Jon Fauer ASC www.fdtimes.com Nov 2018 Issue 91

FILM AND DIGITAL TIMES

Art, Technique and Technology in Motion Picture Production Worldwide

Launch of Canon EOS R in Maui. Photo by Jon Fauer

FILM AND DIGITAL TIMES

Art, Technique and Technology

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

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

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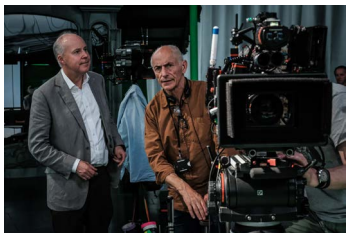
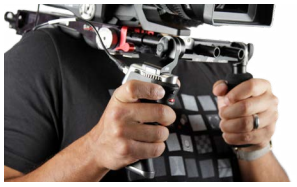




Where Are We Heading?

Mirrorless Still Cameras suggest Short FFD and Wide Mounts

Cinematographers are shooting Full Format on more productions worldwide, using ARRI ALEXA LF, Sony VENICE, RED MONSTRO 8K VV and Canon C700 FF cameras—variously called Full Frame, VistaVision, Large Format, Leica Format and Full Format. The image diagonal is 43.1mm to 46.31mm.

There are more than a few reasons for Full Format: more natural perspective, more resolution, more detail, more depth cues, more magnification, more natural depth of field, more pixels, more avoidance of distortion and more separation from the background.

Meanwhile, manufacturers are building a new class of Full Format cine lenses. Like the new cameras, they are reasonably future-proof and format independent—covering Full Format as well as Super35 and any permutation in between.

This September, photographers and cinematographers were treated to a rapid succession of new mirrorless Full Frame still camera introductions. Some do 4K video. These cameras have very shallow Flange Focal Depths (FFD) ranging from 16mm to 20mm. Lens mount diameters are large. Optical designers, as a result, have come up with interesting approaches that benefit from shallow FFD and wide lens mounts.

What next? As the still and cine worlds continue to converge, expect the next generation of motion picture cameras and lenses to be influenced by these rapid developments in the mirrorless photography world.

Leica M10
M mount 27.8mm FFD, 44 mm Ø

Sony a7 III
E-mount 18mm FFD, 46.1mm Ø

Canon EOS R
RF mount 20mm FFD, 54mm Ø

Nikon Z 7
Z mount 16mm FFD, 55mm Ø)

Leica SL
L-mount 20mm FFD, 51.6mm Ø

L-Mount Alliance among Leica, Panasonic and Sigma
L-mount 20mm FFD, 51.6mm Ø

Canon EOS R: Mirrorless vs DSLR

Canon launched their new EOS S Full Frame Mirrorless camera and lens system on September 5 simultaneously in Maui and around the world.

As seen in the comparison below, the new EOS R with 24-105 f/4 zoom is thinner and shorter than a 5D Mk IV with a comparable lens. Canon Senior Fellow Larry Thorpe's splendid *EOS R System White Paper* explains why and is is required reading.

Larry writes, "The reduction from a 44mm flange back distance in the EF mount system to the 20mm of the new RF mount system opens important additional degrees of freedom in lens designs. The pivotal innovation offered by this short distance— combined with the large 54 mm diameter RF mount—is the freedom to deploy large diameter optical elements at the very rear of the lens and closer to the large image sensor. This adds new optimization capabilities to the lens-camera imaging interface."

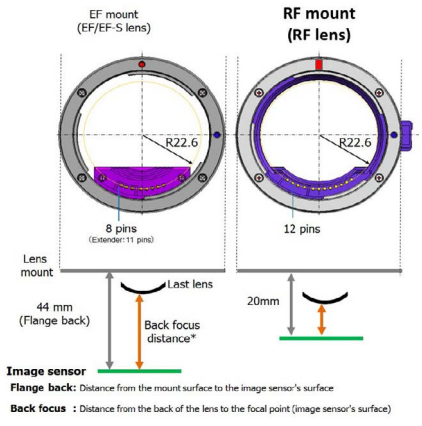
Thanks to Larry Thorpe and Canon for the images on this page.

downloads.canon.com/nw/camera/products/eos/r/downloads/eos-r-system-white-paper.pdf

Canon EOS 5D Mk IV with 24-105 f/4 EF zoom
(EF 24-105mm f/4 L IS II USM)

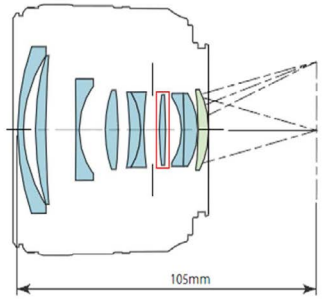
Canon EOS R with 24-105 f/4 RF zoom
(RF 24-105 f/4 L IS USM)

EF vs RF Lens Mount

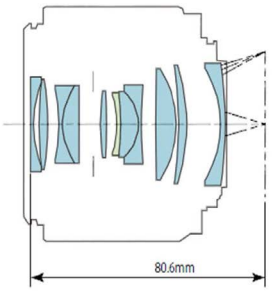


EF vs RF Lens Construction

The RF 35mm lens (below, right) has a shorter distance from the front of the lens to the camera flange than the EF lens (below left), even though it is faster and higher performance.



EF35mm f/2 IS USM



RF35mm F1.8 MACRO IS STM

Above: Celebrating the EOS R Launch in Maui, Hawaii. Below: Launching in Lahaina. (both photos with EOS R and 24-105)

EOS RF Lenses

I keep returning to the half-joking quote of a famous camera designer, "A camera is just a box onto which we put wonderful lenses."

Actually a camera is much more than a receptacle for reaping images. It requires thoughtful ergonomics, careful control and innovative design to make seamless and enjoyable the work of a photographer or cinematographer.

The EOS R camera body abounds in helpful controls and features.

Nevertheless, Canon's optical designers explained that, "After much research by our optical and camera departments, we concluded that optics were key to the new EOS R system. EOS R lenses raise the bar higher than anything we have done before. Image quality from the center to the edges of frame is enhanced. The shorter back focus distance enables a larger diameter rear element and higher image quality. Therefore, the front element can be smaller in diameter. This helps prevent flare. Additional benefits are larger apertures, higher performance and smaller size."

28-70 f/2.0 (RF 28-70mm f/2.0 L_USM)

50mm f/1.2 (RF 50mm f/1.2 USM)

24-105 f/4 (RF 24-105mm F4 L IS USM)

35mm Macro f/1.8 (RF 35mm F1.8 MACRO IS STM)

Canon EOS RF Mount and Protective Shutter

The new RF mount and lenses have 12 electrical pogo pin contacts for faster autofocus and faster Optical Image Stabilization.

EOS R has a mechanical shutter that closes when the camera is turned off. This is good when changing lenses in dusty places.

Canon RF 50mm f/1.2 Wide Open

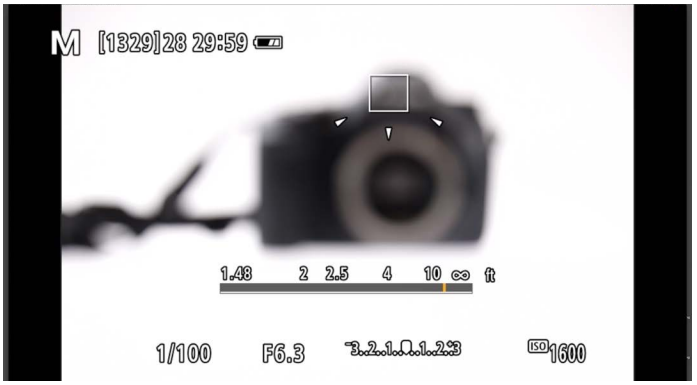
Sant Ambroeus at night wide open in Southampton, NY.
EOS R with Canon RF 50mm f/1.2 L USM at f/1.2, 1/200 second, ISO 3200.

Larry Thorpe on the RF 50mm f/1.2

Again, from Larry Thorpe's EOS R System White Paper:

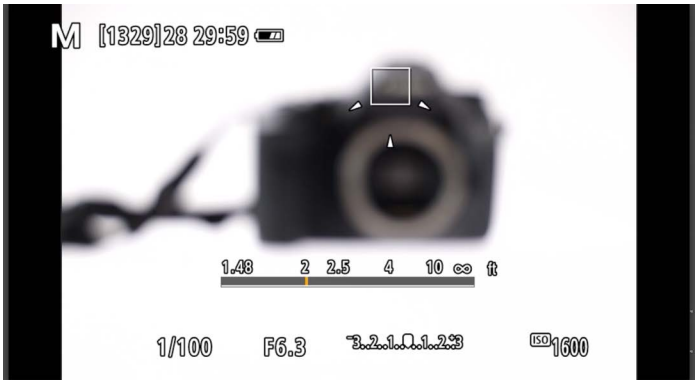
"The RF 50mm f/1.2 L USM is a totally new optical design, comprised of fifteen elements in nine groups. The rear elements capitalize on the short flange back of the EOS R system — their large size contributing to the high optical performance. This lens is a striking example of the powerful new flexibility offered by the new RF mount in achieving f/1.2 in a compact lens. To have gotten this level of optical quality in an f/1.2 design with the standard EF mount would have entailed a significantly larger lens."

Focus Guide



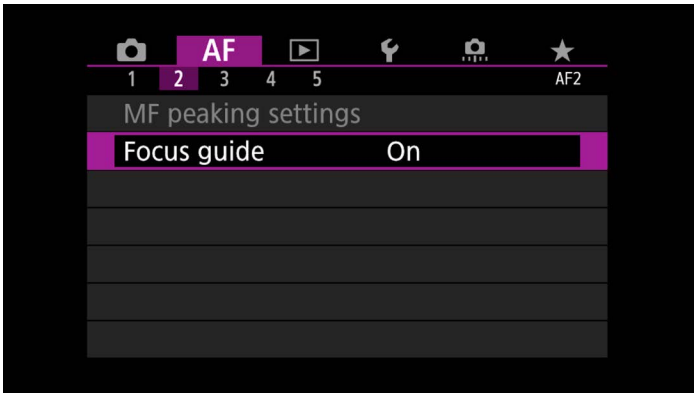
1. The Focus Guide of EOS R is good. It's also on Canon's C700 FF, C700, C300 Mark II, etc. It activates in MANUAL FOCUS Mode. Here, the outer arrows are pointing up, showing we are back-focused (too far away).

2. Turn the focus barrel until the arrows align. The focus area guide can be moved with your finger on the touchscreen. By the way, the focus ring direction of the lens can be changed in the menu (C.Fn3: Operation).

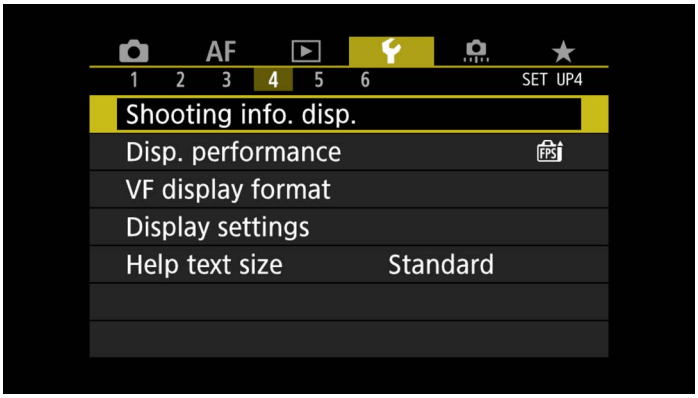


3. Here, we are front focused.

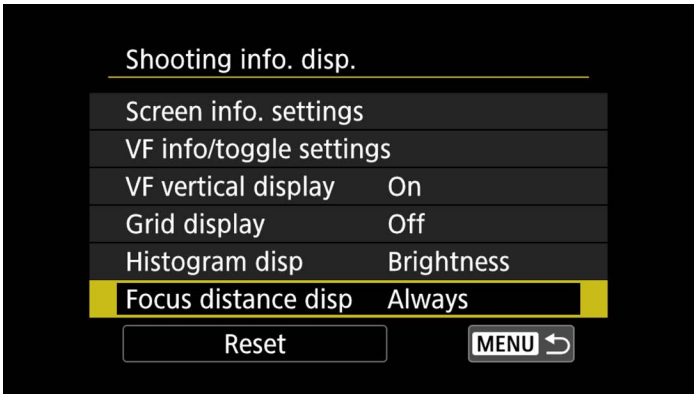
4. And, with the arrows aligned, we're now in focus.



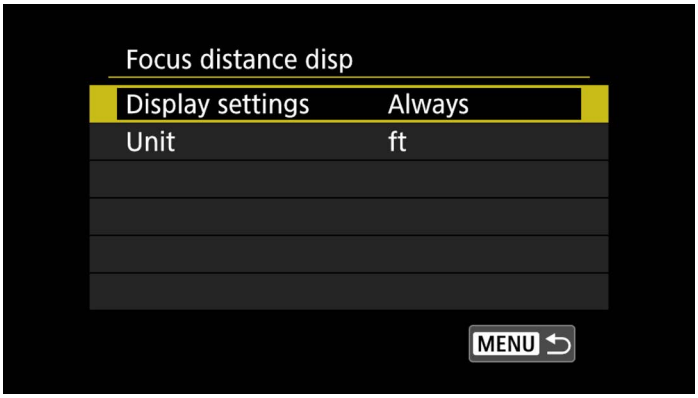
5. To activate the focus guide arrows, navigate the MENU to AF2 and select FOCUS GUIDE > ON.



6. To see focus distance in the viewfinder or monitor, go to the SET UP4 Menu screen and choose SHOOTING INFO. DISP.



7. Select FOCUS DISTANCE DISP.



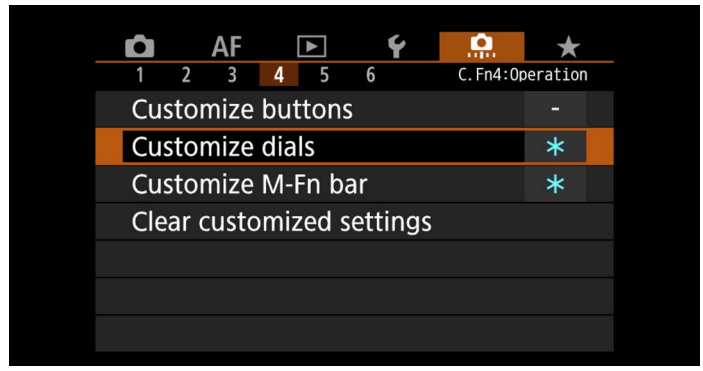
8. Select DISPLAY SETTINGS > ALWAYS and choose FT or METERS.

Screengrabs thanks to AJA U-Tap HDMI

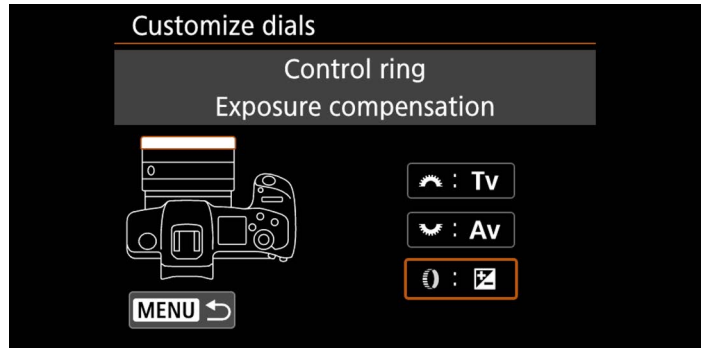
EOS R Control Ring

RF lenses have an additional ring at the front. This Control Ring lets you customize its function to adjust aperture, shutter speed, ISO or ± exposure compensation. The Control Ring is distinguished by its knurled ring and clicks. To choose the Control Ring's job, go to MENU > C.Fn4: Operation > Customize Dials > and go to Control Ring.

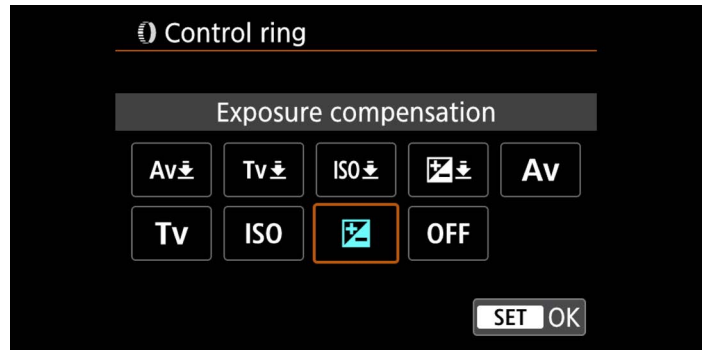
Canon's EF to RF lens mount adapter with Control Ring (below) adds these functions for EF lenses.



1. To select a Control Ring function, navigate the MENU to C.Fn4: Operation CUSTOMIZE DIALS.



2. Select the bottom box, which represents the Control Ring.



3. In this example, we have selected Exposure Compensation ±.

EOS EF to EOS R Lens Mount Adapters

Standard EF to RF lens mount adapter

EF to RF Control Ring Adapter has a lens control ring

EF to RF Drop-In Adapter with slide-in clear filter

EF to RF Drop-In Adapter shown with slide-in variable ND or Circular Pola filter

Using Canon's EF to RF adapters, you can use any existing EOS EF lens on an EOS R camera. To support Canon's existing universe of more than 130 million EF lenses, there are 3 different EF (44mm FFD) to R (20mm FFD) lens mount adapters. There are two kits for the EF to RF Drop-in Adapter (as shown in #3 above). One comes with a Circular Polarizing Filter and another has a Variable Neutral Density Filter. Both come with a clear slide-in filter to maintain correct Flange Focal Depth for shooting without the rotating filters.

The L-Mount Alliance. 20mm FFD, 51.6mm Ø

Photographed with a SIGMA Full Frame FF High Speed Cine Prime 85mm at T1.5, from left: Foucauld Prové, Sigma France; Kazuto Yamaki CEO of Sigma Corporation; Samuel Renollet, Camera Rental Manager of RVZ Paris, and Baudouin Prové, Managing Director of Sigma France,

Readers of FDTimes may have been following the quixotic quest for some kind of standardization of lens mounts. Alas, the opposite has happened, as we have been reading on the previous pages. Rental house managers like Samuel Renollet, above, are keeping machinists busy building multiple permutations of mount adapters. There's one beacon of consistency, the L-Mount Alliance.

Leica launched the L-Mount (originally called T-Mount) with their Leica T (APS-C) mirrorless, interchangeable lens camera in 2014. It was the 100th anniversary of Oskar Barnack's Ur-Leica.

A year later, the Leica SL (Typ 601) arrived: Leica Format (36x24mm), mirrorless, autofocus, with the same mount, now renamed "L-Mount."

