FILM AND DIGITAL TIMES

Art, Technique and Technology

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

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

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Contents: June 2024 Issue 126

Cover:

Cinematographer Christine Ng filming with new Canon Cinema EOS C400 with Canon CN-R 24mm T1.5 L F Cinema Prime Lens on OConnor 2575 and Tango heads, Teradek Bolt, SmallHD Monitor, Preston lens control. Photo by Alex Sax.

What's in Your Bag? New Canon Cinema EOS C400.

Yuji Tanaka unpacking Baicyclon backpack at FDTimes.

Yuji Tanaka and Paul Hawxhurst unpacking C400 cameras.

What's in your bag?

The Tennis Channel may have Bag Check interviews in which famous players pour out the contents of their bags and souls. But, when Canon's Yuji Tanaka and Paul Hawxhurst arrived at FD-Times a few days ago, it was all about the bags and what was in them. Yuji carried a cool Baicyclon backpack by Bagjack of Berlin, an F-stop rolling case, and KATA small camera case. Paul carried a Canon Professional Services branded Think Tank Shape Shifter 15 V2.0 and a Kata CC-193 PL shoulder bag.

They unpacked what seemed like the contents of an entire camera truck: lenses big and small, zooms and primes, lens mounts, every imaginable cool tool, and the objects of our attention: two new pre-production Canon Cinema EOS C400 cameras.

You could say the new Canon C400 was inevitable: Full Frame, RF Mount, Internal ND filter array, 6K, and RAW recording in a very compact, lightweight, ergonomic and affordable camera body.

There is so much to like about this camera—but the thing that made me jump for joy was its RF lens mount.

Camera specifications often adhere to traditions that linger longer. Certainly EF, PL and PV flange focal depths ruled for a very long time, even long after electronic viewfinders replaced optical viewfinders and their spinning or flipping mirror shutters.

Canon introduced cameras and lenses with EF mounts (44 mm flange focal depth) in 1987. It was difficult to argue with success—more than 140 million Canon EF lenses have been sold.

Canon's first Cinema EOS C300 camera launched at Paramount

Studios in Hollywood on November 3, 2011. With an EF or PL lens mount and Super35 format, its look, low-light capability, shape, quality and usability was appealing to cinematographers and rental houses.

Five months after the C300 was shown, Canon introduced the 4K EOS C500 at NAB 2012. It offered EF or PL mounts. Another 5 months later, at IBC 2012 in Amsterdam, Canon showed the EOS C100 camera. Then, in April 2015 at NAB, Canon presented the C300 Mk II with internal 4K recording to CFast 2.0 cards and 15 stops of dynamic range. These were all Super35 cameras with EF or PL mounts.

Masaya Maeda was Senior Managing Director at the time and then as served President and COO of Canon Inc until 2020. He was praised by Canon Chairman Fujio Mitarai as "a digital leader who was always one step ahead in advancing the digitalization of cameras."

Mr. Maeda was prescient in his assessment of Full Frame. Certainly Canon had whetted the appetites of filmmakers with their 5D Mark II that offered Full Frame 24x36 video in 2008. About Full Frame, Mr. Maeda said, "It is a challenge how far we can go with dynamic range and sensitivity using current APS-C or Super 35 size sensors. A larger sensor size is actually more advantageous because a larger pixel pitch will be more sensitive. Larger pixel sizes are an advantage in low light."

In March 2018, Canon introduced the EOS C700 FF (Full Frame) camera. It had a 38.1 x 20.1 mm (43.1 mm Ø) 18.69 megapixel (5952 x 3140) sensor with 6.4 x 6.4 µm pixels. The EOS C700 FF

New Canon Cinema EOS C400

Trying out a Coral anamorphic PL mount lens on a pre-production C400.

recorded Full Frame RAW, ProRes and XF-AVC, and came with a Canon locking EF mount or PL mount. Clearly EF and PL were embedded in the culture. And then things began to change.

RF Lens Mounts landed in Maui and worldwide on September 5, 2018 with the Canon EOS R Full Frame mirrorless photo/video camera and lens system. At the time, former Canon fellow Larry Thorpe said, "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."

Canon's optical designers explained, "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."

The Canon EOS R System of cameras and lenses quickly grew from one camera and four RF lenses to a system of 14 camera models and at least 31 lenses.

