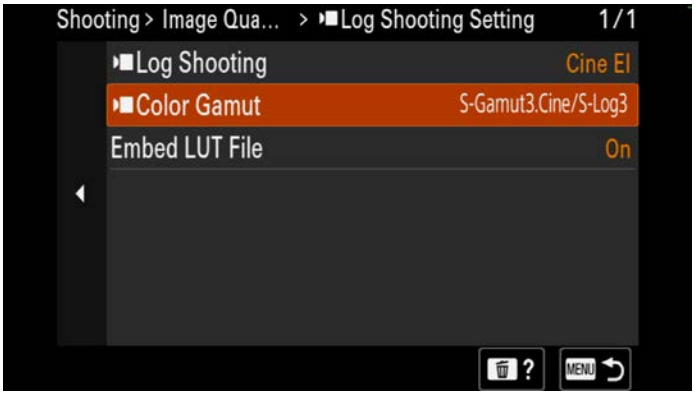
1. Main Menu settings at a glance.



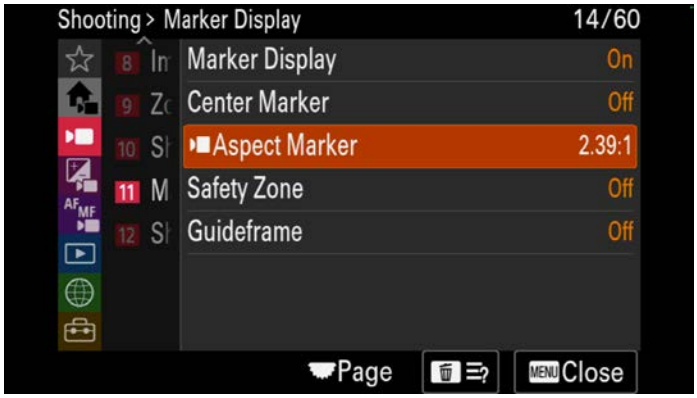
2. Shooting Menu tab.



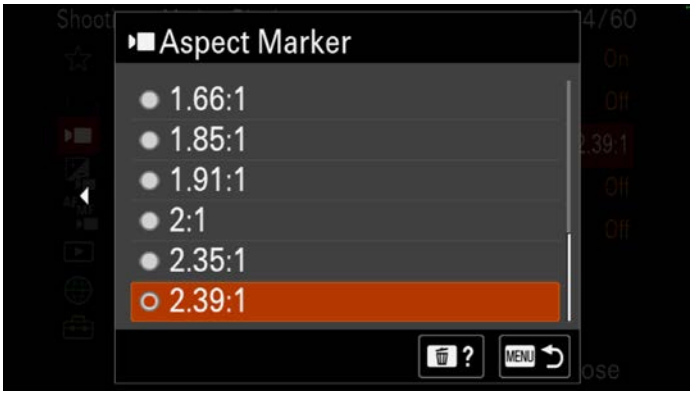
3. File Formats.