The L-Mount has a Flange Focal Depth of 20mm. The mount's inside diameter is 51.6mm.

At Photokina 2018 in September, Leica Camera, Panasonic and Sigma announced the L-Mount Alliance. Dr. Andreas Kaufmann, Chairman of the Supervisory Board of Leica Camera AG said, "In the rapidly growing market for mirrorless system cameras, users seek increasingly greater product diversity to fulfill a wide range of different photographic needs. To meet these needs, we have decided to work together with prominent partners in the photographic segment. Our long-established partnership with Panasonic is a collaboration based on mutual trust, and the company's expertise in the area of electronics is unquestioned. SIGMA is another highly respected company that is firmly established in the areas of optical design, camera and lens manufacturing and complements the portfolio of L-Mount products."

Tetsuro Homma, Senior Managing Executive Officer of Panasonic Corporation said, "Our long-standing partnership with Leica has brought many high-performance and high-quality digital cameras to the market, fusing Leica's optical technology with Panasonic's digital technologies. Our partnership has enabled us to accelerate the development of excellent digital camera products and the L-Mount alliance is a great example of such acceleration."

Kazuto Yamaki, Chief Executive Officer of SIGMA Corporation, said, "As SIGMA strives to develop high performance, high quality and innovative products, this alliance will strengthen the level of our camera systems and provide greater user benefits. The L-Mount will evolve as an extremely attractive system for users."

Mr. Yamaki continued a few days later, "Three years ago, we began to plan the development of a new Full Frame camera with a Foveon sensor. It made good sense to partner in the L-Mount Alliance. Our three companies agreed on this cooperation around the beginning of 2017. We plan to release our new L-Mount Foveon Full Frame camera in 2019.

"The response at Photokina has been very positive. Sigma will contribute to the effort by making an L-Mount camera that is quite unique from others. Leica has its own philosophy and unique cameras. Panasonic has a wide variety of modern cameras and innovative products.

"Foveon in the past had an APS-C and APS-H size sensor. The look of the image delivered by a Foveon sensor is very fine detail and very high fidelity of image quality. Lenses on the new Foveon will be L-Mount Sigma lenses.

We already have 14 lenses for Sony E-mount and our initial plan is to make L-Mount versions of these, shipping in 2019. At same time, we will release more than 14 new lenses in L-Mount. Sigma will make a Sigma SA to L mount adapter and Canon EF to L mount adapter in 2019. The difference between our existing Art lenses and the new L-Mount lenses is the shorter flange back and wider rear element diameter. This allows us to make lighter, smaller and faster lenses. This is especially relevant at wide angles."

Wouldn't it be interesting if there were a Cine L-Mount Alliance?

Panasonic S1 and S1R

Panasonic's Imaging Division President Yosuke Yamane introduced two new L-Mount Mirrorless Cameras at Photokina. LUMIX S1R and the S1 have a Full Frame Sensor with an L-Mount for interchangeable lenses from Panasonic, Leica Camera and Sigma. Panasonic also plans 10 lenses by 2020, with a 50mm f/1.4, 24-105 and a 70-200mm f/2.8 coming first.

The S1R has 47 MP resolution and the S1 has 24 MP. They will record 4K 60p video. Both sensors are image stabilized. Duals slots accept XQD and SD memory cards. Panasonic intends to release the S1 and S1R in early 2019.

S1R

5

S1 with 24-105. Photos by Panasonic at Photokina, taken with Lumix GH5 and Leica DG Nocticron 42.5mm f/1.2 (MFT format)

Alpa Platon: Hasselblad H6D-100c with Cine Lens Mounts

Evolution does not stand still nor does image size stop with Full Format.

ALPA of Switzerland offers medium-format 4K video recording with a Hasselblad H6D-100c digital back and cine lens front section. The H6D-100c has a 53.4 x 40mm (66.72 Ø) CMOS sensor with 4.6 µm pixels. They call it PLATON. Naming a Swedish camera with a Swiss front after a Greek philosopher is good.

The ALPA H6D-100c system can fill the entire 53.4 x 40mm 100 MP CMOS sensor with 4K video. A 16:9 crop corresponds to approximately 53.4 x 30 mm (61 mm Ø) sensor area. The Hasselblad proprietary RAW format can be converted to Cinema DNG using Phocus software. The camera can also record H. 264. HD. Data can be stored on SD or CFast cards.

Platon is based on the ALPA 12 TC with an ARRI PL or Canon EF mount. Presumably an LPL mount will follow.

Platon is equipped with an ARRI rosette, universal NATO style rail and 15 mm support rods.

If you already own an H6D-100c, the kits will be available standalone. Also, an external power supply will be offered to increase run-time on location. *alpa.ch/en/site/moving-image*

Leica Thalia lenses cover Platon's 66.72 Ø image area.

Alpa's Ralph Rosenbauer with Platon

Servicevision's Andrés Vallés with his new 85mm UltraScorpio 70 Super FF 85mm that covers Platon's Hasselblad sensor.

Fujifilm GFX 50R

Watch what they do, not what they say.

While many in the photography industry were saying, "Watch the new mirrorless Full Format (36x24mm) cameras," Fujifilm was doing something completely different. They were leap-frogging from APS-C directly to Medium Format, and in the process, bypassing Full Format completely.

The new FUJIFILM GFX 50R is a medium format, mirrorless digital rangefinder-style sibling of the larger GFX50S camera. Both cameras have a large 51.4MP CMOS image sensor. Both have a 26.7mm FFD (Flange Focal Depth). The GFX 50R looks somewhat like a rangefinder camera because the EVF is actually built into the body, not mounted on top.

The electronic viewfinder has a high-rez, 3.69M-dot OLED display. The new GFX 50R weighs about 145g less than the GFX 50S. Viewing is a pleasure. The EVF is positioned on the extreme left side of the camera, like a Leica M rangefinder camera. Your eye comfortably comes in contact with the finder. Your nose will not hit the camera body and you can look around with your left at what's going on in the outside world. The 50R is also thinner and smaller than the 50S.

The GFX 50R and 50S use the same FUJIFILM G Format 43.8 x 32.9mm (54.78 Ø) 51.4MP sensor.

The rugged body is made of magnesium alloy, weather-sealed, spray and dust-resistant. A joystick on the back lets you set the focus point quickly. The top of the body has two analog style dials – for shutter speed and exposure compensation.

The GFX 50R camera weighs 775g with built-in EVF, approximately 145g lighter than the GFX 50S, and the body is just 66.4mm thick, 25.0mm thinner than the GFX 50S.

The GFX 50R is the first model in the GFX system to feature Bluetooth wireless communication to pair the camera with a smartphone or tablet for easy transfer of pictures via the free FUJIFILM Camera Remote application.

Currently, the GFX system includes 11 FUJINON GF Lenses for G Mount. All GF lenses are capable of resolving up to 100MP, and are designed to be dust and weather-resistant and built to endure temperatures as low as 14 degrees Fahrenheit / -10 degrees Celsius (same as the camera).

Fujifilm also announced the possibility of a 100 MP GFX camera in the works and 3 new lenses for GFX cameras: FUJINON GF100-200mm F5.6 R LM OIS WR telephoto zoom lens, GF50mm F3.5 R LM WR compact prime lens and GF45-100mm F4 R LM OIS WR mid telephoto zoom lens.The GFX system is compatible with Capture One Pro (FUJIFILM) and tethering.

FUJIFILM GFX 50R Key Features

- 51.4MP Medium Format 43.8 x 32.9mm (54.78 Ø) sensor.
- FUJIFILM G Mount with FFD of 26.7mm.
- Body weighs approximately 27.3oz. / 775g
- LCD Monitor: 3.2 inch, aspect ratio 4:3, approx. 2,360K-dots
- Dual SD Cards (UHS-II recommended)
- The new FUJIFILM GFX 50R will be available late November 2018 in the U.S. and Canada for $4,499.95

Fujifilm GFX 50S vs 50R

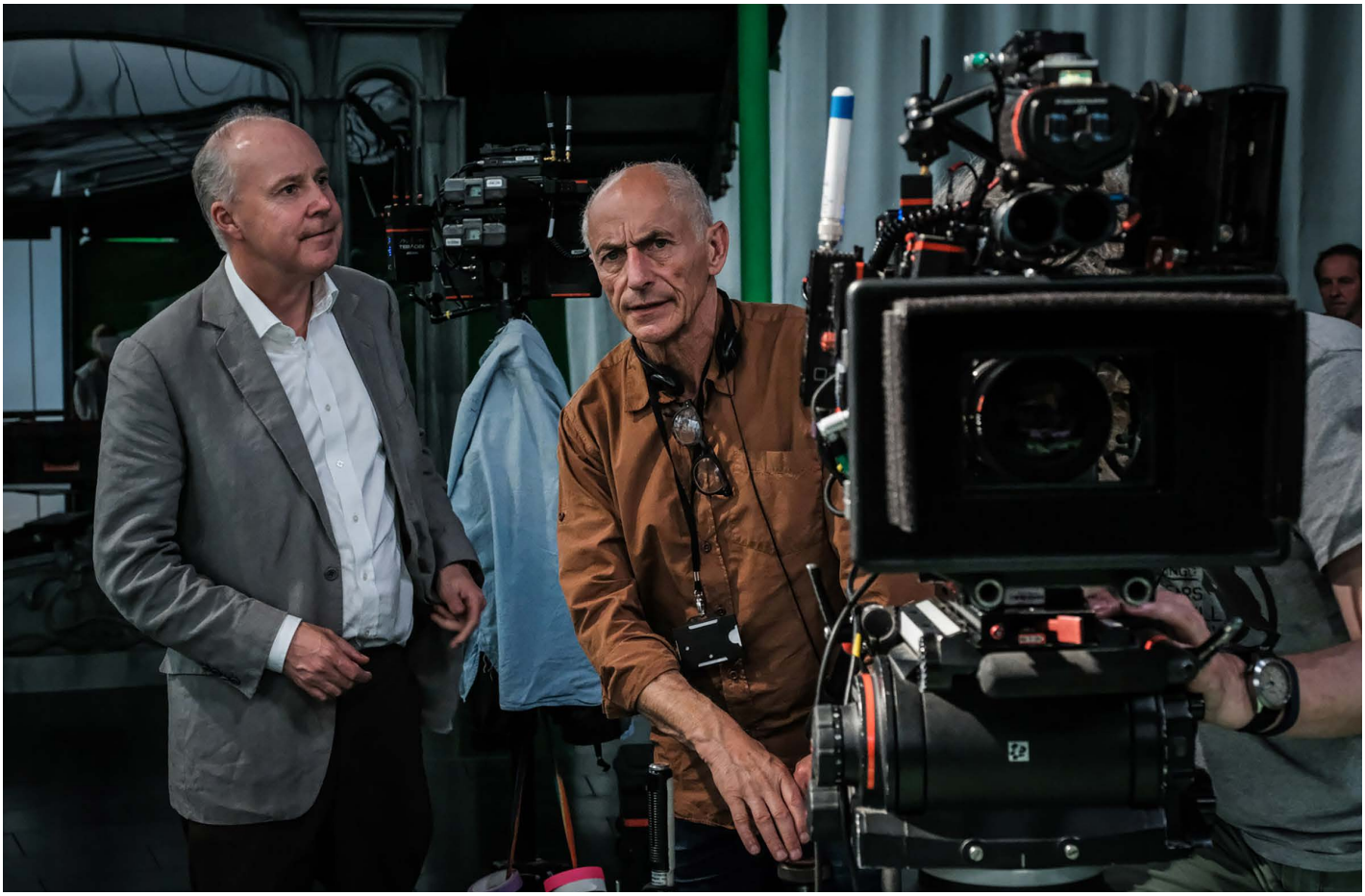
GFX 50S

GFX 50R

	FUJIFILM GFX 50S	FUJIFILM GFX 50R
Effective pixels	51.4 million pixels	
Image sensor	43.8mm×32.9mm Bayer array with primary color filter	
Storage media	SD Card (-2GB) / SDHC Card (-32GB) / SDXC Card (-256GB) UHS-I / UHS-II*1	
File format: stills	JPEG, 14bit RAW (RAF original format), RAW+JPEG, 8-bit TIFF (In-camera Raw Conversion Only)	
File format: video	MOV (MPEG-4 AVC / H.264, Audio : Linear PCM / Stereo sound 48KHz sampling)	
Recording pixels	[L] <4:3> 8256×6192 <3:2> 8256×5504 <16:9> 8256×4640 <1:1> 6192×6192 <65:24> 8256×3048 <5:4> 7744×6192 <7:6> 7232×6192 [S] <4:3> 4000×3000 <3:2> 4000×2664 <16:9> 4000×2248 <1:1> 2992×2992 <65:24> 4000×1480 <5:4> 3744×3000 <7:6> 3504×3000	
Lens Mount	FUJIFILM G mount	
ISO	Standard: ISO 100 - 12800. Extended: 50 / 25600 / 51200 / 102400	
Shutter speed	60 min. - 1/4000 sec.	
Viewfinder	0.5 inch Approx. 3.69 millions dots OLED Color Viewfinder Magnification: 0.85× with 50mm Lens (35mm Equivalent) at infinity and Diopter set to -1.0m-1 Diagonal Angle of View: Approx. 40° (Horizontal Angle of View: Approx. 33°)	0.5 inch Approx. 3.69 millions dots OLED Color Viewfinder Magnification: 0.77× with 50mm Lens (35mm Equivalent) at infinity and Diopter set to -1.0m-1 Diagonal Angle of View: Approx. 38° (Horizontal Angle of View: Approx. 30°)
LCD monitor	3.2 inch, Aspect Ratio 4:3, Approx. 2,360K-dot Tilt (Three Direction), Touch Screen Color LCD	3.2 inch, Aspect Ratio 4:3, Approx. 2,360K-dot Tilt (Two Direction),Touch Screen Color LCD
Video recording	[Full HD (1920×1080)] 29.97p / 25p / 24p / 23.98p 36Mbps up to Approx. 30min. [HD (1280×720)] 29.97p / 25p / 24p / 23.98p 18Mbps up to Approx. 30min.	
HDMI output	HDMI Micro connector (Type D)	
Film Simulation mode	15 modes (PROVIA / Standard, Velvia / Vivid, ASTIA / Soft, Classic Chrome, PRO Neg.Hi, PRO Neg.Std, Black&White, Black&White+Ye Filter, Black&White+R Filter, Black&White+Gfilter, Sepia, ACROS, ACROS+Ye Filter, ACROS+R Filter, ACROS+G Filter), Grain Effect	
Digital interface	USB3.0 (High-Speed)	USB Type-C (USB3.1 Gen1)
Dimensions	147.5mm (W) × 113.8mm (H) × 91.4mm (D) / 5.81in. (W) × 4.48in. (H) × 3.60in. (D)	160.7mm (W) × 96.5mm (H) × 66.4mm (D) / 6.33in. (W) × 3.80in. (H) × 2.62in. (D)
Weight	Approx. 920g / 32.5oz. (incl EVF, battery and memory card)	Approx. 775g / 27.3oz. (incl battery and memory card)

Specifications may change without notice

Philippe Rousselot, ASC, AFC with Alexa 65 & Thalia Primes on *FBTCOG*



Cinematographer Philippe Rousselot, ASC, AFC next to Alexa 65 camera, with Director David Yates on *Fantastic Beasts: The Crimes of Grindelwald*, a Warner Bros. Pictures release. Photo by Jaap Buitendijk. © 2018 Warner Bros. Entertainment Inc.

JON FAUER: *Fantastic Beasts: The Crimes of Grindelwald (FBTCOG)* was shot with Thalia lenses on ARRI Alexa 65. The first one, Fantastic Beasts and Where to Find Them, (2016) was shot on Alexa 35. Why the change?

PHILIPPE ROUSSELOT: Yes, the first film was shot on the Alexa 35. For our second film, I suggested Alexa 65. Obviously the bigger the chip, the better. You hope for the best quality. I was eager to use the 65mm format because of the opportunity to shoot on prime lenses. The 65mm spherical format doesn't result in the aberrations of the anamorphic format which are always a little bit difficult to fight. The logic was: 65mm, yes because of the sensor size; and 65mm, yes to get rid of the anamorphic aberrations. Also, 65mm meant having longer lenses rather than wider angles for the same field of view.

Once we decided on Alexa 65, David Yates banned the use of zooms.

No zooms?

I was happy with this decision. The reason had nothing to do with the technical quality of zooms. They are actually very good. It's just that I like the idea that you have a fixed focal length and then you have to move the camera a little bit forward or backward to compose your frame. You have to make decisions. You move the camera. Whereas, with a zoom, you don't have to move the camera. You can rotate the lens barrel—for example to 81, 82, 83, 84 mm or anything in between. It shortcuts the decision process, in a way. With primes, you basically have to think a little harder.

When did you begin shooting?

Fantastic Beasts: The Crimes of Grindelwald started shooting around July 17, 2017.

The reason I ask is because the Leitz Thalias were only introduced in mid-2017.

Yes, they were still hot off the stove when we started.

I guess you didn't even have the complete set of Thalias.

We were missing the 24, 55 and maybe the 120 mm. We had the 30, 35, 45, 70, 80 and 101 mm.

Was it difficult that some focal length were missing?

Not at all. It was no problem, not an issue.

How did you decide on Leitz Thalia lenses?

Because they were the cheapest. [laugh.] No, I'm just kidding. I think all the lenses I like are expensive, to be honest. But, I usually don't get involved in prices. I don't want to know.

Except when the producer comes and says they can only afford 5 of the 6 lens you ordered. Then you know you're in trouble.

That wasn't a problem. The budget of this film was generous enough to allow any kind of lenses I wanted. But, you know what? To be honest, I tested many other lenses for this production. Between you and me, I could have made the film with any of them.

Framegrabs: Above, Eddie Redmayne as Newt Scamander. Below, Poppy Corby-Tuech as Vina Rosier.

If, in your heart, you favored one set rather than another purely on a technical point of view, it would have been very hard to decide. It's not that one lens was so awful that you had to throw it in the trash can immediately. We have gotten to the point in art and technology where most of the lenses on the market have their advantages and are really incredible.

I liked the Thalia lenses best. I'm not saying that other lenses are not doing the same thing, but this is just my very subjective point of view. I emphasize that point. In the beginning, it's all about a feeling and a taste. The Thalias were extremely accurate and at the same time, quite gentle.

Honestly, I didn't feel the need to use any filters on close-ups because they were so gentle. It was not that they were foggy or diffuse or anything like that. I liked their look. Also, I was really paying attention to the focus at the very edges of the frame, which is always a problem when you get into large formats. The Thalias held focus across the entire image, all the way to the edges.

So, I had quite a good feeling about them. And one more thing: they look very good when you photograph them. [laughs].