Canon RF mount "photo/video" cameras include: Canon EOS R, RP, Ra, R3, R5, R5 C, R6, R6 Mark II, R7, R8, R10, R50, R100. The first RF mount Cinema EOS System cine camera with RF mount came in November 2020: the Canon EOS C70. It had a Super35 sensor.

Canon's EOS R5 C arrived in March 2022. Its styling looked like previous EOS "stills style" cameras, but it could shoot very capable Full Frame video.

Cinematic waters were tested with RF mount cine lenses. In September 2023, Canon announced RF mount Cinema Prime Lenses, with cinema-style 0.8M focus and iris gears and RF mount communication. They said, "This first set of seven RF Mount Cinema Prime Lenses is only the beginning. Canon plans to swiftly expand the lineup of RF Mount production equipment to meet the needs of professional content for movies, TV, and commercials."

In November 2023, Canon introduced the RF24-105mm F2.8 L IS USM Z Full Frame zoom lens. It could be controlled electronically or mechanically. This was Canon's first RF mount hybrid stills/video lens, having a marked and dedicated iris ring. Did this foreshadow a new era of lighter, smaller, faster, thriftier, focus and exposure by wire (and fingers) mirrorless mount cine lenses?

And when was an RF mount cine camera coming out?

June 5, 2024. Canon EOS C400. Let's begin.

Canon EOS C400 at a glance.

- The 6K 26.7 megapixel, backside illuminated stacked sensor has new Dual Pixel CMOS AF II.
- At 38mm, the C400 sensor is actually wider than most Full Frame sensors. Canon seems to favor this, as the C700 FF's sensor also measured 38mm wide.
- You can select an ISO sensitivity from 100 to 102,400.
- Triple Base ISO: 800, 3200 and 12,800 in Clog2/Clog3 RAW recording with auto-change option.
- You can set the Triple Base ISO to adjust Automatically (in RAW/Log) or Manually. In other words, you do not have to select a base ISO—just enter the ISO setting you like.
- Reducing the lens flange-to-image sensor distance by 20 mm (almost an inch), from the EF mount's 44 mm to the RF mount's 20 mm FFD (flange focal depth), means there was less room for the engineers to stuff an ND filter mechanism inside. And so, they describe the ND filter array as "Fusuma" style —like the sliding panels and doors in Japanese architecture that slide from side to side. On the C400, the filters slide up and down.
- The internal optical ND filters are 6 mm thin. Densities are: Clear, ND.6, ND1.2, ND1.8, ND2.4, ND3.0 (2, 4, 6, 8 and 10 stops). ND2.4 and ND3.0 (8 and 10 stops) are achieved by sliding two internal filters together. Fusuma 襖.
- Canon CLog2 is recommended for obtaining the most dynamic range for productions where you will be grading in post-production.
- Canon CLog3, which has less dynamic range, is suggested for quick turnaround, when you have less, or no, time for grading.
- Auto Clear Scan analyzes LEDs or monitor screens, reads the refresh rate and adjusts the camera's shutter speed accordingly.

Canon Cinema EOS C400 Details

- The SDI output at the rear of the camera is 12G, 4K to 60P.
- The Monitor output at the rear is 3G 1080 60P.
- The camera is powered by a BP-A30N or BP-A60N 14.4 VDC battery that slides into a slot at the rear.
- 11.5 - 20 VDC external power connects to a 4-pin XLR.
- Optional V-Mount or G-Mount Micro battery plates are available as options. With the BP battery installed, you can hot swap the Micro batteries.
- There's a 12-pin Hirose connector in front that connects to servo zooms and broadcast style lenses.
- Remote start-stop is available via the serial LANC-style jack. This is where you'd plug in a FIZ MDR for camera control.
- The camera has built-in Wi-Fi. Canon's Multi-Camera Control is a free app that lets you start and stop recording, control focus, zoom, iris, ND Filters, ISO, Shutter, White Balance, and Custom Picture Profiles and view the live image or play it back.

- Canon's new RF24-105mm F2.8 L IS USM Z may be the "must-have" RF mount zoom and "kit" lens.
- Canon's new RF35mm F1.4 L VCM is the first Canon RF mount hybrid prime with a dedicated iris ring. More to follow.
- Auto Lens mapping via Canon's Virtual Production System with certain RF lenses.
- A Canon RF to PL lens adapter with /i lens data contacts is available as an accessory. It comes with two screw-in sides for extra support. The /i metadata is passed through the adapter to the C400's 12 RF mount pogo-pins.
- The price of the C400 is incredibly affordable and competitive: US $7,999.