6. Color Space and Gamut: S-Gamut3.Cine/S-Log3.

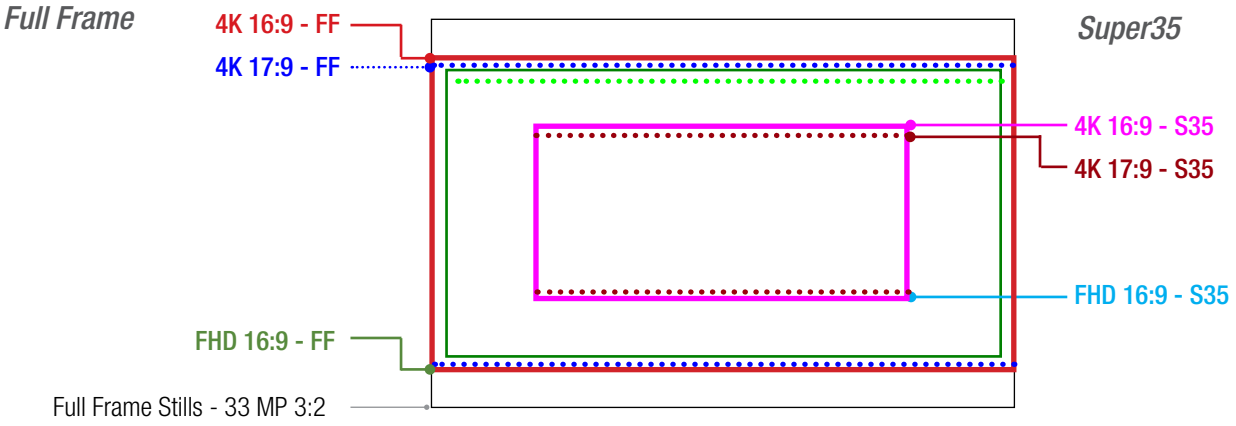


12. Framelines are called Marker Display Aspect Marker is Aspect Ratio



13. Lots of Aspect Ratios available.

Sony FX2



Imager Mode	Format	Resolution	W x H (mm)	Project Frame Rate	fps
4K 16:9	Full Frame		35.9 x 20.2	23.98, 25, 29.97	1-30
4K 17:9	Full Frame		35.9 x 18.9	23.98, 24, 25, 29.97	1-30
FHD 16:9	Full Frame			23.98, 25, 29.97, 50, 59.94, 119.88	1-60 / 100 / 120
4K 16:9	Super35			23.98, 25, 29.97, 50, 59.94	1-60
4K 17:9	Super35	4096 x 2160		23.98, 24, 25, 29.97, 50, 59.94	1-60
FHD 16:9	Super35		24.0 x 12.6	23.98, 25, 29.97, 50, 59.94, 119.88	1-60 / 100 / 120

Sony FX2 vs FX3

Sony FX2

Sony FX3

	FX2	FX3 (as of Ver 6.02)
Image Sensor	34.1 Megapixels / 33 MP stills / 27.6 MP video	12.1 Megapixels / 10.2 MP effective
Sensor Size	35.6 x 23.8 mm	35.6 x 23.8 mm
Formats	FF DCI 4K, QFHD / S35 DCI 4K, QFHD	FF: DCI 4K, QFHD / S35: FHD
Maximum Frame Rates	FF 4K DCI: 29.97p / FHD 119.88p S35 4K: 59.94p	FF: 4K 119.88p / FHD 119.88p
Recording Formats	XAVC S / XAVC S-I / XAVC HS	XAVC S / XAVC S-I / XAVC HS
Bit-Depth / Codec	10bit 4:2:2, Long GOP, All-I / H.264, H.265	10bit 4:2:2, Long GOP, All-I / H.264, H.265
Flex ISO	100 -51,200 (expandable: 50-102,400)	80 - 409600 (expanded)
Base ISO	800 / 4000	800 / 12800
Latitude	15+ stops in S-Log3	15+ stops in S-Log3
Stabilization (IBIS)	5-axis (Dynamic active/ Active/ Standard) Center 5 stops, Periphery 5 stops	5-axis (Active/ Standard) 5.5 stops
16-Bit RAW output via HDMI	Super35 — 4672 x 2628 (16:9) up to 59.94p	Full Frame
Menus	VENICE Style “Big 6” Menu & Sony Alpha Style	Sony Alpha Style
Movie / Still Mode	Switch at rear	—
EVF with eyecup	3,686,400 Dot Viewfinder tilts 0-90°	—
Assignable Buttons	7	6
Log Recording	Up to 16 LUT files can be imported	—
Log Stills Capture Mode	33 MP stills (JPEG / HEIF) with S-Log3 applied	—
Dimensions mm / inches	129.7 x 77.8 x 103.7 mm / 5.1 x 3.1 x 4.1"	129.7 x 77.8 x 84.6 mm / 5.1 x 3.1 x 3.3 "
Weight	23. 95 oz. 679 g	22.6 oz. / 640 g.
First Introduced	May 2025	Feb 2021

Kino Flo CELEB IKON

- 2x1 rugged Kino Flo RGBWW LED fixture.
- First IP 65 rated (water resistant) from Kino Flo.
- Improved color science.
- Improved daylight and tungsten.
- Full power (600W) to all white and color points.
- 18,030 Lux at 1 m / 1,675 Footcandles at 3.3 ft.
- No color spikes. CRI: 98.2. TLCI: 99
- Built-in power supply.