Sorry, what?

They're pretty to look at. Of course, that doesn't show up in the film. But, they are stylish in their design. I had a good feeling about them and I can't remember ever complaining about the lenses during our shooting—so that's a very good point.

Did the fact that they have different maximum apertures bother you?

No. That's one important thing about shooting in 65mm format. At least it's my opinion. Focus is absolutely critical. So, I very rarely use large format lenses wide open. Sometimes I shot at T11. On stage, I shot at T5.6 or T8 very often, and they behaved well. I even did some shots at T22 and wondered if they were going to be too brutal. But, when I looked at the monitor, it was great.

I liked the depth of field that I could get with deeper stops. The sensitivity of Alexa 65 camera makes this possible. Also, the new LED lights give us enormous output without much pain. I was

Philippe Rousselot, ASC, AFC holding finder and Leitz Thalia 70mm T2.6 prime, with Director David Yates. Photo by Liam Daniel.

very glad to shoot at very comfortable stops. I know this is not the fashion lately, where my colleagues may tend to shoot wide open and like shots that are out of focus. Personally, I like to see my scenes in focus.

That's good to hear. If the aesthetic was not shallow depth of field, what attracted you to 65mm large format Thalias for this production, besides keeping focus across the entire field?

It's the fact that you don't have the problems of anamorphosis, however good our anamorphic lenses are. It is very difficult to achieve the same focus at the top and bottom, left and right sides of frame, as you have in the middle. That's due to the fact that you introduce Toric elements. When you think about it, anamorphic is an extreme deformation of the geometry and you do the reverse in projection. That's breaking up the image quite a bit.

Comparing 65mm spherical format versus 35mm anamorphic format, you've got pretty much the same focal length to get the same horizontal angle of view. You can still do wide angles on a 70mm lens. However, in non-anamorphic spherical 35mm format, you would use a 35mm focal length to do the same shot. I like the possibility to do wide angle wide shots with long lenses. And you don't have much distortion.

The sets don't suddenly become mile-long perspectives. In 35mm format, wide angle lenses make the background appear very far away. In 65mm, backgrounds are more natural. On top of that, you've got a better picture because you are capturing the image on a bigger chip, with more pixels to play with in the DI.

Is this the Philippe Rousselot I used to know? You were famous for your anamorphic films for many years. The first *Fantastic Beasts and Where to Find Them* was shot on Alexa XT Studio with Panavision E- and G-Series Anamorphics. You used these and other anamorphics on *The Nice Guys, The Tailor of Panama, The Emerald Forest, The Bear*…I could go on.

Because of the long lens. Not because of the distortion. Yes, I really liked anamorphic, but not if it was against the wishes of the director. For example, on two films I did with Tim Burton, we did one in anamorphic. That was Planet of the Apes, but he was never in love with the format. On our next film, Big Fish, we went back to 1:85:1 spherical format. I love to work with Tim. I was not married to anamorphic. It's always a collaboration with the director. With Tim, you're very glad to go his way.

JON FAUER

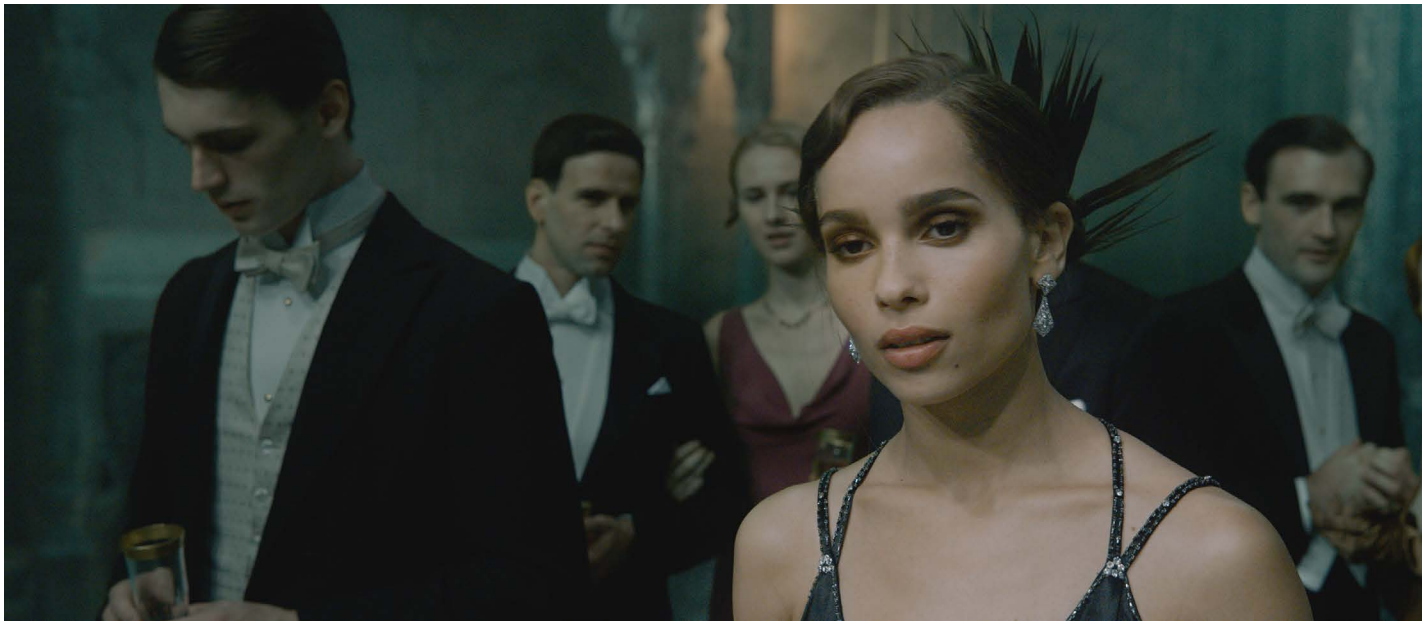
How did you and David Yates establish the style of this film?

David had the point of view, which was also on the first film, that if you do a story about magic then the image has to go in the opposite direction and be fairly real. It should not try to do tricks or have magical lighting because then you're redundant and it doesn't work. Of course, the story is not realistic because people do strange things with little magic wands in their hands. In terms of style, we wanted to be real. What is real? That's another long philosophical discussion. The devil is in the details. We analyzed what we liked on the first Fantastic Beasts and what we didn't like and hopefully we fixed this and that.

Dan Fogler As Jacob Kowalski and Eddie Redmayne as Newt Scamander.

Above, Jude Law as Young Albus Dumbledore. Below, Johnny Depp as Gellert Grindelwald.

Frame above, Katherine Waterston as Tina Goldstein. Below, Zoe Kravitz as Leta Lestrange.



I don't believe in a blanket idea that will take care of the entire film. It's a series of different sequences. Each one has to analyzed and thought of on its own. We covered the walls in a very big room with all kind of photographs, paintings and notes. We called it the mood room. It let us see where we wanted to go. There was a huge amount of material from production, art department, and references that I built up with my assistants through all the weeks of prep to to determine what we liked and what we didn't like.

How many days of shooting did you have?

I lost count, to be honest. We shot about 100 days There were also some added scenes later on.

How long did the DI take?

The DI was about 3 weeks at Technicolor London with Peter Doyle, a famous colorist. It was not a difficult DI.

Who supplied the camera package?

It came out of ARRI Rental London.

And about your choice of working with the Thalias: in looking at the film, textures are beautiful even though you were stopped way down. Eyelashes are very sharp but the skin tones are very smooth.

I hope so. And we had beautiful actresses.

The Thalias did not have a harsh quality. That's why I liked these lenses. I did some good tests with them. I usually am not satisfied with tests because they never look like the real thing, but I was pleasantly surprised with the Thalias. I would have been tempted, maybe not in anamorphic, but in spherical I might have added a Soft FX filter when I got really tight to soften the crispness. But I didn't feel the need, as I said before, to put any filter in front of the Thalias.

Sometimes lenses can be too sharp. They show things you don't want to see. It's like a microscope on the skin, what I call "derma-

Photo by Jaap Buitendijk © 2018 Warner Bros. Entertainment Inc.

tology." But I didn't have that feeling at all with the Thalias. I think the rendition was fine. Even in the DI, we sometimes use tools to soften the skin. I don't think we did any of that on this show. The Thalias were very good portrait lenses. Which was a surprise: even at T5.6 they were fine.

Don't you also take still photographs with a Leica?

Yes, and I also have a little point and shoot Leica. But I'm not a photographer. I'm a cinematographer. I think I can prove it.

I think so, yes. And, in case anyone wondered, an Oscar to show for A River Runs Through It, not to mention a bunch of BAFTAs, Césars, ASC, and National Society of Film Critics awards.

Call my agent [laugh]. But I'm not a photographer. In my non-profession life, I do other things. I take pictures once in a while, but I would never show my pictures or pretend that it's professional work. But I like the Leica camera, of course.

What I'm getting at is that the Leitz Thalia lens design has a lot of Leica history running through it.

You would expect that from a company that has a such a glorious history as Leica. When I was in school, I remember having friends who had Leica M3 or M6 cameras. They let me sometimes use the Leicas and these were the best possible objects you could possess.

With the company having such a history and a policy of interpreting what photography should be, I was expecting that to carry on with Thalia lenses. I think they have done that.

You are in the company of Cartier-Bresson.

He was not the only one. Lartigue and many others in the history books of photography used the Leica. (Robert Capa, Alfred Eisenstaedt, Elliott Erwitt, Mary Ellen Mark, William Eggleston, Nick Ut, Stanley Kubrick…)

Where did you go to film school?

I went to the film school called Vaugirard. (It was founded in 1925 as l'Ecole Technique de Photographie et de Cinématographie — ETPC—on rue de Vaugirard in Paris. Louis Lumière himself, inventor of the Cinématographe, began teaching there in 1926. In 2012, the school moved to the Cité du Cinéma Studios.) It's a very decent school and many of the camera interns and camera assistants who came out of Louis-Lumière were great. The students there get a good education.

Last time we spoke, you were about to go hiking. What else are you doing in what little spare time you may have?

I take care of my garden a little bit. Badly, and even worse, I play the piano. I think music is my second love. I want to get back to painting because I did that a lot when I was in my 20s.

JON FAUER

Thank you. It's been a fascinating discussion. I'm sure *Fantastic Beasts: The Crimes of Grindelwald* will be a big success.

Photos by Jaap Buitendijk. © 2018 Warner Bros. Entertainment Inc.

Leitz Thalia 65mm Format

Leitz Thalia primes cover Large Format, Full Frame, Leica Format and 65mm Format cameras: ARRI Alexa 65, LF, Sony VENICE, RED and Panavision DXL2, Canon C700 FF. The image diagonal is 60mm. They also cover Super35.

Thalias come with user-swappable PL or LPL mounts. Two new close-focus lenses are shipping now: 24mm and 55mm. These are highlighted in red, below. Thalias have 92 mm screw-in front filter threads and rear net holders, same as with Summilux-C.

Focal Length (mm)	**24**	**30**	**35**	**45**	**55**	**70**	**100**	**120**	**180**
Aperture	3.6	2.9	2.6	2.9	2.8	2.6	2.2	2.6	3.6
Length (mm)	124.5	131.5	131.5	131.5	154.5	124.5	124.5	175	154.5
Front Diameter (mm)	95	95	95	95	95	95	95	95	95
Close Focus (m)	0.4	0.5	0.55	0.6	0.7	0.5	0.7	0.57	1.5
Weight (kg)	1.42	1.50	1.40	1.46	1.64	1.06	1.16	1.66	1.62

Image Circle: 60 mm diagonal (covers ARRI ALEXA 65, RED and DXL 8K VV, VistaVision, Full Frame, Super35)
Matched Barrels: Focus and Iris Ring locations in same position for all focal lengths. 0.8M Lens Gears.
Front Diameter: 95 mm on all lenses in set (same as Summilux-C and Summicron-C)
Lens Mount: PL, LPL and XPL (XPL for ARRI Rental) - Stainless Steel, user-swappable
Metadata: /i Technology lens data contacts
Focus Rotation: 270°
Iris Blades: 15 - Circular at all apertures

Leitz M 0.8 Leica Format Lenses

Leitz added 3 more Leica Format (Full Format) lenses to their M 0.8 series: 50mm f/1.4, 75mm f/2.0 and 90mm f/2.0. This brings the total to eight. The M 0.8 lenses have a click-less iris, 0.8M industry-standard gear rings for lens motors and 80mm diameter fronts with 77mm screw-in filter threads.

You can M0.8 lenses on RED, ARRI and Sony VENICE cameras fitted with M mounts. *Note: always check rear element clearance to sensor.*


M mount for ARRI Alexa Mini


M mount for Sony VENICE


M mount for RED DSMC

Focal Length	**21mm**	**24mm**	**28mm**	**35mm**	**50mm**	**50mm Noctilux**	**75mm**	**90mm**
Aperture	f/1.4	f/1.4	f/1.4	f/1.4	f/1.4	f/0.95	f/2.0	f/2.0
Weight (g)	515	505	480	370	466	835	572	605
Length (cm)	8.7	8.7	8.3	7.4	7.5	9.8	8.7	9.5
Close Focus (m)	0.7	0.7	0.7	0.7	0.7	1.0	0.7	1

Image Circle: 43.3 mm Ø
Front Diameter: 80mm
Lens Mount: Leica M
Screw-in Front Filter: 77mm

New Leitz Leica Format Primes and Zooms

Here are new Leica Format Leitz Cine lenses with no name.

History repeats. Nine years ago, "mystery lenses" that would later become Summilux-C Super35 primes were also presented without a name. This year at IBC 2018, Leitz showed pre-prototype previews of their new line of Leica Format (Full Format, VV, LF) prime and zoom lenses. Leitz also announced their roadmap.

There are two Leica Format zoom lenses planned for delivery in late 2019: 25-75 mm T2.8 and 55-125 mm T2.8.

A set of 12 prime lenses is planned for delivery in early 2020. Focal lengths run from 18 mm to 180 mm, all with a T1.8 aperture. Six primes were on display: 21, 25, 29, 40, 65, 100 mm — T1.8.

The lenses are made in Leitz Cine's new factory in Wetzlar, Germany. Like fine automobiles and yachts, you should not have to ask the price. Performance and MTF are described in terms so superlative I hesitate to repeat. The look is designed to be painterly, filmic, smooth and beautiful. *leitz-cine.com*

Focal Length (mm)	21	25	29	40	65	100	25-75	55-125
Aperture	T1.8	T1.8	T1.8	T1.8	T1.8	T1.8	T1.8	T1.8

Image Circle: Full Frame Leica Format

At IBC behind glass, top shelf: Leitz Thalias
Middle shelf: Leitz prototype Leica Format Primes
Bottom shelf: Leitz prototype Leica Format Zooms

John Williams, 1st Assistant Camera (above, left) with Matthew Williams, Director of Photography (above, right).

Usually this episodic series about adventures with the Light Ranger 2 is told by the Focus Puller. Here's an interesting point of view from the DP as well, who happens to be the father of the AC.

Matt: When starting Disney's *Andi Mack* 2 years ago, I was coming off 3 solid years of shooting a long term project on 35mm film. I was used to camera assistants using a Preston wireless remote focus for crane and Steadicam shots, and maybe difficult shots where they couldn't be on the dolly, but I was still in the basic mode of having the camera assistant close to the camera and pulling focus by hand.

John: I was the "B" camera focus puller on Steven Soderbergh's *Mosaic*. Soderbergh was shooting more free-form and wanted to discover the scenes in blocking and rehearsing, and work with the actors in the room. It was just him operating the camera, the dolly grip, and the boom operator. We were off in another room pulling focus remotely with a Preston FIZ by watching our monitors. (Not uncommon for assistants these days with digital). There weren't rehearsals as such—it was more of a process of discovery. The A and B camera focus pullers had to be on point, working on the fly. Six months of that experience (and working with veteran focus puller Chris Silano), previewed a changing world.

Enter the Preston Light Ranger 2 (LR2).

Soon after that show ended, Silano was on his next project, *The Greatest Showman.* He had the chance to use an LR2 when they sent one out with a motion control crane rig. After one day, Silano was hooked. He called me and said, "I've just used this new piece of equipment that will be the next big thing in camera focus, the Light Ranger 2. You've got to use this ASAP."

I immediately called Alanna at Preston and asked for a demo. I was sold, and came back to Matt and said, We've got to do this—you'll love it.

Matt: I knew that John was already a great focus puller, so why did he need this piece of gear? Then he showed me.

After a few scenes, I saw possibilities that I hadn't seen before: an ease and precision that I didn't know could exist and, more than that, an actual evolution to the next phase of focus pulling.

I am not saying this for any other reason, but the Light Ranger 2 has changed our working experience. Since the LR2 is integrated into the Preston FIZ system, not only did it give John complete lens data and depth of field, but more importantly it gave him a graphic "map" of the focus area overlaid onto his monitor which gave him a "picture" of the focus, if you will. It's not a numbers and calculating distances game.

John: All the distance info is still there, but when you can "see" the info through the image and don't have to look away, you are better and faster than checking someone's mark on the floor, looking at the lens or a readout and then making the adjustment.

Matt: After 2 seasons, we have our personal day-to-day experience to tell the story, and we wouldn't be without the LR2. Even the producers are now talking about it.

Sure, the 2nd AC's still put marks on the ground for actors. Sure, we still rehearse, but not really for focus. John is usually outside of the set where he can't even see the actor marks. But he doesn't need them anymore in the traditional way. The marks are for the actors and the camera operator. With the Light Ranger 2, there's no more traditional measuring and marking focus distances. It's all there layered over his focus monitor with the Light Ranger 2.

Here's a more practical explanation. We rarely do another take for focus anymore, even on tight, difficult shots. Period. John always knows exactly where the focus is and where his depth of field is, quicker and easier than the traditional way.

John: The LR2 can do really difficult shots. And that's when everyone on set really notices. But also, it saves me all day everyday when people don't notice. No more hunting back and forth for focus, no more worrying about splits. You know exactly where your depth of field is at all times. The security of knowing that you get it right every time has made my work life 100% less stressful and that's worth it's weight in gold right there.

I can't say it more effectively. It is an evolution and a new era, and we will never go back. *prestoncinema.com*

Daniel Patterson on Spike Lee's *She's Gotta Have It* in Large Format

Daniel Patterson, cinematographer holding new Angenieux Optimo Ultra 12x zoom with crew of *She's Gotta Have It.*

This began as a story about the new Angenieux Optimo Ultra 12x zoom, but quickly grew as Daniel Patterson talked about graduating from film school at the dawn of digital, Full Frame, ALEXA LF, RED, Master Primes, Leitz Thalia Primes, lighting, look, "She's Gotta Have It," and how to compensate for different maximum lens apertures with camera ISO.