The C400 camera passed the 5-minutes-without-needing-instruction manual test. Easy and intuitive. These notes are based on pre-production cameras with preliminary specifications, without instruction manuals, but with advice from Canon's Yuji Tanaka and Paul Hawxhurst.

Canon Cinema EOS C400: A few more specs

Lens mount	RF mount. 20 mm Flange Focal Depth, 54 mm Inside Diameter.
Sensor	Full Frame CMOS sensor. Approx. 26.7 megapixels total (6202 x 4300). Actual picture area at 6000 x 3164 Full Frame Sensor Mode: 38.4 x 20.2 mm
ISO sensitivity	160-25600 (Extended: 100-102400)
Triple BASE ISO	Clog2 / Clog3 RAW = 800, 3200, 12800. Canon 709, PQ, HLG, Wide DR = 400 / 1600 / 6400 BT. 709 Standard = 160 / 640 / 2500
Sensor modes	Full Frame, Super35 Crop, Super16 Crop
Dynamic range	16 stops
Recording format	Cine: Cinema RAW HQ, ST, LT, XF-AVC, XF-HEVC S, XF-AVC S / Photo: JPEG
Sensor Modes & Maximum frame rates (slow & fast). *When frame rate exceeds 100 fps in Super35, the angle of view is cropped approx. 6%.*	Full Frame 6000 x 3164 60 fps Super35 Crop 4368 x 2304 100 fps 4096 x 2160 120 fps Super16 Crop 2048 x 1080 180 fps
Dimensions — camera body only	142 x 135 x 135 mm / 5.6 x 5.3 x 5.3 in. (W x H x D)
Weight — camera body only	1540 g / 3.4 lb

Canon Cinema EOS C400

POWER On/Off

Image Plane

Internal ND FILTERs: set with + and - buttons:
Clear, 2, 4, 6, 8, 10 stops
(Clear, ND.6, 1.2, 1.8, 2.4, 3.0)

CFexpress and SD card slots
behind this door

SELECT/SET menu dial and button

Canon BP-A30N, BP-A60N
onboard battery

RECORD Start/Stop

Camera left

Canon RF to PL
lens mount adapter

The Full Frame sensor appears
to be full height, so perhaps
38.4 mm wide x 24 mm high

RF mount lens release button

12 RF mount pogo-pin contacts

Hirose 12-pin

Front

USB-C style connector for
single-cable monitor power
and video, with thumbscrew
lock

Industry-standard Hirth
Tooth Rosette

Standard RJ45 Ethernet connector

USB-C Handgrip control
connector

Camera Right

Canon Cinema EOS C400

USB-C

MON OUT 3G SDI

SDI OUT 12G SDI

Audio INPUT 1

Audio INPUT 2

DIN connector for Genlock, Sync, Return Video

Ethernet RJ45

BP onboard battery compartment

DIN connector for Timecode

BP battery release

12V DC IN 4-pin XLR

Camera right rear

Menu Joystick

4x Micro Battery Plate attachment threaded sockets

Menu CANCEL

MENU Button

REMOTE serial connector

Camera left rear

Multi-Function Shoe enables control and power of various accessories.

Top

Bottom

Canon Cinema EOS C400

3.5-inch touchscreen and touch-to-autofocus LCD monitor/viewfinder/ menu rotates 360°, pivots perpendicular and parallel to camera body, and attaches to almost any position—front, back or either side.

Canon Cinema EOS C400 with RF Zoom Lenses

Canon Cinema EOS C400 with new auto/manual focus and iris
RF24-105mm F2.8 L IS USM Z Zoom Lens

CN7×17 KAS T/R1

Above:
at left: New Canon CN7x17RF 17-120mm CINE-SERVO T2.95 Zoom Lens. Official names:
RF mount: CN7×17 KAS T/R1
PL mount: CN7×17 KAS T/P1

RF24-105mm F2.8 L IS USM Z Zoom Lens,
at right.

Canon Cinema EOS C400 with RF to PL Mount Adapter

Canon's RF to PL mount adapter comes with "wings" that attach to the front for extra support. Note the four /i lens data contacts at 12 o'clock in front.