Kino Flo's Frieder Hochheim (President), Jim Bogdanowicz (Color Science and Software Engineer) and Alan Ipakchi (Global Brand Manager) discuss the new Kino Flo CELEB IKON LED fixture.

Alan: "Our new fixture builds on the popularity of the CELEB family. The CELEB IKON is an IP 65 rated panel. It's rugged and can withstand the elements. It's meant for rental houses, film and TV production. Kino Flo has always been known for exceptional color science. The CELEB IKON actually builds on that with full spectrum light. And it is unique in providing full power to all its color points."

Frieder: "Kino Flo has also been known for lightweight, portable lighting fixtures. Our new CELEB IKON is the first time we've responded to gaffers saying, 'But this other unit here is brighter.' Well, if you want bright, here is our new fixture that really is brighter.

"It is also very compact and relatively light weight. The power supply is built in. That means there's no cable connecting between a big, heavy power supply and the fixture head. With fewer cables, there's less rigging. Microelectronics have come a long way to enable this. And the big thing is being able to push full wattage out of every individual LED."

Jim: "As with our current LED products, the CELEB IKON is a five-color RGBWW system—with 2,700° Kelvin White, 6,500° Kelvin White, as well as Red, Green and Blue LEDs. And so, our 600 watt CELEB IKON fixture technically has a total of 3,000 watts because each individual LED by itself can be driven to the full 600 watts.

"The emphasis at Kino Flo has always been to have the highest color rendering white LEDs to provide the fullest, broadest spectrum with the highest CRI or TLCI numbers when comparing the spectrum to daylight, the higher Kelvin range or something more like a Planckian locus. On the lower end of the spectrum range, it's always been to try to be as close to those types of spectrums. With the CELEB IKON, the whites that we've chosen are much better than even some of our previous products.

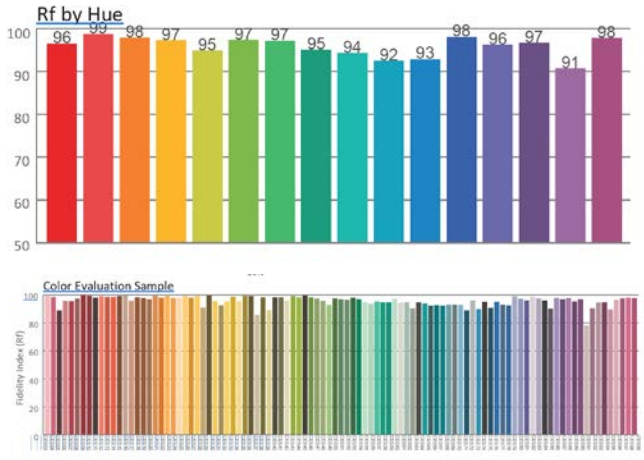
"For example, if you wanted to film a candle flame or something at a very low color temperature, let's say 1500° Kelvin, the CELEB IKON has a broader spectrum red, so you're able to work at these lower color temperatures and maintain a higher spectral quality. The fixture has presets for things like candle light, fire and so on. And, there's a gel selection mode where you choose your base color temperature along with the type of gel."

Frieder: "We don't assume you are putting the gel onto a 3,200° Kelvin fixture. CELEB IKON gives you the ability to vary the source color temperature as well as the gel. You can ride that source Kelvin and the gel to enjoy another aesthetic that you would not have been able to achieve if you were simply locked into a single color temperature.