JON FAUER: You recently completed cinematography on Season Two of the Netflix series *She's Gotta Have It*?

DANIEL PATTERSON: We shot Season Two this past summer for about three months. The show is a direct spinoff from the film, with the same director, Spike Lee. It's his baby. On Season One, we did ten half-hour episodes. It's a dramedy: drama and comedy. That being said, it has kind of a filmic, cinematic quality to it.

Season One began in the fall of 2016. I shot using Master Primes with RED cameras. It was about 50 percent on location and the other half was on stage. In total, we worked roughly 60 days. I learned a lot. It was my first series. We shot at Broadway Stages in Greenpoint. I chose the Master Primes primarily for their speed, T1.3. We were shooting three cameras simultaneously, and sometimes as many as six. That meant I had to figure out ways to work with ambient light and practicals, especially when we were on location. I ended up smoothing the very sharp image of the Master Primes slightly with Schneider Hollywood Black Magic filters, mostly 1/8th density, just to soften up the image a little bit.

Did you use zooms as well?

I did. We had Angenieux Optimo 24-290 T2.8 zooms.

And Season Two?

For Season Two, which began in the summer of 2018, I wanted to switch things up a bit. I wanted to find some lenses that didn't necessarily require a softening filter in front of them. I was also interested in shooting Season Two on the ALEXA but we had to fulfill Netflix 4K UHD shooting standards. I was not sure if the budget would allow for an ALEXA LF. Our rental house, TCS, was able to provide enough ALEXA LF cameras in time for tests and for the shoot. Funnily enough, TCS was the rental house for the original film *She's Gotta Have It*.

For Season Two, tell us about the different style, the cameras and lenses and lighting.

Inherently, there are different looks. Season one was in fall and winter in Brooklyn. In Season Two, we went to Martha's Vineyard and Puerto Rico.

We had a lot of direct, hard light in Season One. In Season Two, we did the exact opposite. It was a softer quality. I used a lot of Ultra Bounce rags, frost or sometimes shower curtains. On interior locations, I was big on a book light. The style that Spike has in approaching this show might have us winding up with two or three cameras that are essentially pointing at each other. So you need the geographic space to be able to hide lights and cameras and not see each. For exteriors, we didn't need a lot of lighting but we had a basic HMI package. The biggest light I had was an 18K.

We had some crane days with a 50-foot Technocrane. We worked with Steadicam, dollies, and a good amount of handheld. You know, that's another thing to think about. My operators were initially concerned when they heard about the size of the ALEXA LF camera and the idea of doing a lot of handheld work. We ended up having a lot of camera operators from BlacKkKlansman and they shot that film on film with thousand-foot magazines. So, we

At left: Daniel Patterson, cinematographer. Above: Kerwin DeVonish, camera operator, with Alexa LF and Angenieux Optimo Ultra 12x.

had some really talented camera operators and an ALEXA LF was no problem in handheld mode for them.

What were your Alexa LF camera settings?

ARRIRAW, UHD 4K, 16:9 aspect ratio. ALEXA LF 16:9 Sensor Mode: 3840 x 2160 (31.68 x 17.82mm sensor area, 36.35mm Ø.)

What Large Format lenses did you have for Season Two?

We went with Leitz Thalias and the Angenieux Optimo Ultra 12x.

(Jon's notes: The zoom lens has an interchangeable rear section. So the lens works in S35 at 24-290, Ultra 35 at 26-320 T3.1 and Full Frame at 36-435 T4.2. Daniel had the 26-320mm T3.1. The image circle is 34.6mm at the wide end. So, shooting in LF 16:9 sensor mode, the lens was vignetting from 26-35mm. But, from 35-320mm, it was fine.)

And the Leitz Thalias?

The Thalias are really beautiful. I tested a number of lenses. You start to see differences as soon as you put them on the camera: how they handle focus and out-of-focus, fall-off and bokeh and smoothness. You're looking at skin tones and at how flares happen. I embrace flares. Testing is the way I see how each lens handles these things. I test with two cameras, side by side. I start with different lenses on each camera. I figure out which lens I like better, and then, while keeping the winner lens on one camera, try another lens on the other camera. And so on.

The two cameras were shooting the same thing and the Thalias just kept winning out the whole time. The only tough thing was that suddenly, TCS told me, "Hey, you're kind of limited with Thalias because Leitz still hasn't delivered the 24mm and the 55mm—but they might be able to do it in time, and we can't make any promises, but we're going to try to make it happen."

And somehow they and Leitz were able to make it happen. I think we got our lenses two weeks before we started shooting.

Did your producer faint when you settled on these very expensive cameras and lenses?

Wow [laugh], it's interesting. I think that there were a lot of favors. Angenieux provided the prototype zoom for free. Leitz went to great lengths to help us. And TCS gave us tremendous support because they wanted to invest in our long-lasting relationship. I imagine the negotiations for the ALEXA LF cameras must have taken a long time. And I appreciated all that. I can't necessarily say that it was a small budget. But it was only my second series.

You were lucky to get a 24mm Thalia. I think they only started shipping in September.

Yes, I was. I did have one prime that wasn't a Thalia. It was a 19mm f/2.8 Leica R series lens.

Was it a concern that all your lenses had maximum apertures a little slower than what you had on Season One?

That was absolutely a concern at first. But, I was fortunate because we shot a lot of exteriors in the summertime. Also, I was familiar with the interiors and the studio setup and the type of changes that I would need to make in lighting.

But it definitely took some adjustment because the wide-open T-Stops of the Thalias are not uniform. The 24mm is T3.6, the 55mm is T2.8 and the 100mm is T2.2. My goal was to shoot at a base exposure of T5.6, so I was fine.

Of course, there are times when we have to shoot things that we didn't plan for and have to go wide open. The ALEXA LF sensor was able to make up for the differences in the lenses.

Now, please tell me about the zooms.

Although we were spending more money on equipment, the budget didn't go up. I asked TCS, "Is there anything we can do, because I really need these zooms?" They had just found out about the new Optimo Ultra 12x and Angenieux was extremely kind in making it available to us. The Angenieux Optimo Ultra 12x zoom was great—very, very cinematic. Everything about their look is smooth. They came in handy during our many exteriors because a lot of scenes were shot long lens.

Left to Right: Jamie Marlow (1st AC), Rodrigo Millan Garce (2nd AC), Zakiya Lucas Murray (loader), Daniel Patterson (DP), Aaron Medick (camera operator/Steadicam operator), Lamont Crawford (key grip - only hat and shades visible), Kerwin DeVonish (camera op), Ricardo Sarmiento (camera operator), David Lee (yellow shirt - set still photographer), Michael Garofalo (Blue Shirt - 1st AC), Carlos Covian (above Michael) (2nd AC), Patrick Bracey (shades & Hat - 2nd AC), Julien Zeitouni (1st AC).

JEAN-MARC BOUCHUT, Angenieux Americas Technical Support Director, jumps in and we now take a brief detour in a Rashomon *style side of this saga. Jean-Marc said, "Daniel was happy to hear about the possibility of using the new Optimo Ultra12x for the last month of the shooting. When the lens arrived on location in Martha's Vineyard, Spike Lee saw it and asked what it was. When Daniel told him it was the new 12x Optimo, he said, 'Let's use it.' They did.*

This was the Ultra 35 version of the lens. The Full Frame version was not yet available. There was an advantage to using the U35 version: you gain about 1 T-Stop of aperture compared to the FF version (T3.1 vs. T4.2).

JON: Back to Daniel. Did the Angenieux Optimo Ultra 12x match the Thalias?

DANIEL: When I looked at the monitor I felt confident about the matching between the Optimo and the Thalias. I didn't have a DIT, so I was going off calibrated monitors.

On Season Two, did you have filters again like the Hollywood Black Magics?

Nope. My main goal was to not have to do that. In testing, we found some vintage lenses but they were way too soft. I needed something right in the middle, and I found that the Thalias and the Angenieux had the quality I was looking for.

You mentioned compensating for different apertures with the ISO setting on the camera. So the fact that the maximum apertures were different did not really bother you?

No. I was able to compensate by changing the ISO of the ALEXA LF. My base ISO on the ALEXA LF was 1250. But, for example, if I was wide open with the 55mm at T2.8, I could go to 800 ISO. And, when working with the 24mm wide open at T3.6, I could increase the ISO to 1600.

Did you see differences in the levels of noise?

Yes, you do but you're able to minimize that in DaVinci Resolve. We use DaVinci Resolve in grading at Harbor Picture Company. Also we can work with Flame, which is another excellent noise reducer. But Flame is more expensive. Resolve does a very good job.

You said you record ARRIRAW but there's no DIT. Who takes care of the data on set?

I have a loader who copies the Capture Drives onto duplicate drives and then the original Drives go to Harbor Pictures. They back up to LTO, so we always have at least two to three copies, probably more, in addition to the original.

Tell us about grading.

On Season One, they gave us three days per episode. We finished a lot sooner. We might have taken a day and a half per episode. On Season Two, they saw that and they made an adjustment. They've given us one day per episode. I'll start grading the episodes next month at Harbor Picture Company in New York with colorist Joe Gowler.

In this new digital era, do you find it's more important to be at the grading than in the analog film days or equally important?

It's equally important. Because the whole idea of RAW is that it's like a digital negative, productions know how much can be done in terms of dynamic range and how much can be manipulated in post.

Is it a different skill set where you have more choices?

I feel like the skill set is restraint. There's so much that you can do. You can power-window everything. A lot of stuff that I see now on television almost gets me dizzy with the heavy vignettes. I think it's really about taste.

How did you get into film?

My first film experience was during the summer after my sophomore year of college, on the *25th Hour* (2002). I was an intern and PA.

You were a film student in college?

I grew up in Queens, New York. I originally got into theater because I wanted to be an actor.

I went to St. Johns Prep in Astoria, Queens. I was a theater major at Morehouse College in Atlanta, Georgia. (Other film alumni:

Aaron Medick handheld with Alexa LF Leitz Thalia 100mm.

David Ellis, Steadicam operator on season 1 and 2, with Alexa LF and Leitz Thalia 35mm.

Spike Lee, Samuel L. Jackson.) I graduated in 2004. Later, I attended NYU and received an MFA in film production from Tisch Graduate Film School in 2010. There are 36 students in each grade. I'm teaching a course in cinematography at Tisch this term. I do a one hour lecture at the beginning of the class and then for the next few hours we do a studio lighting class where we light and shoot.

How did you get your first job after graduating from NYU? I think every film student, everywhere, would like to know how somebody else actually got into the real world of filmmaking.

After I graduated from NYU, I went directly into working as a DP. The transition to working professionally in the industry really started in film school. I began shooting whenever people needed someone to help shooting something. It ranged from corporate videos, sporting events and short films. I needed to make money, as much as I could, while I was still in film school. Eventually, some of those films went on to festivals and then before you knew it, one of those directors might get some grant money to do a documentary.

Right after film school, I shot documentaries and shorts. I think that was key. Whenever you have an opportunity to collaborate with someone who has an interesting point of view, a story to tell, short films are a great medium because they usually are affordable. I've lost track of the number of short films I've shot.

My first feature film was *Gun Hill Road*. It was directed by Rashaad Green who was also a student at NYU graduate film school. It was his thesis film. I got the job because we had been working together on a lot of short films of his. I liked the script. He had the funding. It opened at Sundance in January 2011.

You graduated from NYU Tisch at the very beginning of the transition from analog film to digital.

Many short films that I shot in film school, beginning 2007, were film. Then the digital boom started and it was hard to keep up at first. I bought a lot of digital cameras. I went from shooting film and not being able to afford a camera, to suddenly going digital and I could buy a Panasonic DVX. Many times, people thought we had shot on film. I think that's because of the experience I received in lighting for film and going for a film look. So, going digital was a very fast transition.

Within a few years, I went from a DVX to an HVX to using 35mm PL lens adaptors, to the Canon EOS 7D and 5D mark II DSLRs. The formats and recording media kept changing. We went through many P2 cards, SD cards, and now we're learning about SSD. It was fun to keep up with it but, it's funny, I would find myself going to weekend lectures and finding myself in classes with my former teachers. We were all trying to keep up with the evolution of cinematography from film to digital. It's been great and has been something to embrace. It enabled more people to be able to make movies.

You mentioned the film look on these early digital video cameras. Was that a function of lighting, lenses, and maybe Super35 to small sensor Depth of Field adapters?

The first one I used was from P+S Technik. Then I tried the Redrock Micro and the Letus Extreme adapter. In terms of the look, I found that it was a combination of everything you said. Of course, lighting. I was inspired by what I learned in film school.

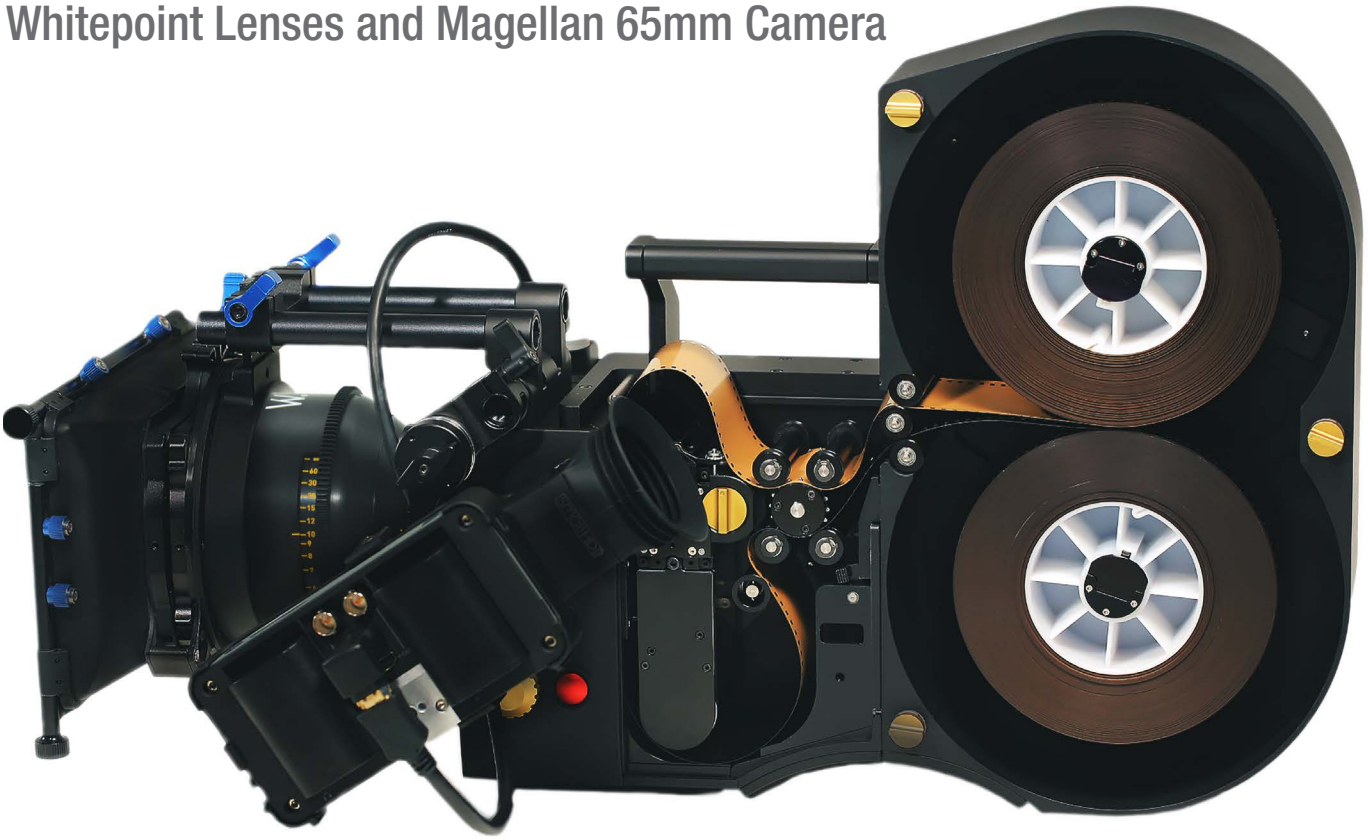
Now that you shot Season Two of *She's Gotta Have It* with Alexa LF and larger format lenses, what's your feeling about Full Frame / Large Format compared to Super 35?

I appreciate more picture area. I really do. I personally want to do more experimenting. As all these new formats and new lenses come out, I just want to continue to experiment—so I embrace Full Frame.

I achieve a lot of what I do through lighting. Shooting RAW, nothing's burned in on set. I give myself enough flexibility in post to do some grading. But it never ends up being far from what we lit for. I like to say a cinematographer's best tool is his or her memory.

Above, ARRI Signature Prime 125mm T1.8. Below, Joerg Pohlman, Thomas Feuchtmann, Thorsten Meywald on Signature Prime 18mm T1.8.

Whitepoint Lenses and Magellan 65mm Camera



Whitepoint Optics, using venerable vintage V-series Medium Format Hasselblad/ZEISS glass are packaging their large format TS70 lenses (82mm Ø) to partner with Logmar's lightweight (12kg /26lb) 65mm film camera. Available around January 2019. TS70 primes come in 30, 40, 60, 80, 100 and 120 mm; with 150, 250 and 500 mm lenses in the works. TS70 lenses cover 82mm Ø. Tilt & Swing Adapter is available for WPO TS70 lenses

whitepointoptics.com *logmar.dk*

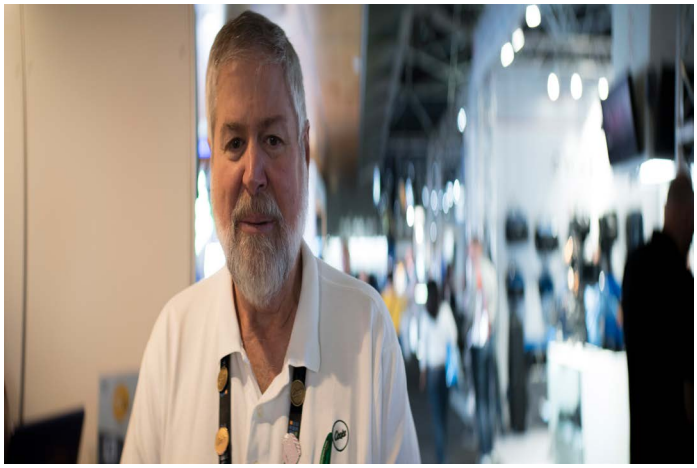
Whitepoint Optics TS Series — 82mm image circle for 65mm Film and Digital Formats

TS70 lenses cover 82mm Ø. Image area of 65mm 5-perf film ≈ 52.5 x 23 mm (57mm Ø). Alexa 65 ≈ 54.12 mm x 25.58 mm (59.86 Ø) .