Rear view of Canon's RF to PL mount adapter. The /i lens data is passed through to the camera via the 12 contacts at 6 o'clock on the rear side of the adapter.

EOS C400 with PL mount lens

Second Reef's pre-production Coral 50mm T2.6 Full Frame 1.5x squeeze anamorphic PL mount prime lens is shown on the C400 with its RF to PL mount adapter.

The anamorphic squeeze ratio is recorded in the camera meta-data for desqueezing in post.

So far, the C400 only has monitor desqueeze viewing ratios of 2x, 1.8x, 1.3x and Off. We viewed in 1.8x, which wasn't bad. Or, we could have used a SmallHD Cine 7 which has 1.5x anamorphic viewing desqueeze.

Canon EOS C400 Prep

Christine Ng (on the cover) was one of the first cinematographers to try the Canon EOS C400. She commented:

"The images look so good. I am very ambitious with what I need to do and how many shots I want to get. In fact, I think we got more shots than we had on the schedule. I also wanted to use the camera where it was built out in studio mode, but also small enough to go handheld.

I was excited to try the autofocus feature. I had used it before on the Canon C70 (Super35 RF mount camera), so I knew generally what it could do. I had a scene where the sun was in my eyes and I couldn't really see the screen so well, but I knew that if I tapped and locked in the autofocus, it would hold. So that was actually amazing to have.

"As a narrative cinematographer, auto focus is not necessarily a thing. It's much more of a stills world thing. I was happy that this function exists when you're in a bind and you can't really do critical focus as well as for documentary work.

"Canon has new RF lenses, which I was able to use as well. There was a new 35mm RF mount lens and a 24-105 F2.8 which also had a tiny servo that you can just screw in and it works well. You can adjust the speed. It's nice to have options. I also like to shoot documentaries, so I'm always trying to find tools that can work across multiple genres. As someone who owns a lot of gear, this camera was giving me options I didn't have before. That was really exciting for me.

"I also like that these hybrid cine/stills lenses that have an actual iris ring now and you're not clicking through a menu or on a toggle wheel. I also had Canon Cine primes with PL mounts. The C400 also has a good PL mount that attaches onto the RF mount and is very secure. That makes it very versatile. You can use a variety of lenses. If you're swapping from PL to RF or other lenses, you're just adding an adapter.

"The monitor viewfinder is good. Because I wanted to use the autofocus, I wasn't really sure if I would have it on a gimbal or have it handheld, but I was worried about not being able to get the monitor where I need it for operating.

The monitor now connects via USB-C, so if you need a longer cable to get it somewhere, you can do that. This allows more versatility. And even the mounting bracket is a 1/4-20, so you can

put it on an arm and move it anywhere.

"I think the industry has been waiting for Canon to release a camera like this. I still rent a lot of equipment. But I also own a lot of my own equipment—and for many people, especially younger filmmakers or filmmakers who are trying to be working across different genres, it's always nice to have equipment."