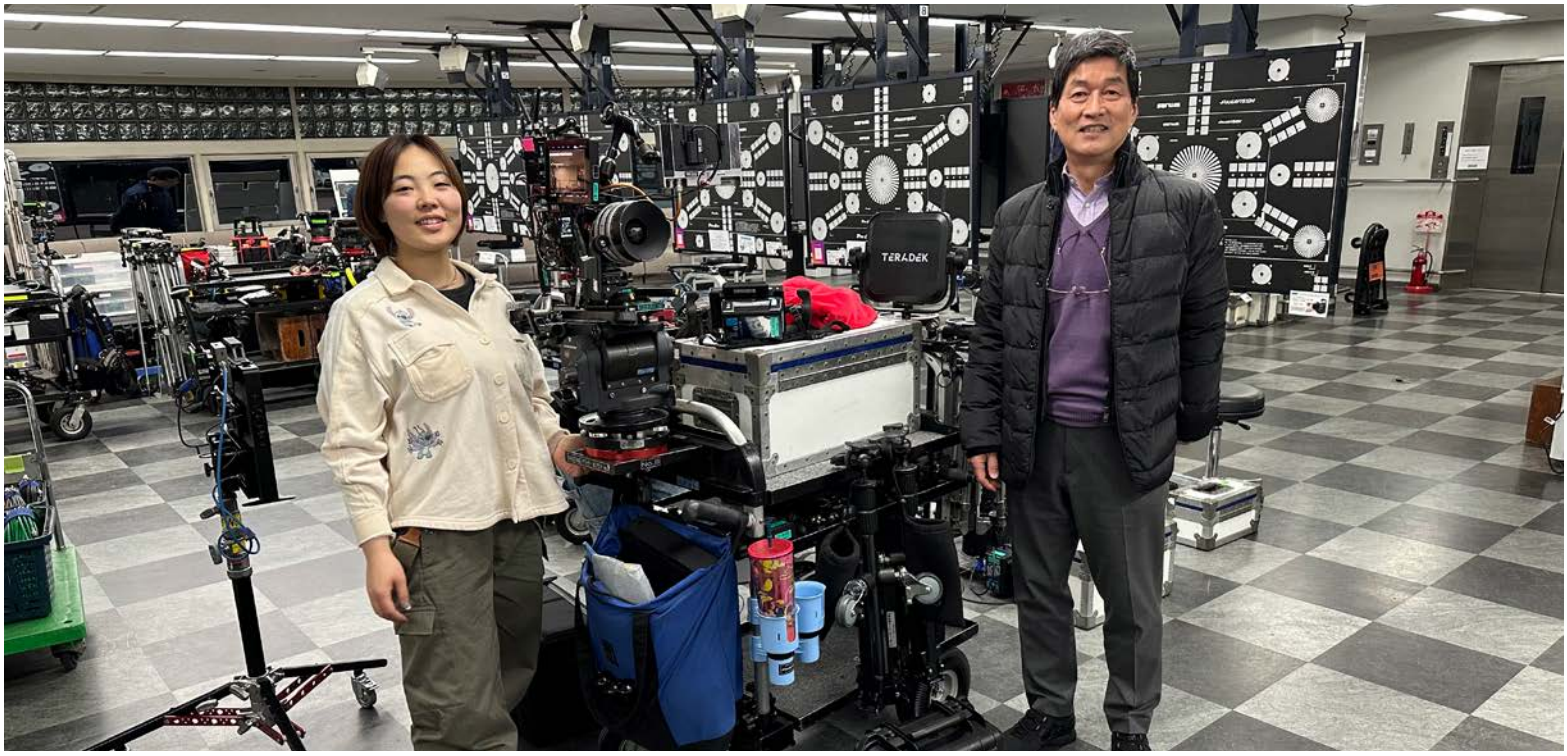
"Everything that we have been doing was essentially predicated on what we understand about digital cameras. For the past year, Jim has been doing more camera profiling. There appears to be a closer alignment of the cameras out there. We're not seeing the range of differences in cameras' responses that we've had in the past. It looks like they're now coalescing around a more common spectral response, which helps our approach.

"The other thing that we're seeing is that manufacturers are taking different approaches to white light. Some companies are not using any whites at all in their fixtures. The results can be multiple peaks, and the more discontinuous you make your source, the more the cameras are going to start to see differences. Our objective was to use white phosphors to broaden the spectrum as wide as possible so you don't have all those spikes, where everything is filled in and the cameras will respond very well."