Whitepoint Optics HS Series — Faster, 46mm image circle for Full Frame / VV

The Whitepoint Optics HS (High Speed) Series uses the same Hasselblad V-series glass as TS70. Speed and focal length conversions are made with Whitepoint's new, built-in 0.7x Speed Converter. The converter is also available separately so a set of 6 TS70 lenses can easily be converted.

Cooke 1.8x Anamorphic /i T2.3 Full Frame Plus



Above: Les Zellan and Thomas Greiser squeezed with a Cooke 1.8x Anamorphic /i T2.3 Full Frame Plus 50mm T2.3 lens on a Sony a9.

Cooke Chairman Les Zellan. The Cooke 1.8x Anamorphic /i T2.3 Full Frame Plus lenses will come in focal lengths of 32, 40, 50, 75, 100, 135 and 180mm, T2.3. Front diameters will be 110mm with weights at about 8.4 lb each (except the 180mm).

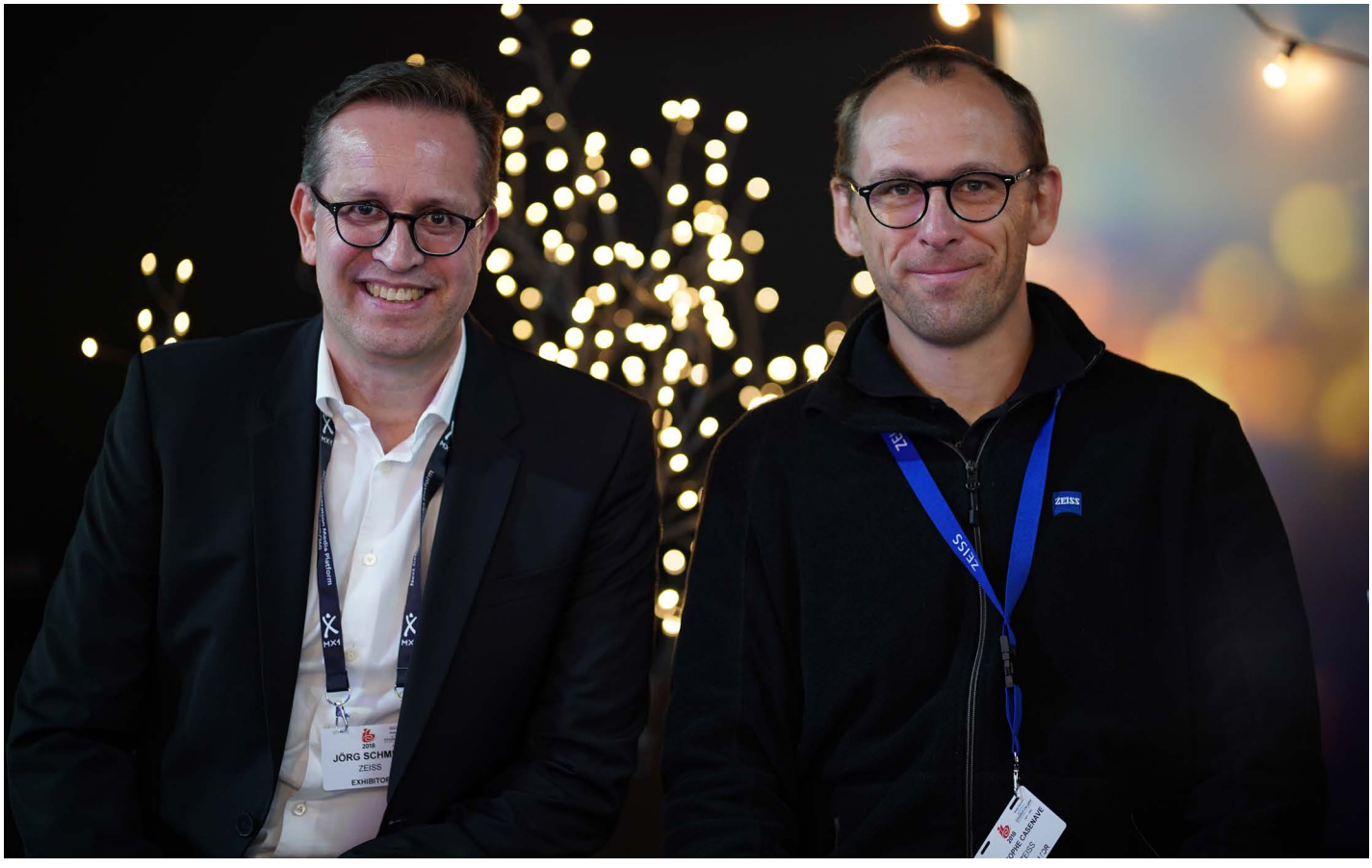
Thomas Greiser, Cooke Optics Ltd Director of Sales (Asia, Australasia, Middle-East & Africa)

Cooke 1.8x Anamorphic /i Full Frame Plus, VENICE & CineTape2

ARRI, RED and Sony have implemented 1.8x desqueeze. Above: Cooke 1.8x Anamorphic /i T2.3 Full Frame Plus on Sony VENICE with CineTape2. Below, Larry Barton, President of Cinematography Electronics setting up new CineTape2 on Sony VENICE.

ZEISS Supremes Wide Open

ZEISS Supreme 100mm T1.5. Above, Theresa Mayer. Below, L-R: Jörg Schmitz, EVP, Head of ZEISS Consumer Optics and Christophe Casenave, Product Manager Cinema Products. Also with Supreme 100mm T1.5



ZEISS Supremes Wide Open

ZEISS Supreme 100mm T1.5. Above, Christian Bannert, VP ZEISS Development & Manufacturing.
Below, Andrew Steele, Président/Directeur of EMIT, distributor of Cooke lenses in France, captured with (gasp) a 100mm T1.5 Supreme.

Tokina VISTA Primes (Full Frame)

The name "VISTA" is appropriate. Tokina VISTA T1.5 Cinema Prime Lenses cover VistaVision/Full Frame image areas. And, as Tokina says, they go "Beyond Full Frame," covering an image diagonal up to 46.7mm. At IBC in September 2018, Tokina introduced a 105mm T1.5 Vista Prime to ship in December. Also, the cine lenses will also be available with LPL mounts.

Lens	Aperture	Close Focus	Image Circle w/ PL	Front Diam.	Screw-in Filter	Length Overall			Weight		
						PL	EF mount	E-mount	PL	EF mount	E-mount
18mm	T1.5 - 22	0.45m / 17.7"	Ø 46.7mm	114mm	-	182mm	182mm	208mm	2.68kg	2.76kg	2.85kg
25mm	T1.5 - 22	0.35m / 13.9"	Ø 46.7mm	114mm	112mm	155mm	155mm	181mm	2.19kg	2.27kg	2.36kg
35mm	T1.5 - 22	0.41m / 16"	Ø 46.7mm	114mm	112mm	145mm	145mm	171mm	2.03kg	2.11kg	2.11kg
50mm	T1.5 - 22	0.48m / 19"	Ø 46.7mm	114mm	112mm	145mm	145mm	171mm	2.11kg	2.19kg	2.28kg
85mm	T1.5 - 22	0.95m / 37.5"	Ø 46.7mm	114mm	114mm	145mm	145mm	171mm	2.15kg	2.23kg	2.32kg
105mm	T1.5 - 22	1.15m / 3'9"	Ø 46.7mm	114mm	114mm	161mm	161mm	187mm	2,56kg	2.64kg	2.73kg

Tokina VISTA Cinema Prime Lenses

- T1.5 maximum aperture for all lenses
- Almost breathless - no breathing
- Aspherical elements and modern coatings.
- Low chromatic abberation
- Image circle of 46.7mm covers Full Frame, VistaVision and Red Dragon 8K VV image areas.
- Mounts: PL, EF, E-mount, MFT
- Focus and Iris scales on both sides
- Consistent 114mm front outer diameter
- 112mm screw-in filter thread (except 18mm)
- Consistent length of lenses for 35, 50 and 85mm
- Consistent placement of focus and iris gears
- 300° (approximately) rotation of barrel from close focus to infinity
- Internal focusing 9 bladed iris
- Shimmable mount

tokinacinema.com

Tokina Cinema 16-28mm T3.0 Mk II (Full Frame)

This rugged, wide, Full Frame cinema zoom lens was redesigned by Tokina. It is based on their well-respected AT-X 16-28 F2.8 PRO FX still lens—rehoused, de-clicked, cinematized. It is intended for aerials, underwater, rigs, Steadicam, landscapes, architecture...in other words, anywhere you'd like a good, wide angle zoom lens.

- Tokina Cinema 16-28mm
- Aperture Range: T3.0 – T22
- Parfocal optical design, almost breathless
- Focus Rotation angle approximately 300 Degrees
- 114mm Front Diameter
- 112mm Filter Thread
- Mounts: PL, Canon EF, MFT, Sony E, Nikon F
- Optical Design 13 groups /15 elements
- Image Coverage: Full Frame
- Parfocal design
- Minimum Focus Distance: 0.28m / 11 inches
- Aperture/Iris Blades: 9
- Overall Length with PL Mount: 142mm
- Weight with PL Mount: 1.75kg
- 0.8 M geared zoom, focus and aperture rings

Tokina Cinema 11-16mm T3.0 (S35)

- Tokina Cinema Zoom 11-16mm
- T3.0 – T22
- Covers Super35 format
- Mounts: PL, Canon EF, Sony E and MFT
- Focus Rotation: 166° (on PL mount model)
- Parfocal optical design
- 0.8 M geared zoom, focus and aperture rings
- Smooth, de-clicked, 9-bladed, curved iris
- Minimum Focus Distance: 0.35m / 13.8 inches
- Front Diameter (PL model): 85mm
- Front Diameter (EF, E, MTF): 84mm
- Overall Length (PL model): 103.3mm
- Weight (PL, EF model): 0.69 kg

Tokina Cinema 100mm T2.9 Macro (Full Frame)

Tokina Cinema 100mm T2.9 Macro covers Full Frame and focuses to 1:1 at 0.3m (11.8 inches). The color-coded focus scale quickly shows light loss at close distances.

- Tokina Cinema 100mm T2.9 Macro
- T2.9 - T32
- Covers Full Frame
- Mounts: PL, Canon EF, Sony E and MFT
- 0.8 M geared focus and aperture rings
- Smooth, de-clicked, 9-bladed, curved iris
- Minimum Focus Distance: 0.3m / 11.8 inches
- Front Diameter: 85mm
- Overall Length (PL model): 148mm
- Weight: 1.31kg

UltraScorpio 70 - Super FF T1.4

Andrés Vallés “caught” with prototype UltraScorpio 70 Super FF 85mm at T1.4.

UltraScorpio 70 - Super FF T1.4

Servicevision team posing as a depth of field chart, taken with UltraScorpio 70 Super FF 85mm at T1.4. Focus is on Alfredo and Andrés, of course.

Breaking news at IBC. Servicevision announced a new series of spherical large format lenses. The UltraScorpio 70 Super FF lenses are light, small and fast.

The Ultrascorpio 70 lenses have a new optical and mechanical design by the same team who created the Scorpio FFA Full Frame Anamorphics. The lenses are built in the high-tech clean room assembly facility by the Servicevision crew in Barcelona.

The Ultrascorpio 70 lenses use multi-aspheres and floating elements inside.

Andrés Vallés described the look as "silky smooth, film-look and excellent for digital sensors."

- Focal lengths: 18, 25, 35, 50, 85, 105 mm — all T1.4 — in 2019.
- 40mm and others coming later.
- Image coverage: 60 mm diagonal (covers Alexa 65).
- Front diameter: 110 mm.
- Weight: approx 1.65 kg. (very light)
- Mounts: LPL, XPL, PL.

servicevision.es

The reviews are good. The title is strange and shrill. *LOUDER! Can't Hear What You're Singin', Wimp!* premiered at the Fantasia Film Festival and opens on October 12.

Sin (Sadao Abe) is a Japanese rock star with a secret. Years of steroid shots finally cause his vocal cords to fail. Meanwhile, shy Fuka (Riho Yoshioka) has been thrown out of her band because her voice is barely audible. When she runs into Sin, he decides to help her.

"The latest incarnation of *A Star Is Born*, in which an ingénue singer rises to the top of her profession, guided to the heights of fame by a member of the old guard whose career is simultaneously slipping." — Rebecca Pahle, *Film Journal International.*

"It's been five years since Satoshi Miki graced us with a new film, and *Louder! Can't Hear What You're Singin', Wimp!* feels like he never missed a step. Fun songs, great chemistry between the leads, exciting visuals." — J Hurtado, *ScreenAnarchy*.

"Every frame explodes with color and texture." —Kristy Puchko, *Riot Material.*

The film's exciting visuals, glorious color and texture along with breakneck moving camera work comes from one of Japan's leading cinematographers, Daisuke Sôma. His credits include *Helter Skelter, Tokyo Tribe* and *Prophecy*, and many more.

LOUDER! Can't Hear What You're Singin', Wimp! was shot with Blackmagic Design URSA Mini Pro 4.6K and Pocket Cinema Cameras. Blackmagic's Video Assist was used as a monitor and recorder for the URSA Mini Pro 4.6K.

Daisuke Sôma explained, "We used three different cameras in this film, including the URSA Mini Pro 4.6K and Pocket Cinema Camera. Under usual circumstances, you often prioritize cameras like the "A" camera for important scenes and "B" camera for less important scenes, but we decided not to choose a main camera in this film and tried to use the one that was best for each scene. We chose not to match the looks between scenes, hoping to retain the quality and character of each camera.

Daisuke Sôma, Cinematographer, above. *Photos: © 2018 "LOUDER! Can't Hear What You're Singin' Wimp!" Film Partners.*

"I was looking for a camera that was suitable for anamorphic lenses. I feel that anamorphic lenses are similar to 65mm film, because you can separate the distance between objects and actors more than when you shoot with 35mm lenses.

"Compared to Miki's previous comedies with sarcastic humor and vacant looks, this film centers around the intimacy between Shin and Fuuka. Therefore, I went for the shallow depth of field and pleasing look of Kowa anamorphic lenses.

"I also used 16mm lenses, which are good to describe the nuances of distance and detachment. I decided to change lenses, depending on the scene, to suggest the ever-changing relationships among the characters. That is why I looked for compact and light cameras that support anamorphic lenses and can shoot RAW. URSA Mini Pro 4.6K was the only option available to satisfy these conditions.

"Because of it compactness and flexibility, the URSA Mini Pro 4.6K was especially valuable on our small sets where we had little space. The set of Fuuka's house was so small that it would have been impossible to shoot if not for URSA Mini Pro 4.6K. The camera was not only compact but also lightweight, and I could even put it on a gimbal with wires. There was no situation we couldn't shoot with URSA Mini Pro 4.6K.

"For daylight scenes we always used the internal ND filters. It was very helpful to have them inside the camera. We had a relatively small crew, so these little things meant a lot to us. URSA Mini Pro 4.6K looks cool, but that is not the whole story. I gradually grew aware that this camera is built with careful attention to tiny details."

Actually, that is a very good point. Cameras should look cool. Successful cameras always did. The Pocket Cinema Camera was used on the concert scenes with Shin and Fuuka.

Daisuke Sôma continued, "The Pocket Cinema Camera is literally pocket-sized, so you can carry it around anywhere. For the music concert scenes, a camera operator went into the crowded audience. Normal-sized cameras would have drawn attention to themselves to the detriment of reality, but with the Pocket Cinema Camera, the audience remained oblivious to us and we succeeded in capturing the real excitement of the concert."

Daisuke Sôma answered our follow-up questions by email.

FDTimes: Which anamorphic lenses did you use?

Daisuke Souma: We used the KOWA 35-BE Anamorphic lens set (40, 50, 75 and 100 mm). They have a 2x squeeze ratio.

And you also worked with zooms?

We mixed anamorphic and spherical lenses. Our zooms were:

- Fujinon ZK 19-90 mm 35mm format
- Fujinon ZK 85-300 mm 35mm format
- Canon 6.6-66 mm 16mm format
- Canon EF 8-15, 24-70, 70-200 photography zooms

You mentioned 16mm format lenses. You used them on the URSA Mini Pro 4.6K and cropped in post?

Yes, I used the Canon 6.6-66 mm 16mm format zoom lens on the URSA Mini Pro 4.6 K.

For those scenes, we set the URSA Mini Pro 4.6 K to 2K DCI. The sensor mode was windowed. So I used it as it is.

What lens mount did you have on the URSA Mini Pro 4.6K?

The URSA Mini Pro 4.6K had a PL mount.

What frame rates and ISO did you work at?

We shot frame rates from 24 fps to 72 fps at ISO 800.

blackmagic-design.com

Daisuke Sôma and crew on the cover of FDTimes Japan November 2018

FILM AND DIGITAL TIMES

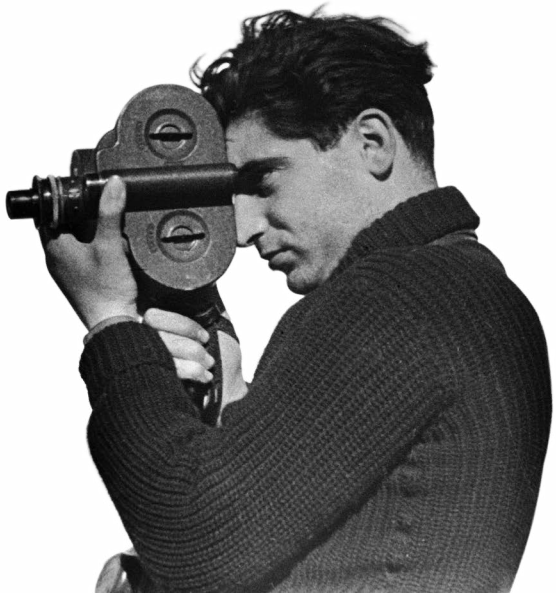
フィルムアンドデジタルタイムズ　世界の映像制作における芸術・技法・技術の総合情報誌

フルサイズはこうして生まれた
Leitz 新プライムレンズとズームレンズ
ZEISS フルサイズSupremes
「音量を上げろタコ！」
ARRI OCU-1
ARRI ALEXA LF ラージフォーマットSUP3.0
エド・ラックマンASCとAngenieuxアワード
Angenieux フルサイズ ズームレンズ
Canon C700 FF フルサイズ
Sony VENICEフルサイズ バージョン3
AJA FS-HDR
RED レポート（ジャレッド・ランド社長インタビュー）
Panasonic EVA-1
SIGMA フルフレーム・シネプライム
Transvideo StarliteHD-メタデータ
ARRI ラージフォーマット Signatureプライム
DJI Mavic 2
Fujifilm X-T3とマシュー・リバティークASC
Teradek RTとFocus Bolt
Wooden Camera LPLマウントとバッテリーブラケット
Flowtech 100 三脚
Cooke 1.8x フルサイズアナモフィック
Preston LR2とフォーカスのサムライ
Tokina フルサイズ Vistaプライム

Photo by Yasuhiko Mikami

AbelCine's CameoGrip

Beaulieu R16



Robert Capa with 35mm Eyemo during the Spanish Civil War. Photo by Gerda Taro.