Some EOS C400 Menus and Monitor Views
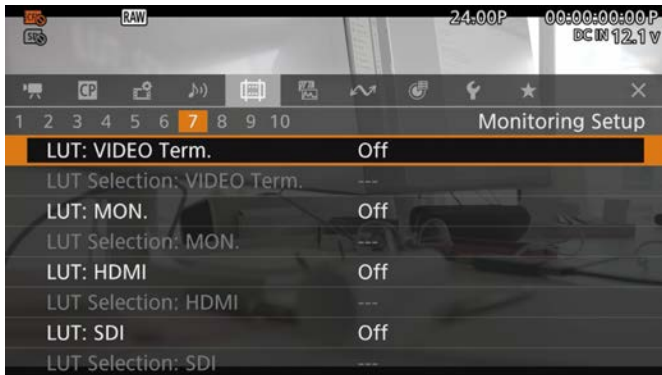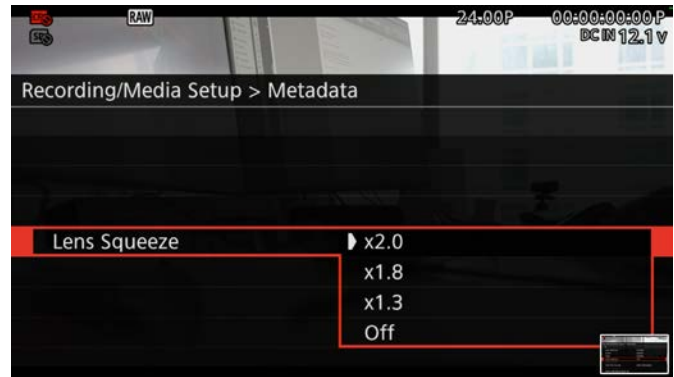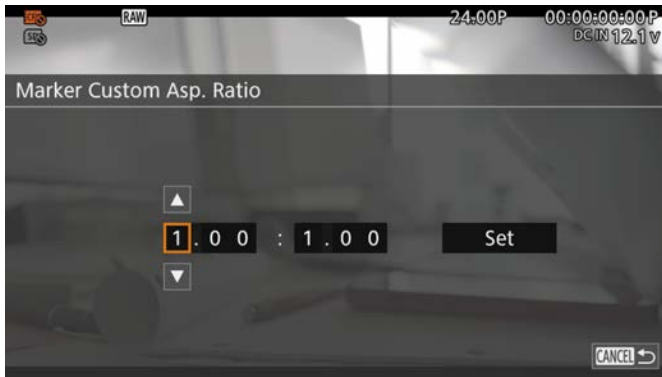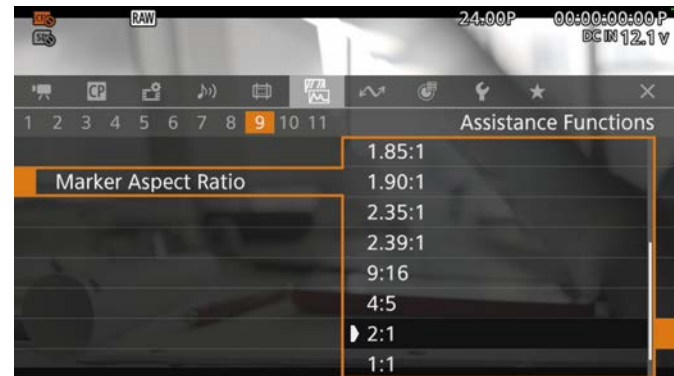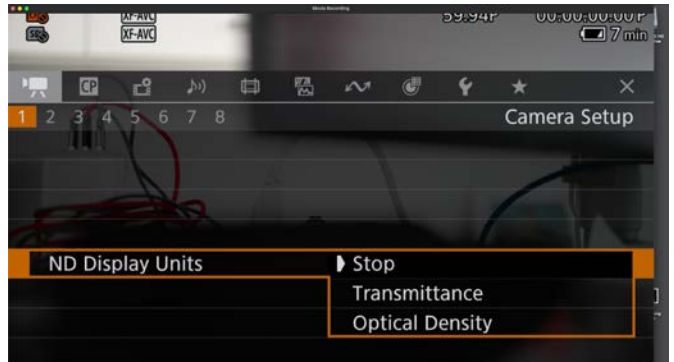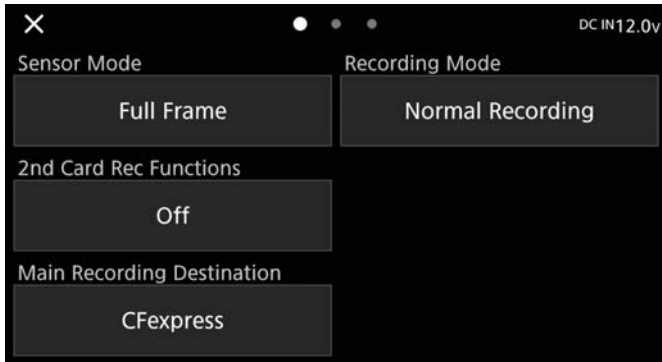
New Tiffen Gear at Cine Gear Expo

The Tiffen Company has been busy.

Here are some of their new products at Cine Gear Expo 2024.

Steadicam Volt3

At right: the new Steadicam Volt3 3-axis stabilizer (pan, tilt, roll) on the Steadicam M-2 with G-70x2 Arm.

Filters:

New Tiffen Soft Glow and Black Soft Glow Diffusion filters reduce fine details yet retain sharp focus. In other words, eyelashes stay sharp and skin tones smoothen.