Cine Gear booth S3243. *kinoflo.com*

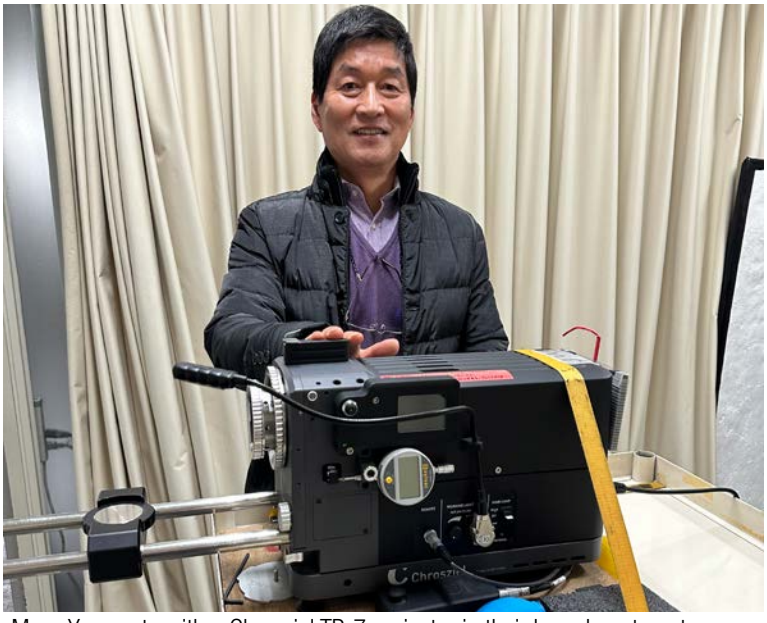


Sanwa Cine Equipment Rental Co. Tokyo



Ms. Kao Fukumoto, Focus Puller prepping a TV Commercial in Sanwa's checkout area, with Masa Yasumoto, Managing Director of Sanwa.

Prepping for a feature film at Sanwa, L-R: Ms. Mami SHIMODA, Focus Puller; Mr. Tomoki Oda, Focus Puller; Ms. Maiko NUKUMIZU, 1st AC



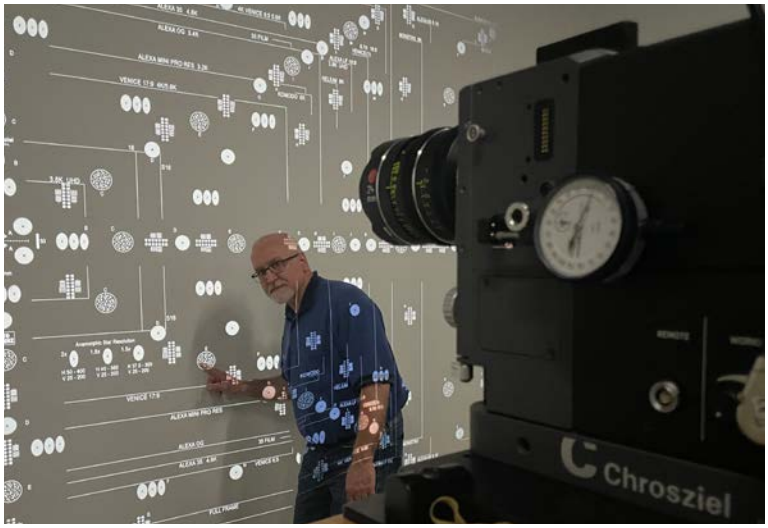
Masa Yasumoto with a Chrosziel TP-7 projector in their lens department.

It's a 30-minute walk from Tokyo's beautiful Imperial Palace East National Gardens, past Edo Castle ruins to Sanwa Cine Equipment Rental Company. The camera department occupies two buildings in Tokyo and one in Osaka. Sanwa Post Production is in Osaka. Sanwa Pro Light (and grip equipment) offices are located in a separate building in Tokyo and in Kyoto. Sanwa's ProCam Rental group is in Seoul, South Korea.