Once upon a time, handheld cameras had good handles.

The handle was centered below the camera. And it was good.

Then, as Hemingway said in *A Moveable Feast*, "If it was good you could only fill it by finding something better."

Robert Capa's Eyemo had a good pistol grip. So did the Arriflex 35 II and it doubled as the motor. Bolex balanced beautifully. Beaulieu put a battery inside the R16's hollowed handgrip and for French news crews slogging through the Mekong Delta it was good.

Then things got sidetracked. Handles migrated to the side. Cameras grew heavier and unbalanced and hand-holding became shoulder-resting. Eclair's Cameflex motor grip moved right. The next wave of NPR, ACL, Aaton and Arriflex cameras needed new ways to be grabbed. Bicycle handles and hand-carved olive-wood sculptures transmogrified into camera side-grips. For companies building accessories, times were good.

"It's good," Gertrude Stein said to Hemingway about a completely different topic. "That's not the question at all. But it is *inaccrochable*. That means it is like a picture that a painter paints and then he cannot hang it when he has a show and nobody will buy it because they cannot hang it either."

And so, in another unbalanced parallel universe, video camera handgrips evolved into something akin to holding a coffee mug with a baseball mitt. Weird prehensile leather and velcro straps ensnared one's hand onto a grip incomprehensibly attached directly to the lens and not the body. Could this have been conjured by network news cost consultants to discourage anyone from ever putting the camera down?

Lately, in our camera-carrying timeline, DSLR and digital video cameras shed size and weight and became as light as their Super8 handheld ancestors. But, their handrips astonishingly resisted balanced evolution.

Now, CameoGrip brings balance back to lightweight handheld cameras and add electronic control as well. *(Read on.)*

Bolex Paillard D-8L 8mm

Beaulieu S8 from Pro8

AbelCine's CameoGrip, cont'd

CameoGrip, the newest entry in AbelCine's line of CameoGear products, brings back the time-tested hand-holdability of Eyemo, Bolex and Beaulieu film cameras into the digital age. It's crafted from aluminum, stainless steel and plastic.

CameoGrip screws into the tripod thread below mirrorless and small digital cameras. It also attaches to cameras in many other clever ways.

What makes CameoGrip so much more than a stylishly retro Bolex kind of grip is the way it also can manage the camera electronically. CameoGrip has controls for run/stop, zoom, iris and other functions.

CameoGrip connects to your camera with a 2.5mm LANC or multi-pin connector.

Each CameoGrip comes with an industry-standard ARRI-style rosette adapter for shoulder-resting cameras. You can also attach the CameoGrip to the pan arm of a fluid head for comfortable tripod operating. *(continues on next page)*

Rosette Adapter with Industry-Standard (ARRI Style) Hirth Tooth Rosette

2-Axis joystick for controlling zoom or iris. (Depends on camera and lens compatibility.)

Press the joystick horizontally to control zoom and vertically to control iris. These can be reassigned or disabled through the configuration software.

Zoom and iris work on most electronically controlled lenses.

Iris control is available only via LANC. Sony's Multi-Terminal (Micro Terminal/ Micro USB) connector (a7, a9, FS5, FS7) does not support iris control at this time.

Left

Knurled attachment ring

2 Programmable Buttons

Run / Stop Button

Micro USB Connector for firmware updates

Right

M6 (6mm male) Rosette attachment screw

¼-16 male threaded mounting screw attached to knurled ring

Joystick

8-pin Hirose connector for cable to camera's LANC or Sony Multi-Terminal pin (Micro USB Port)

3/8-16 female threaded mounting socket at bottom—helpful to attach CameoGrip to tripod or monopod

Rear

Joystick

2 Programmable Buttons

Run/Stop Button

Front

AbelCine's CameoGrip, cont'd

- CameoGrips has an ergonomic design that attaches to the bottom of a small camera and lets you handhold it comfortably.
- The rosette adapter lets you attach the CameoGrip to a shoulder-resting camera.
- Electronic controls are where you expect them and are easy to reach. The CameoGrip is powered by camera it's plugged into.
- Controls can be re-mapped and changed to the way you work
- Firmware can be updated to add new features in the future.

CameoGrip works with most cameras that have LANC remote ports and all Sony Alpha cameras with Multi-Terminal Micro USB ports. Here is the list of tested cameras:

- Sony FS5
- Sony FS7
- Sony Alpha series a7, a9, etc.
- Canon C100
- Canon C100 MK II
- Canon C200
- Canon C300
- Canon C300 MK II
- Panasonic EVA-1

Zoom works on most lenses with a zoom motor.
Iris works on most lenses with an electronic pairing for iris.

CameoGrip is priced at an irresistible $799 each and available now from AbelCine and B&H.
abelcine.com *bandh.com*

CameoGrip attaches with rosette adapter to right side of camera rods.

Specs

Pin-outs and cable connectors:

• Multi-Terminal cable:	Hirose 8-pin male to Multi-Terminal
• LANC cable:	Hirose 8-pin male to 2.5mm male
Dimensions of Grip only:	5.8 x 1.6 x 3.45 in
Weight of Grip:	7 oz
Weight Rosette Adapter:	2.5 ounces
Materials:	Aluminum, stainless steel, plastic
Mounting points:	• 1x 3/8-16 female • 1x 1/4-20 male • 1x ARRI Rosette via adapter
Cables supplied:	• 16" Multi-Terminal cable or 20" LANC cable
Power (approx):	< 400mW
Voltage (approx):	Sony Multi-Terminal: 3.2V LANC: 5.8V

CameoGrip attaches with rosette adapter to pan handle for control of zoom and iris

Flowtech 100 Tripod from Sachtler and Vinten

The flowtech 75 tripod was introduced last year by Sachtler and Vinten. With its light carbon fiber two-stage design and controls on top, it proved to be extremely popular. It accepts almost any fluid head with a 75mm bowl and is intended for camera systems up to 20kg.

Now, a new flowtech tripod for larger 100mm ball heads joins the Sachtler and Vinten family.

You can set up these tripods in seconds. Levers and brakes are on top, so you do not have to bend down to adjust height or level. The mid-level spreader can be removed for low angle shots. The rubber feet come off quickly for access to the tripod's metal spikes.

The flowtech 100 works with fluid heads with camera packages up to 30 kg / 66 lb.

flowtech-tripod.com

	flowtech 75	flowtech 100
Tripod bowl	75mm	100mm
Payload	20kg	30kg
Weight	2.9kg	3.2kg
Weight with rubber feet and mid-level spreader	3.5kg	4.1kg
Heights without spreader	26 - 153cm	26 - 153cm
Heights with spreader	63 - 157cm	52 - 155cm
folded length	68cm	68cm

IB/E Optics Smartfinder Pro

The Smartfinder Pro from IB/E Optics is a Director's Viewfinder for lenses ranging from Super35 through Alexa 65mm format, including VistaVision variants, Full Format, etc.

The Smartfinder Pro currently works with an iPhone 8 Plus or iPhone 7. Its dedicated app includes a depth of field calculator, and you can summon almost any frameline, format, lens, adaptor, sensor size or anamorphic desqueeze ratio imaginable. You can capture, share, edit and save all your still frames and videos. Screen mirroring enables, for example, the Director to see what the DP is viewing in real time on another iOS device. Smartfinder Pro also provides GPS coordinates, a compass, and sunrise/sunset information. The entire package (including iPhone and the LPL Mount) weighs only 1 kg (2.2 lb), making it a wonderful new tool for scouting, prep, pre-viz and post.

Starting from the front, it works like this:

1. The native lens mount is LPL: 44mm Flange Focal Depth and 62mm inside diameter. The native LPL mount (shown here) has red locking levers and makes it easy to use other lens mount adapters: PL, XPL, and so on. The black locking levers in these photos are part of the IB/E Optics PL-LPL Mechanical Adapter and the lens is the new IB/E Optics 60mm Raptor Macro.

2. A high resolution optical groundglass sits inside the stylish carbon fiber housing. It is positioned 44mm behind the LPL mount's flange. At 62mm Ø image diagonal, it is even larger than an Alexa 65 sensor (approx. 54.2mm x 26mm).

3. The image is formed on the groundglass.

4. An intermediate diffractive 4-element lens is housed between the groundglass and the iPhone's camera lens.

5. So, the iPhone is actually photographing the image on the groundglass, improved by the Smartfinder's high quality optics.

6. The handle on the right side of the Smartfinder houses a 2500mAh battery to provide the iPhone with many additional hours of use. There's also an accessory 5 Volt USB socket.

7. The phone shown here is an iPhone 8 Plus with a 5.5" Retina display, 1920 x 1080 and 1300:1 contrast ratio.

8. As shown at left in Amsterdam, the Smartfinder app displays framelines, surround view, focal length, aperture, angle of view, sensor size and resolution, aspect ratio, depth of field and distance. It can desqueeze anamorphic images.

Although it's still a prototype and final shape is to be determined, production models are expected to ship in the first half of 2019. As Full Frame and Larger Format productions become more prevalent, with all kinds of aspect ratios and parameters, the IB/E Optics Smartfinder Pro is an essential device. *ibe-optics.com*

What News on the Rialto?

The Rialto is a central area of Venice and, of course, the famous bridge across the Grand Canal, designed by architect Antonio da Ponte. It connects the *Sestieri* (districts) of San Marco and San Polo.

Which brings us to the Sony VENICE Extension System CBK-3610XS that tethers the camera head to the body.

But, can you imagine any DP calling out to the AC, "Set up the VENICE CBK-3610XS Tether Extension System ASAP?" Why not stick with Venetian geography and call it "RIALTO"?

As the Rialto area of Venice is connected by the famous bridge, Sony VENICE RIALTO connects two essential components of the camera. The cable is like the bridge.

Sony VENICE RIALTO

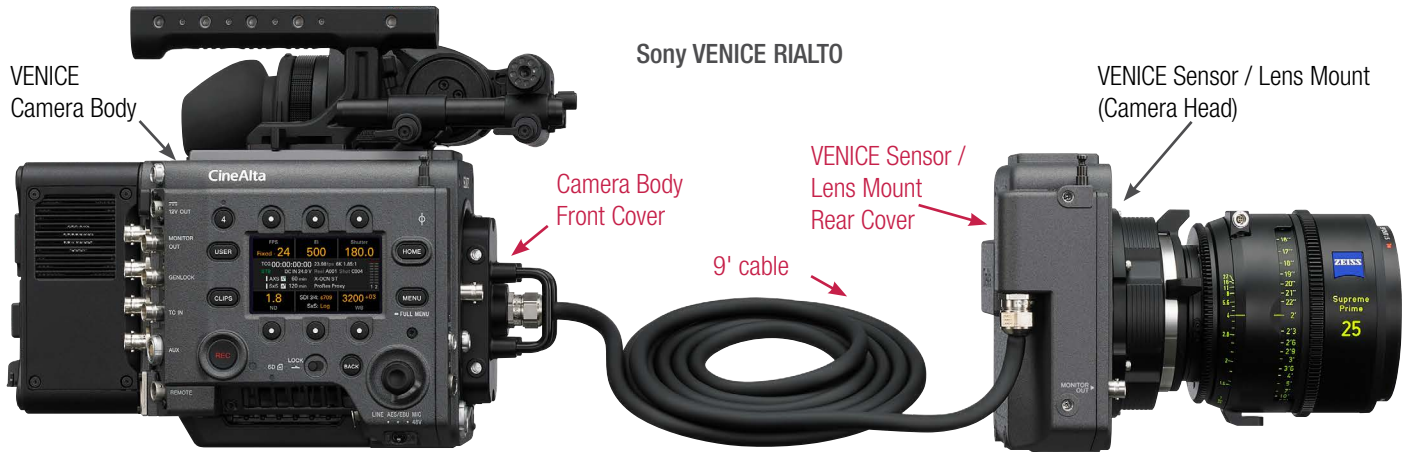
RIALTO works with any Sony VENICE. You don't have to purchase a different camera. The RIALTO kit lets you separate the image sensor, with its lens mount, from the camera body. RIALTO consists of a front camera cavity front cover, a sensor/lens mount rear cover, two 9' cables and a signal booster box in case you want to join the two cables together for an 18' run.

The sensor / lens mount module weighs 4 lb with the PL mount and 3 lb with the E-mount. It has a 24 VDC power connector for accessories like MDR, lens motors, or CineTape. It also has an HD-SDI output to attach a monitor.

RIALTO lets you get into tight quarters, inside cars, in small underwater housings, on lightweight remote heads and other claustrophobic places. It's good on 3D rigs, gimbals and drones where balance is critical. Helicopter crews like a camera body that's inside the cockpit, with easy access to recording media and other controls. No need to land to change batteries or cards.

RIALTO works with existing VENICE cameras when Firmware Version 3.0 is installed (expected early 2019).

To set up RIALTO, separate the sensor / lens mount head from the VENICE body by unscrewing the four 3mm shiny hex screws in front. Attach the sensor / lens mount rear protective cover. Attach the body / recorder cavity cover. Connect the tether cable. *"…e il gioco è fatto."* ...And that's it.



Setting Up Sony VENICE RIALTO (It's even faster than reading this)

1. Here's a VENICE with a PL mount, viewed from the front

2. Unscrew four 3mm shiny hex screws. Save the for later.

3. Separate the sensor / lens mount by pulling forward.

7. The RIALTO cover adds a MONITOR IN connector. Connect this with a short cable to MONITOR OUT at the rear of VENICE. This lets you send video over the tether cable to the camera head.

8. To send auxiliary 24V power to the camera head... connect these 2 plugs.

16. RIALTO ready to roll. Monitor optional.

4. This is what the VENICE camera body looks like without its "head."

5. Attach the RIALTO camera body cover

6. This is how VENICE body looks with RIALTO cover

10. Connect two 9' cables together this way.

14. Sensor / Lens Mount rear cover

15. Attach Sensor / Lens Mount module to rear cover with four 3mm shiny screws

9. Attach the connector and a 9' cable to the RIALTO camera body cover.

11. Connect cable to camera sensor / lens mount rear cover

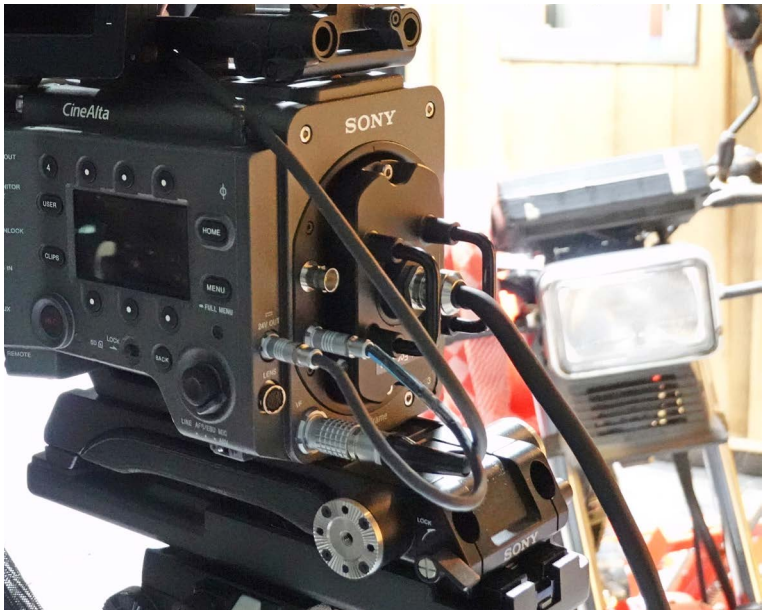
12. AKS 24V 3-pin

13. Connect MONITOR here. The BNC connector will emerge through the former Hirose hole labeled "LENS".

RIALTO camera head with E-mount: 3 lb. without lens.

RIALTO camera head with PL mount: 4 lb. without lens.

More Views on the RIALTO



As described in step 8 on previous page: to send auxiliary 24V power from the VENICE body to its remote camera head, connect the 24V OUT to 24V In with a short cable.

VENICE RIALTO sensor / lens mount module shown here with a Leica M mount and Leica M0.8 Summilux 21mm f/1.4 lens.

VENICE Mounts

So, you might ask, how does one put a Leica M0.8 lens (Flange Focal Depth of 27.8mm) onto a Sony VENICE?

When you remove VENICE's PL mount, a Sony E-mount is revealed. It has an 18 mm flange focal depth (FFD) from the mount to the sensor.

Leica M and M 0.8 lenses have a 27.80 mm flange focal depth and an M-mount. Here is the Leitz-Cine Leica M (M0.8) mount, made by Leitz for Sony VENICE. It attaches with 6 screws over the existing E-mount.

And what about ARRI Signature Primes? They have a 40mm flange focal depth and LPL mount. KipperTie makes an LPL mount for Sony VENICE.

To remove PL mount, loosen 6 hex screws (2.5mm). Careful, they are not captive. Don't drop them onto the sensor!

M mount for VENICE by Leitz Cine.

LPL mount for Sony VENICE by KipperTie.

This is the back side of the LPL mount. The milled out area makes room the E-mount locking levers.

Arsenale di Venezia

left:
The *Arsenale di Venezia* (Venetian Arsenal) today

below:
Canaletto (Giovanni Antonio Canal)
View of the entrance to the Arsenal
circa 1732
Oil on canvas
47 cm (18.5 in) High x 78.8 cm (31 in) wide
Private collection

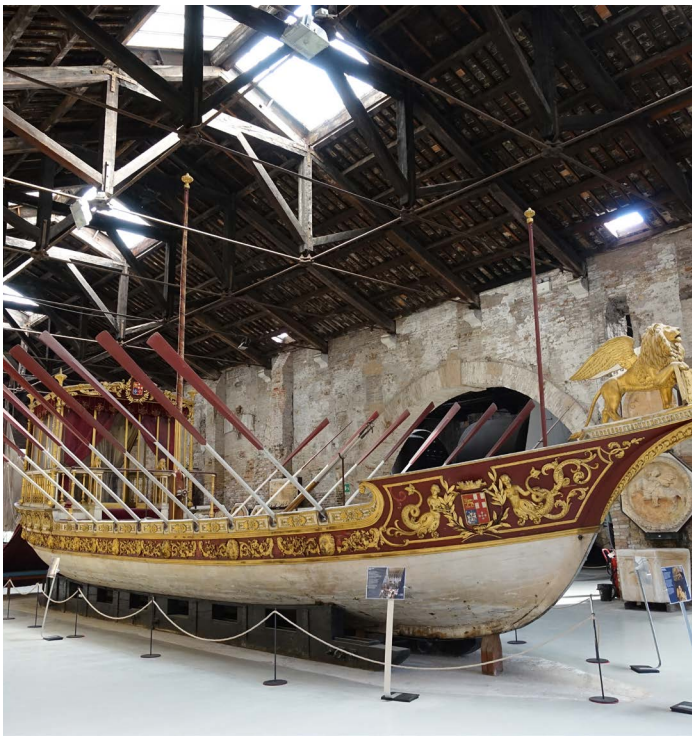
The *Arsenale di Venezia (*Venetian Arsenal) is home to the famous Venice Biennale Art and Architecture exhibitions.