Soft Glow adds a slight cooling effect in the stronger grades.

Black Soft Glow also adds a cooling effect and keeps dark areas dark without shifting colors.

Dark Contrast lowers contrast by darkening highlights without darkening shadows.

Steadicam G-70x2 Arm

Now shipping: Steadicam G-70x2 Arm holds payloads up to 70 lb /31.8 kg.

Steadicam Axis

Steadicam Axis is the first professional Steadicam with 3-Axis Volt Stabilization. It carries payloads to 20 lb / 9 kg.

Tiffen Mag Control System

Now filters attach magnetically to the front of your lens instead of screwing on.

Read on.

Steadicam Volt3 3-axis stabilizer on Steadicam M-2 with G-70x2 Arm.

Steadicam Volt3 on M-2 Series

Pan Tilt Roll Dampening

VOLT3

 The new Steadicam Volt3 M-2 Series has a new gimbal with integral 3-axis pan, tilt and roll control.

This is big news. While the previous Volt had 2-axis control (tilt and roll), the new pan "motor" control lets you fine-tune the movement of the pivoting post.

An Alt-Key adjusts tuning to your personal preferences. This adds a whole new level of control of Drag, Dampening and Digital Inertia.

Steadicam Operator James Marin explains:

"Up to now, the Steadicam Volt has had two 'motors,' one for tilt, one for horizon. It helps to level the horizon, and it also means that if you want to lock your tilt, for example when you're following someone up stairs, then you can lock the tilt in that position instead of using your hands to maintain that tilt.

"Now with the new pan axis, you can dial in the amount of pan inertia. Right now, pan inertia can be one of Steadicam's best friends because, right now, with cameras getting smaller and lighter, there tends to be not enough inertia. Meaning when you pan, it's really easy to overdo it.

"So you have to be really gentle with longer, heavier cameras as well because they have more physical inertia. And so, the idea

of having the pan axis control is to provide more inertia or less inertia. Another nice thing about that is when you want to do a really slow push-in and you want the lens to point perfectly straight. And it also helps keep the whole system level against wind because if you are in an even slightly windy environment, then the wind pushes the camera and the rig in one direction and you are pushing it back to keep it straight. And obviously the tighter the lens you use, then the more difficult it is to keep moving straight in.

"Having that third axis pan motor lets you dial in the amount of control and basically decide when you want the frame to be perfectly centered and not wagging. Or maybe if you need less inertia. Or dial it back and then be able to whip pan rather quickly."

STEADICAM G-70x² Arm

The Tiffen Company, makers of the Steadicam, announce that the Steadicam G-70x² Arm is now available.

It flies and stabilizes payloads from 13 to 70 lb (5.9 to 31.8 kg) with a boom range (up-down) of 29" (737 mm).

There are many upgrades from the previous G-70 line, which is popular for its twist-resistant core design, carefully sourced metal alloys, propriety coatings and components that work together to add strength, enhanced stability, and durability. Building on the Steadicam G-70x, with its patented Iso-Elastic and Geo Spring Geometry, the new G-70x² includes features and functions that significantly enhance reliability, durability, safety, set-up speed, and smooth stabilization.

The new Steadicam G-70x² has a dual bearing mounted ¾" arm post. Rotational locking and drag control is done without tools—for quick adjustments from a solid lock-off to free rotation of the arm post, even when changing posts.

The new, rigid pivoting steel Socket Block also adjusts without tools and eliminates flex that can be inherent in traditional rod ends. This offers more precise sled positioning, with faster set-ups and on-the-fly adjustments, without removing the arm. Also, as a safety benefit, it prevents the operator from mistakenly over-extending the rod ends.

The popular kickback link, which gets the arm further out of the way as the sled crosses the operator's body, now has a multi-position socket block to locate the arm in the most convenient position, whether operating front- or back-mounted.

The new Steadicam G-70x² also has a sleeker design, with lower profile arm links that make it appear more transparent and less intrusive to operator movements. Operation is smoother thanks to Tiffen's attention to detail: with a full complement of low friction pivot point bearings, updated arm bumper design, and Lift and Ride knobs that have rubber grips and are easy to turn. Furthermore, the G-70x² uses Metric assembly components for easier service.