Masa Yasumoto is the Managing Director. He studied in England and worked at Samuelson's. On returning to Japan, one of his first jobs was interpreter on the original *Shogun* (1980). Sanwa supplies major feature productions, domestic and international, as well as commercials, music videos and multi-camera shows. When I flew to Japan this past February, many of the films on ANA had a Sanwa credit—including the award-winning *125 Years Memory* about the Turkish ship Ertuğrul that sank in a storm off Wakayama and whose crew were rescued by the villagers.

Additional productions supplied by Sanwa: *Monster, Godzilla Minus One, Tokyo Swindlers, The Queen of Villains, Alice in Borderland 2, Kokuho, Glass Heart, Rental Family, House of The Owl*, and many more. Sanwa is the Panavision agency in Japan, but they carry almost all the great cameras, lenses and the latest accessories.

Lens Projection Tutorial: Otto Nemenz, Dan Lopez, Chrosziel TP-7



Dan Lopez, Head of Opical Engineering at Otto Nemenz International (above), designed a custom reticle for their Chrosziel TP-7 Lens Projector (at right). It is available for anyone to purchase directly from Chrosziel. The target gives you an immediate indication of how much image area your lens will cover, how large a format it can work with, where it vignettes, begins shading, as well as all the usual things that lens projectors do.

Dan explained, "In most cases, when inspecting a lens on the projector, I am looking for symmetry in resolution and aberration (Spherical and Chromatic). Having less resolution and more aberrations as you go out from the center of the image has become a very desired character of lenses today, so making sure the "fall off" is symmetrical is very important. Making sure the lens clears the image size it is built for can be done on the projector as well. I also check for the quality of the Blacks: is it deep, washed, or flat?

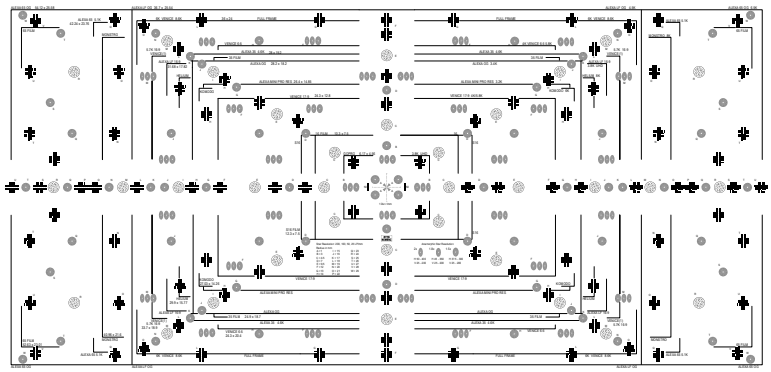
"Checking distortion characteristics is important. It especially helps when working with a customer to choose the right lenses for their project. "With existing lenses, I look for any drastic changes in the previously mentioned optical performance. Most optical adjustments or corrections will be done on the lens projector.

"When looking at lens sets, you are looking for a consistency in the image quality for each focal length. In designing our reticle for the TP-7, in adding as many sensor sizes as possible, I am able to check for coverage on a particular camera or use the different sizes as reference for most of the new camera sensors."

Otto Nemenz himself added, "After more than 50 years of looking at lenses, you develop a certain amount of experience as to what to look for. Camera crews and our technicians often look together, commenting on the technical qualities of the lenses. They look at image coverage, color, contrast, close-focus and quality (the 5 C's—well, 4 Cs and a Q). Then, you look at geometry, geometric distortion, sharpness, breathing, flares, ghosting, chromatic aberration, and lots more. After looking at these technical details, you look through the lens on a camera and shoot a test to see the artistic qualities of that lens."

The Chrosziel TP7 covers up to a 60mm image circle with its bright LED 5000K source. The original Chrosziel Siemens Star (bottom right) and other reticles are also available.

Chrosziel Cine Gear booth S3005 *chrosziel.com*



ONI custom-designed reticle for Chrosziel TP-7 lens test projector.

Chrosziel TP-7 II lens test projector.

Standard reticle for Chrosziel TP-7 projector.

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