From the 12th to 18th centuries, the *Arsenale* served as Venice's vast shipyard and armory to outfit its formidable navy of up to 3,000 ships. Historians have called the *Arsenale* one of the earliest large-scale assembly-line enterprises in history, long before the Industrial Revolution and Henry Ford's factories. While it would take months to build a ship elsewhere in Europe, workers of the *Arsenale* were turning out one ship a day. More than 16,000 craftsmen worked in this massive assembly-line, connected not by conveyor belt but by canal. Up to a hundred ships were usually in production using interchangeable, standardized parts.

Which brings us to another enterprise, Tilta, who build camera accessories at a prodigious rate. They have a new Camera Cage for Sony VENICE.

While I'm whimsically renaming Sony VENICE things, like RIALTO for the Sony VENICE Tether Extension System, how about something Venetian for Tilta's new VENICE Cage?

"Tilta VENICE *ARSENALE*" has a nice ring to it. There are good historical references about production and standardization and rapid deployment. *Continued on next page.*



Tilta Camera Cage for Sony VENICE

This Tilta camera cage is designed specifically for the Sony VENICE. Think of it like a protective iPhone cover or a turtle's shell or a football helmet and shoulder pads. Or think the other way around. Would you drive a car without bumpers?

The Tilta VENICE Cage offers more than mere protection. It also provides ergonomic handling and helpful accessory features.

There are a couple of ways to think about camera design. You can build it like a Cadillac Escalade with all the bells and whistles and size and weight. Your mileage may vary. Or go with a smaller, lighter, faster sports car design and then add a trailer, roof rack and bike carrier when you need it. I think of the VENICE as a kind of sports car. If you need more accessory power outlets or a bigger handle, that's where the Tilta Cage comes in.

The Tilta VENICE Cage is crafted of high quality, CNC-milled aluminum that protects the camera. Many ¼"-20 and ⅜"-16 mounting points let you attach all kinds of accessories.

The Tilta Battery Plate for Sony VENICE (available in either Gold mount or V-mount) connects to the Tilta VENICE top plate and provides additional accessory power connectors. There are two versions of the battery plate. One has the connectors facing straight out from the side of the camera, which is good when an AXS-R7 recorder is attached. The other battery plate's connectors are set at a 45-degree angle so they don't interfere with VENICE's rear connectors.

The Tilta VENICE top plate has an extension if you have the AXS-R7 recorder attached. This gives the camera additional protection and also provides an extra P-tap connector.

The top plate adds two 2-pin Lemo 14.4V connectors and two 3-pin Fischer R/S 24 V connectors.

VENICE's EVF attaches to 15mm Lightweight Support rods that can be inserted into the front of the top plate.

The top handle slides on and off the top plate easily when you want to configure the camera for Steadicam or gimbal setups. Optional top handle extensions attach to provide a "Hollywood handle" that extends around the back of the battery plate.

The baseplate has a built-in shoulder pad and is compatible with Tilta-standard dovetails. An optional Tilta-standard to ARRI-style baseplate can be attached to let you use ARRI dovetails.

tilta.com/shop/camera-cage-for-sony-venice

Technical Specifications

- The Tilta Camera Cage for Sony Venice can provide up to 225W of power, but under 175W is recommended.
- 6-pin 2B LEMO connector: 12V-24V DC.
- 2-pin Lemo 14.8V accessory power output is unregulated DC, with short-out protection, overflow protection, static electricity protection, and is hot-swappable. (About overflow protection: maximum power draw on a single AUX OUT is 3.8A. Four of the 14.8V power outputs share a single hot-swap function; overall power should be less than 5A. Three of the 14.8V power outputs on the top plate share a single hot-swap function; overall power should be less than 5A.)
- 3-pin Fisher 24V external power output has short-out protection, overflow protection (3A max), static electricity protection, and is hot-swappable.
- P-tap connector is industry-standard, with short-out protection, 3.7A maximum power output, 11.5-17.5V unregulated DC power, hot-swappable.
- 3-pin R/S Fischer connectors are compatible with most triggers on the market (ARRI, Tilta, etc.) and support record run/stop.
- V-mount batteries confirmed by Tilta to fit mechanically: Blueshape, IDX, Sony, Rolux, Swit, Dyna.
- Gold mount batteries confirmed by Tilta to fit mechanically: Anton/Bauer, Rolux, Dyna.

Tilta Camera Cage for Blackmagic Pocket Cinema Camera 4K

Stop the presses.

Tilta's Camera Cage for Blackmagic Pocket Cinema Camera 4K is a clever, customizable, modular system.

These pictures show many possible configurations. Equip your camera the way you like to shoot. An optional right side handle has a small finger wheel to control the Nucleus Nano lens motor that's in development now. The handle has an SSD slot and an Sony F970 battery compartment to extend the run-time of the camera and power accessories.

tiny.cc/tilta-PCC4K

Sony BVM E171 Monitor

The Sony BVM E171 is an OLED 12-bit monitor that addresses the demand for viewing 4K video in HD or 2K on set or in a grading suite. It supports BT.2020 and DCI-P3 emulation.

The picture is excellent. There's almost no motion blur. And there's a flicker-free mode. A Sony spokesperson at IBC described the monitor's High Dynamic Range: "Black is black, colors are realistic, city lights sparkle and stars in the night sky glow vividly."

There are 2 sets of 3G/HD/SD-SDI Input/Output connectors, and 1 set each of HDMI and Composite Input/Output connectors.

A 2K (2048 x 1080, RGB/XYZ) signal is displayed as a full 2K image scaled into a Full HD (1920 x 1080) screen area, or as a 2K native picture that extends beyond the left and right sides of the screen. You can view the entire picture with the "image-slide" function. Image slide lets you "slide" the image left and right. So, 2K images are mapped, pixel-to-pixel, and centered on the Full HD picture area. When you want to view the left or right edge of the 2K image, just "slide" the image left or right.

The BVM E171 displays S-Log3(SDR), S-Log2(SDR), etc.

Note that the monitor actually comes in two pieces: the display itself and the BKM 17R control unit that attaches by means of a cable. This makes it conveniently configurable on a DIT cart.

ZEISS ZX1. Shoot. Edit. Share.

SHOOT. EDIT. SHARE.

The ZEISS ZX1 ZEISS ZX1 is a mirrorless full-frame camera that brings together the excellent image quality of a ZEISS lens with the familiar, intuitive image editing and connectivity of a smartphone.

To SHOOT, you have an integrated (not interchangeable) ZEISS Distagon 35 mm f/2 lens with autofocus featuring a brand-new design. The lens has been matched to the 37.4 megapixel full frame sensor developed in-house at ZEISS. So this is an impressive proof of concept. After all, ZEISS makes the SMT optics that make many of the world's sensors.

To EDIT, Adobe Photoshop Lightroom CC is built in for professional photo editing on the ZEISS ZX1. Using the unique user interface, you can control the workflow directly on the camera's 4.3-inch multi-touch display.

To SHARE, the ZEISS ZX1 lets you select and post images directlyonline, without the need for storage cards or a connection to external devices. Wi-Fi, Bluetooth or USB-C ensure that many peripherals can be connected. At the same time, software updates are performed over the air, without the need for an external computer connection.

ARRI Stellar App

ARRI Stellar is a wonderful new app for iOS and Android phones and tablets for wireless control of ARRI SkyPanels and L-Series lights on set. Download Stellar on the iTunes store or Google Play.

Color Modes

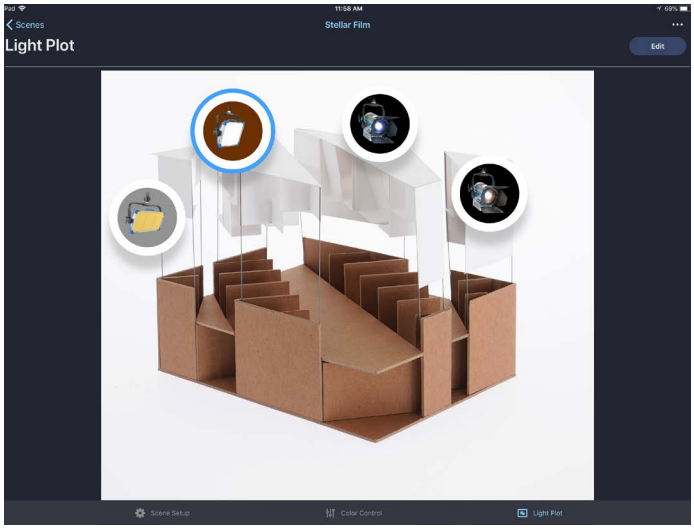
Click the round icon below the Stellar Film title on top. Color modes include: CCT (Correlated Color Temperature), RGBW, HSI (Hue, Saturation, Intensity), Gel and Source Matching. Gel View lets you select more than 300 familiar Rosco or Lee colors. Source Matching painlessly adjusts an ARRI fixture to the same color as, for example, a normally difficult-to-match-with-gels Mercury Vapor lamp. I counted 46 sources ranging from Amber Caution Light to Yellow Traffic Light.

Light Plot View

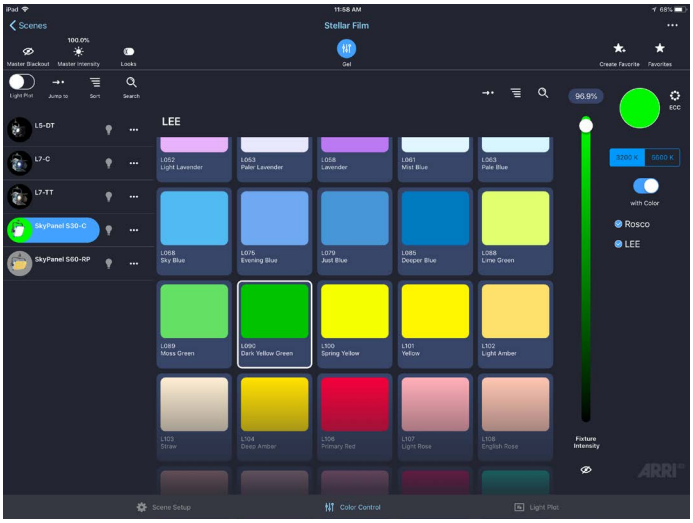
Stellar can import a lighting plot diagram, model or studio photo so that fixture placement can be graphically shown on screen. This lets you quickly find light fixtures based on where they are in real life. No more searching through lists of fixture addresses.

Auto Layout

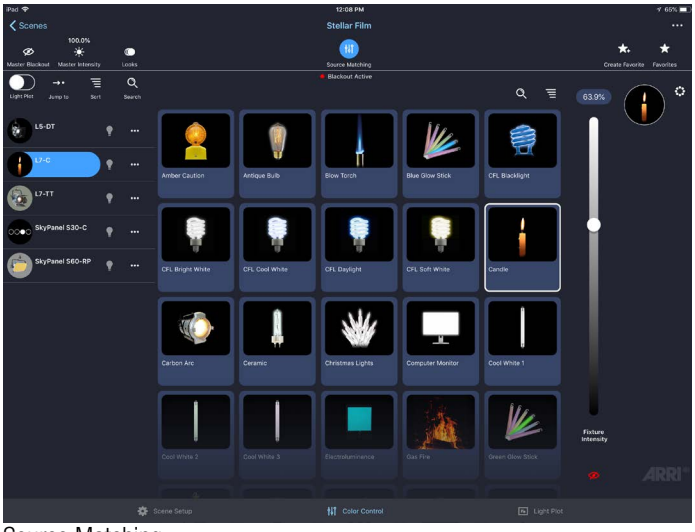
Lighting networks can be a complicated concoction of nodes, splitters, gateways, etc. Stellar will search the DMX network automatically and find every ARRI fixture connected to it—whether it's 10 fixtures,100 fixtures, etc. The app is free to download and try out the demo. Additional FDT articles will follow.



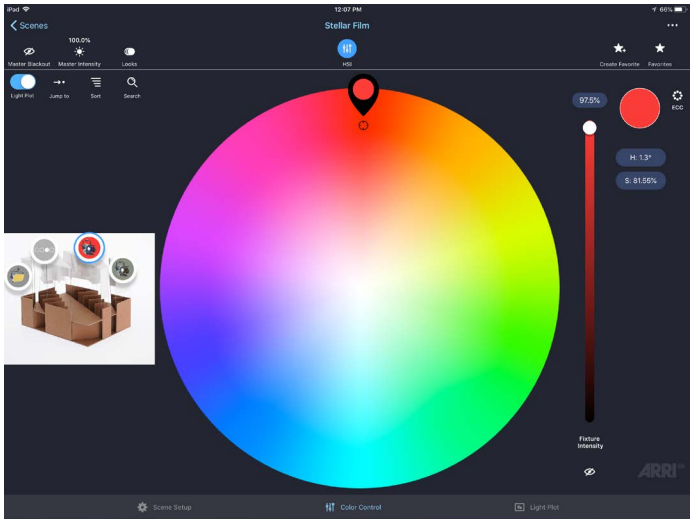
Light Plot View shown with imported photo of a model by Marlena Fauer.



Gel View: select more than 300 familiar Rosco or Lee colors.



Source Matching



HSI View (Hue, Saturation and Intensity)

Blackmagic RAW: Eats, Shoots & Leaves

Select Blackmagic RAW in the URSA Mini Pro Dashboard Menu

Choose Constant Bitrate 3:1, 5:1, 8:1 and 12:1 or Constant Quality Q0 or Q5. Q0 is best.

Eats, Shoots & Leaves is a lively book about proper punctuation.

It reminds me of Blackmagic Design's latest design. Having democratized shoot, edit, grade and other once-expensive endeavors, Blackmagic Design is at it again. Now they have democratized working in RAW. Shoot RAW, Edit RAW, Eat healthily while you Grade in RAW, Finish in RAW, and then Leave happily.

Blackmagic RAW is a new codec that is easy to use, has small file sizes with the speed and ease of familiar video formats, and gives you the advantages of having the digital negative built in.

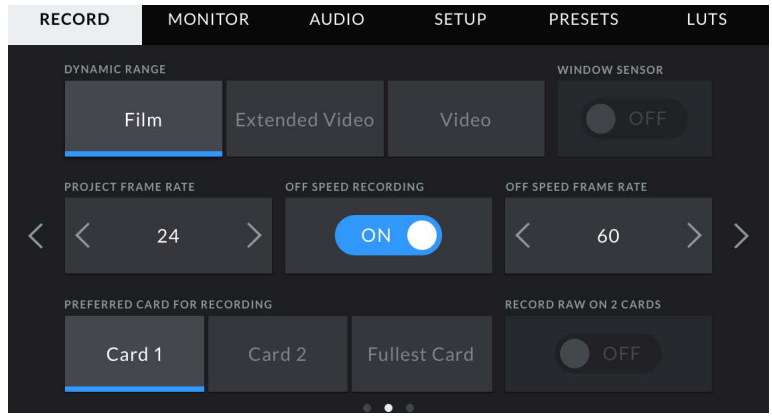
It makes life salubrious from set to sitting in the post-production place. There's just one file per shot, with a single file name (.braw). Data is not "wrangled." It is managed simply.

Blackmagic RAW codec incorporates the latest non-linear 12-bit Blackmagic Design Generation 4 Color Science. It offers pleasing skin tones and a filmic look. Blackmagic RAW files contain metadata with ISO, white balance, exposure, contrast, saturation and other settings. These settings can be summoned up in post and adjusted.

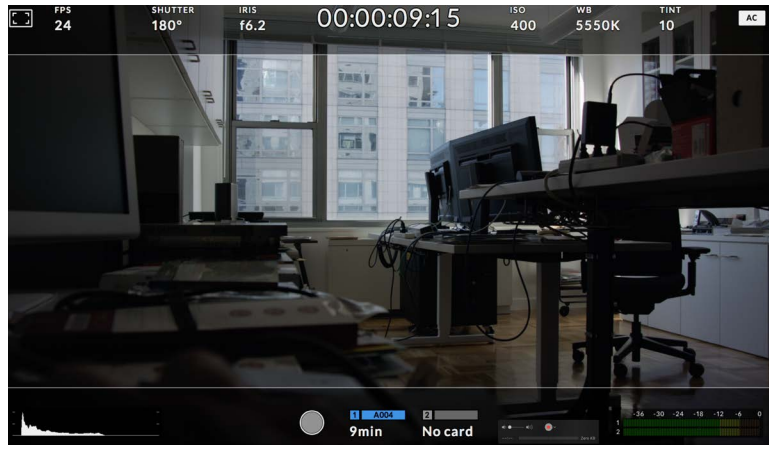
Gone are the days of editing with one set of transcoded "workprint" files, and then having to grade and conform another set of RAW files in post.

The Blackmagic URSA Mini Pro 4.6K camera is ready for Blackmagic RAW with the latest free camera update. ProRes and Cinema DNG are still there. But, a week of testing convinced me that Blackmagic RAW is what I would choose all the time.

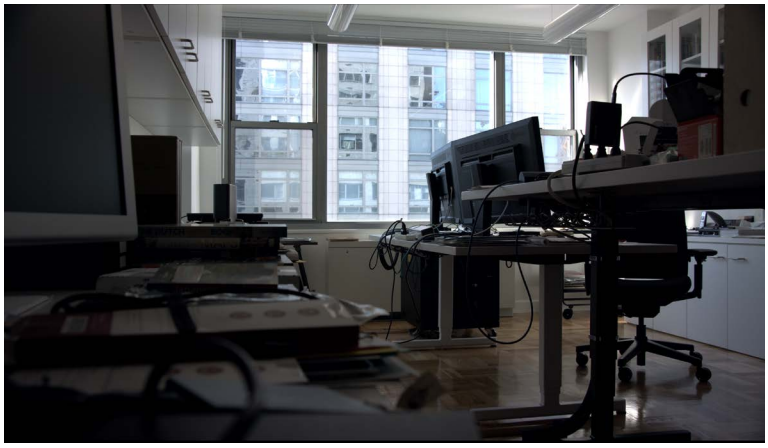
Blackmagic Design representatives explained, "Typically, RAW files are large and slow. Blackmagic RAW provides excellent image quality, wide dynamic range and a good selection of compression ratios. Blackmagic RAW files are very fast because part of the de-bayer is performed in the camera where it can be hardware



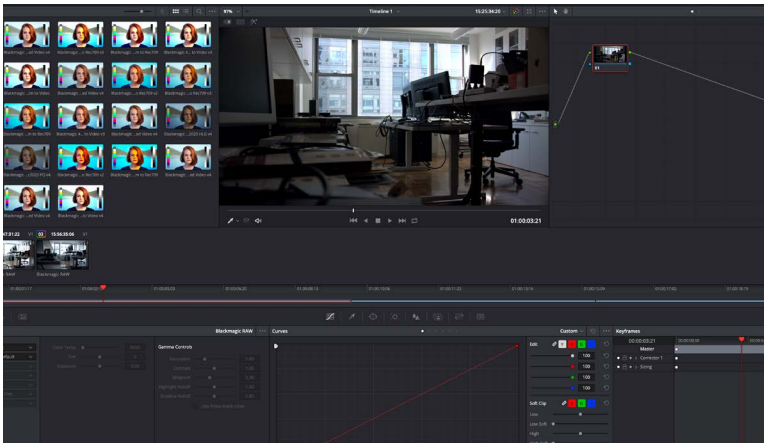
The 2nd page of the RECORD Menu offers choices of Dynamic Range: Video, Extended Video or Film. We chose Film.



❶ OK, let's shoot some tests. Here's a framegrab from the URSA Mini Pro's SDI output to an external monitor. I'm shooting Blackmagic RAW, FILM style Dynamic Range, ISO 400, Messy FDT Test Area.



❷



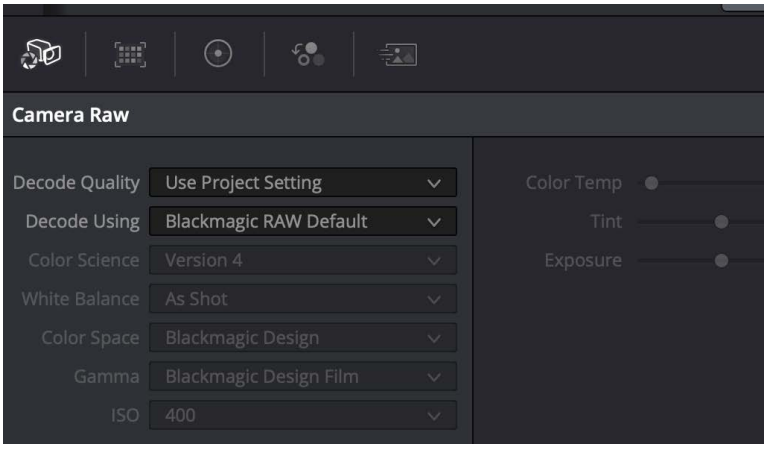
❷ Above, we have ejected the CFast 2.0 media card from the URSA Mini Pro and copied the RAW .braw files to our Mac running the latest version of DaVinci Resolve 15. The RAW files play, edit and grade effortlessly.

❸ At the lower left of the COLOR page of DaVinci Resolve, click on the icon above "C" of Camera Raw. We selected "Decode Using Blackmagic RAW Default." And clicked on one of the Blackmagic LUTs in the upper left side of the COLOR page.

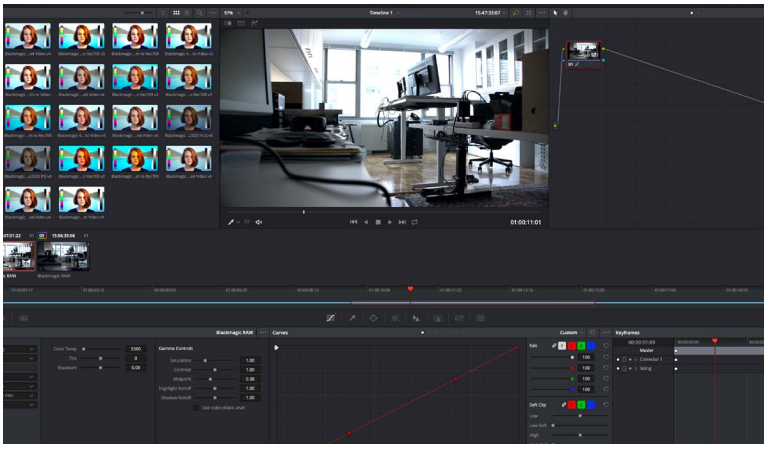
❹ What happens if we want to Video Dynamic Range? I deliberately overexposed the windows and they are horribly washed out.

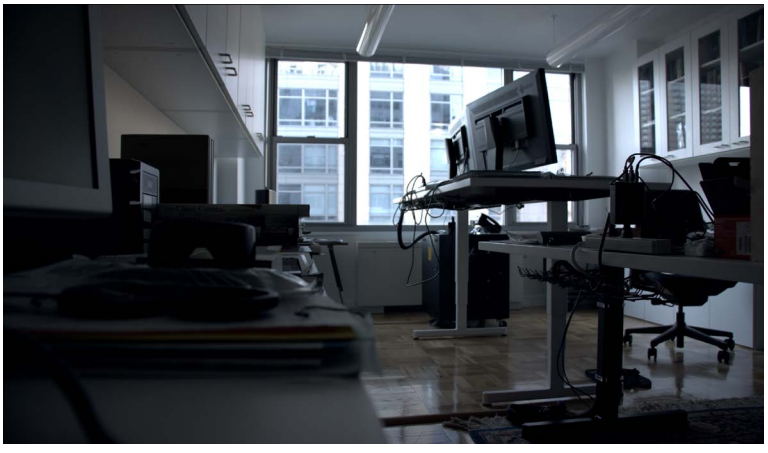
❺ Blackmagic RAW to the rescue. Select "Decode Using CLIP." Adjustments that were grayed out in the RAW Defaults mode are now available. You can adjust ISO, reduce exposure, preserve the highlights, etc.

❸



❹





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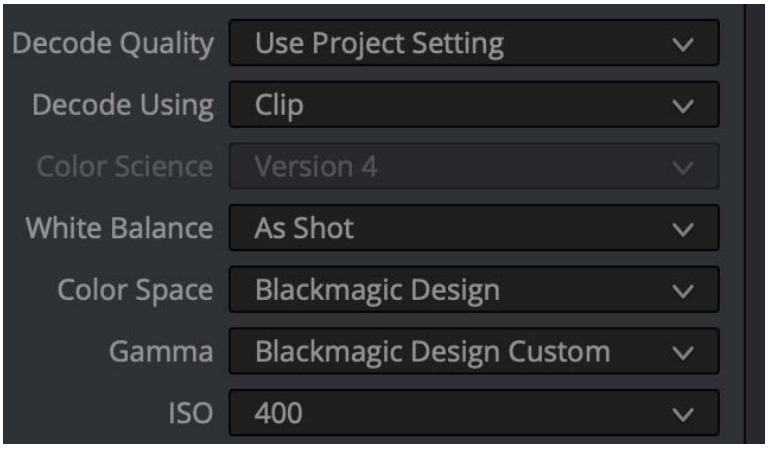
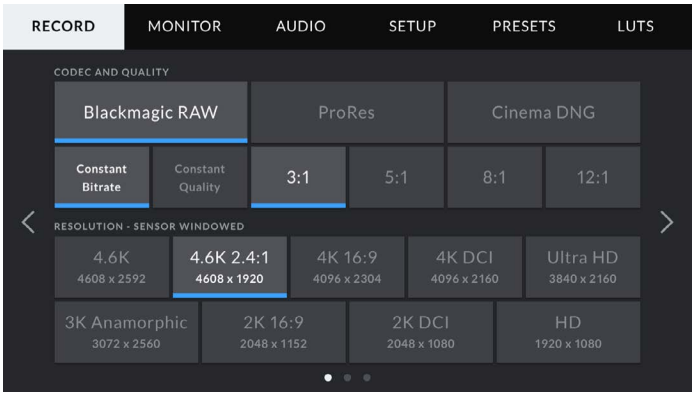
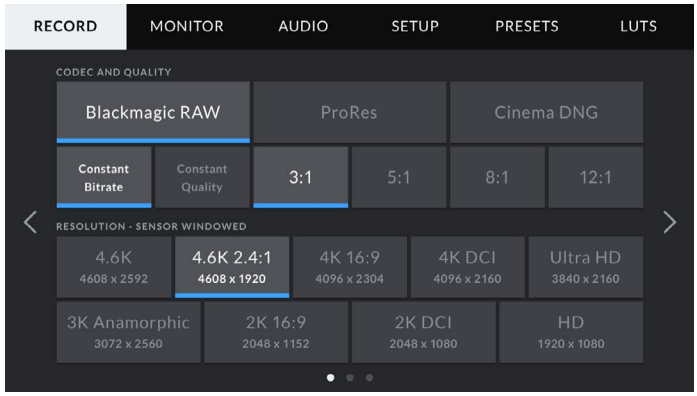




Blackmagic RAW Constant Quality Q0 for best image quality.



Blackmagic RAW Constant Bitrate choices of 3:1. 5:1, 8:1, 12:1.

accelerated. When the files are opened for editing and grading, software like DaVinci Resolve doesn't have to do as much work decoding the files and you get noticeably improved performance."

Blackmagic RAW has two types of file compression. You can shoot with constant quality or constant bitrate. I recommend Constant Quality Q0 for high-end production.

Constant Quality (Q0 or Q5) is a friendlier name for variable bitrate encoding. File sizes grow and shrink depending on the scene. Complex scenes, like motion control product shots of a fine watch, are encoded at higher data rates to preserve detail and quality. The other choice, Blackmagic RAW Q5, uses moderate quantization for lower bitrates and smaller file sizes.

One caveat: it is possible to shoot something and the file size might increase beyond the capability of your CFast 2.0 card. This could result in dropped frames. However, there's a RECORD menu setting to stop recording if frames are dropped.

Blackmagic RAW Constant Bitrate choices are 3:1, 5:1, 8:1 and 12:1. File sizes are predictable and file sizes are consistent. The ratio refers to the amount of compression. So, 3:1 means that the file is 3 times smaller than if it were uncompressed. And 12:1 means the file is 12 times smaller than uncompressed. 3:1 has the best quality and largest file sizes. 12:1 results in the smallest file sizes.

In summary, Q0 would be the setting to get the best quality. Its variable bitrate changes depending on the complexity of the scene but never compromises the quality. Bitrates will range from below 2:1 (for a scene that's difficult to compress) up to 6 or 7:1 for a scene that's simple to compress. Q0 averages around 3:1. The image quality never changes, no matter how much movement or fine detail you have in the scene.

Blackmagic RAW simplifies and speeds up post production. The latest version of DaVinci Resolve fully supports Blackmagic RAW. Files play back immediately, in 4K, seamlessly. DaVinci Resolve performance with Blackmagic RAW is much faster than, for example, Cinema DNG RAW. As mentioned before, one shot in Blackmagic RAW results in one .braw file. One shot in Cinema DNG RAW results in a folder with many files that are a sequence of still images.

When the RAW settings are changed in DaVinci Resolve, a .sidecar file can be generated or updated. When opened in other software applications that support Blackmagic RAW, the .sidecar file, which contains the RAW settings made in DaVinci Resolve, will be automatically used to display the image. If the .sidecar file is removed, the file will be displayed using the embedded metadata instead. This gives you a non-destructive way to change RAW settings while working with different applications.

Blackmagic RAW Player

The Blackmagic RAW Player is included when you download the free URSA Mini Pro or DaVinci Resolve update. It's an excellent and simple application to quickly review and visually QC shots at full resolution. Blackmagic RAW Player opens when you double-click on a .braw file. The viewer is currently ready for macOS.

Blackmagic RAW SDK

The free Blackmagic RAW Software Developer kit (SDK) is available for Mac OS, Windows and Linux. If you are a camera or lens manufacturer or software developer, it is very helpful to know the details of Blackmagic Design sensor profiles and color science. The protocols are being shared openly. Developers get access to GPU and CPU accelerated algorithms for decoding files, along with information about the camera's image sensor so their applications can decode and display the files.

Metadata

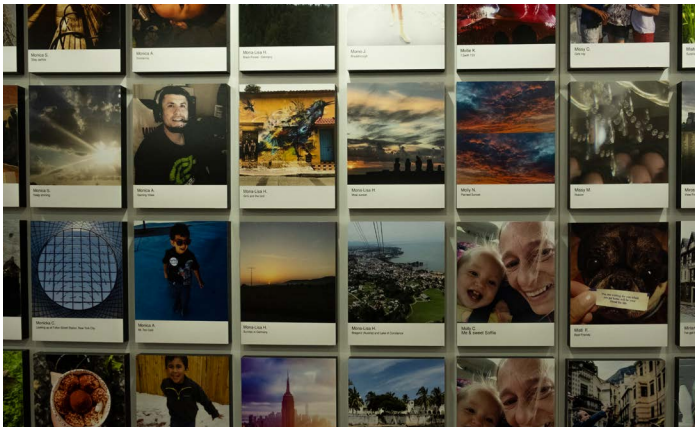
The SDK includes many metadata options. Metadata is embedded directly in the .braw file or it can be stored in a .sidecar file containing the RAW settings as well as camera and lens information: lens model, focus distance, iris, zoom, focal length, white balance and more. The camera received lens data via the pogo pins in the EF lens mount or the PL mount for /i. Lens data can also be captured through the Hirose connector on the camera's front when using PL and B4 servo zoom lenses from Canon or Fujinon.

The .sidecar files can be used on top of the embedded metadata without overwriting it. Blackmagic RAW also supports frame-based metadata. This is important in VFX work and match-moving, for example when tracking focus distance frame by frame on a dolly shot when the hero actor is blocked by a foreground dinosaur.

Grant Petty, Blackmagic Design CEO concludes, "Blackmagic RAW is a modern, high performance, professional RAW codec that is open, cross platform and free. Blackmagic RAW has been designed to provide the industry with an open, elegant and standardized high quality image format."

Blackmagic DaVinci Resolve 15.1.2 and Blackmagic Camera 6.0 Updates support Blackmagic RAW and can be downloaded free: *blackmagicdesign.com/support*

Square Aspect Ratio. Fujifilm Print Life.



Manny Almeida, President of FUJIFILM Imaging Division, FUJIFILM North America Corporation, with his pictures of Newport, RI submitted to the exhibition.

Square is a very good format. It solves the eternal dilemma between portrait and landscape mode.

On October 17, FUJIFILM North America Corporation opened its first 2018 FUJIFILM Print Life Photo Exhibition in Vanderbilt Hall of Grand Central Terminal.

The theme was "Everyday Photos." More than 13,600 photos were submitted from all over the United States. Participants were invited to upload their photos to the FUJIFILM Print Life Photo Exhibition website in July and August this year.

Each photo was carefully printed and mounted in a 9-inch x 9-inch square format. Certainly, it helped that FUJIFILM runs its own vast commercial printing and mounting plants in countries around the world.

The idea began in Japan in 2006 as the "10,000 Person Photo Exhibition." It has become the most popular photo exhibition in Japan, with 50,000 photos and 1.2 million visitors last year.

The exhibits continue to grow and have expanded to Germany, Thailand, Malaysia and Canada, with more than 100,000 photos.

"In the US, there are billions of photos taken every day and unlike the film photography era, images are shared through social media quickly and easily instead of being printed," said Ken Sugiyama, President and CEO of FUJIFILM North America Corporation. "Fujifilm strongly believes in the power of the printed picture. The 13,600 printed photos that will be on display carry the power to tell a story of their own. They are different from photos taken by professional photographers, but are personal and beautiful their own way."

View the gallery online : *printlifeexhibition.com*

Teradek DSMC2 Bolt

Teradek Bolt DSMC2 is here. Teradek worked closely with RED Digital Cinema to build Bolt transmitters that attach stylishly to the back of RED DSMC2 cameras.

They provide zero-delay 1080p HD wireless video to monitors on set.

The Bolt DSMC2 is a video transmitter module that attaches directly to the rear of RED MONSTRO 8K VV, HELIUM 8K S35 or GEMINI 5K S35 cameras. It's neat and eliminates cable clutter. You don't need to attach mounting arms or additional video or power cables. The transmitter module attaches to the back of any DSMC2 camera. Any DSMC2 I/O or battery module approved by RED can then be attached behind the Bolt DSMC2. It fits like a fine pastrami on rye sandwich.

The Bolt DSMC2 provides the same pristine, real-time, zero-delay wireless video you know and love in the regular Bolt line. It comes in three different ranges, 500, 1000 and 3000 ft.

Bolt DSMC2 are compatible with Bolt 500, 1000, 3000, XT and LT systems, as well as receivers like SmallHD's 703 Bolt, ultra-long range Bolt 10K, and the Bolt Sidekick series.

One Bolt DSMC2 transmitter module supports up to 4 Teradek Bolt receivers. They support Dynamic Frequency Selection (DFS) on the required frequencies for optimal performance.

Ships in Fall 2018.

dsmc2.teradek.com

Bolt DSMC2 3000
3,000 ft. transmission range
$5,690.00

Bolt DSMC2 1000
1,000 foot transmission range
$2,890.00

Bolt DSMC2 500
500 foot transmission range
$1,690.00

Teradek ACI for RED DSMC2

Teradek RT ACI (Assistant Camera Interface) gives RED DSMC2 cameras a bigger LED menu screen with a nicely reimagined menu layout, tactile push-buttons, a jog wheel and intuitive controls.

There are 3 models. They all screw directly onto the right side of RED DSMC2 cameras. The ACI module is the basic unit. The MDR.ACI adds a 3-channel Teradek RT Motor Driver Receiver (MDR) for wireless lens control. The remote control unit (RF.ACI) also attaches to the camera but you can also remove for remote control of a DSMC2 camera up to 5,000 feet. *aci.teradek.com*

ACI

connects with a cable to any DSMC2 I/O module's CTRL (RS232) port and to the camera's Lemo auxiliary power connector or the onboard battery's D-Tap. $899.95

MDR.ACI

includes all the features of the ACI and adds a 3-channel Teradek RT Motor Driver Receiver (MDR) for wireless lens control. $2199.95

RF.ACI

includes everything in the ACI and adds a 2.4GHz FHSS long-range transmitter/receiver. It also has Bluetooth to connect with mobile devices. RF.ACI attaches to the DSMC2 like the other modules. But, best of all, it works as a remote for long range camera control when paired with the MDR.ACI (or another RF.ACI). RF.ACI is great for remote camera control on drones, gimbals, remote heads, Steadicam, helicopters, camera cars, etc. It is powered with a Sony L-series or Canon LP-E6 battery. $1699.95

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