The G-70x2 comes with a soft-sided Arm carrying bag, special tool for user servicing, an operating manual, and 3-year full parts and labor warranty.

tiffen.com/products/steadicam-g-70x-2

STEADICAM G-70x² Arm
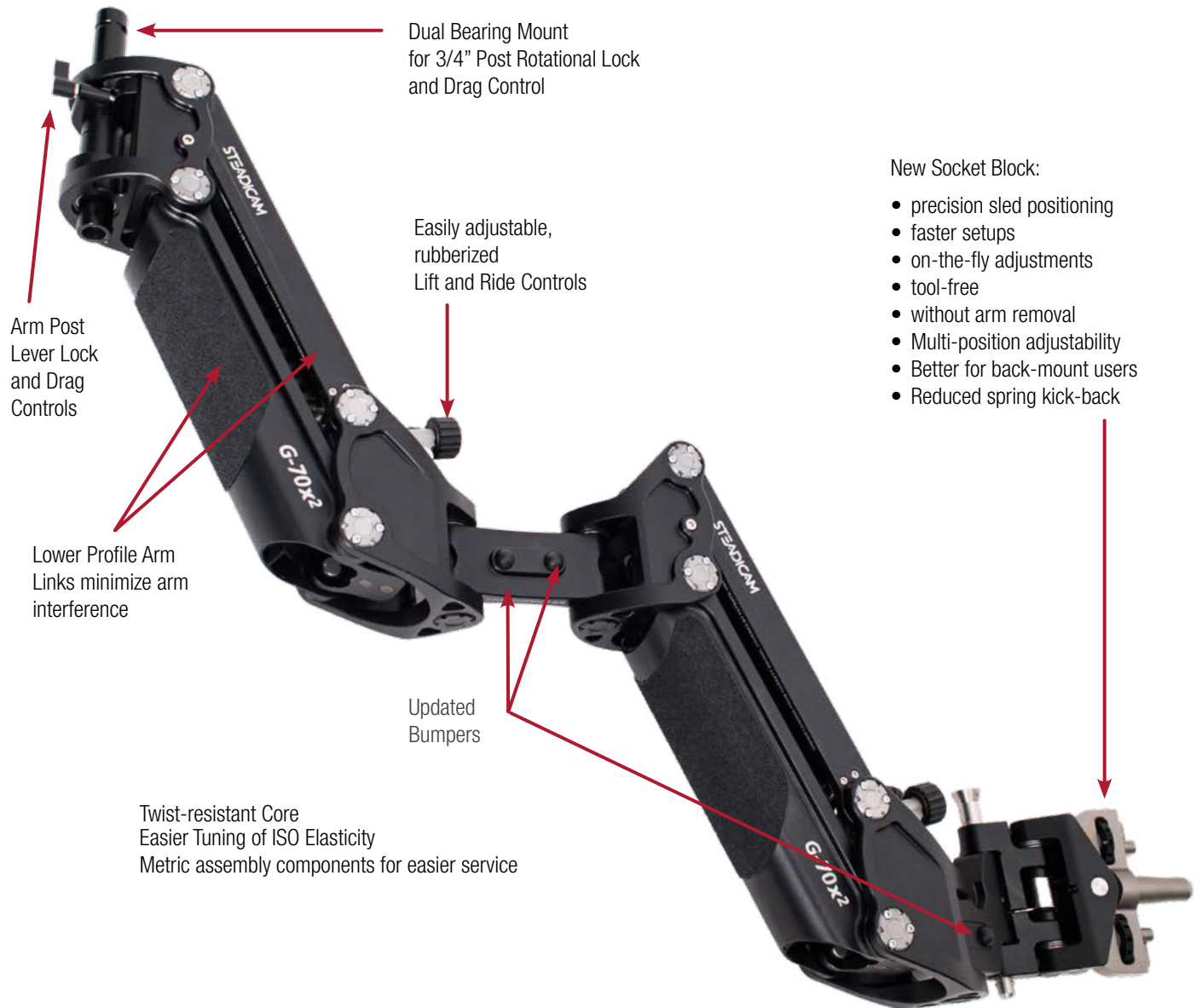
Dual Bearing Mount
for 3/4" Post Rotational Lock
and Drag Control

Easily adjustable,
rubberized
Lift and Ride Controls

Arm Post
Lever Lock
and Drag
Controls

New Socket Block:

- precision sled positioning
- faster setups
- on-the-fly adjustments
- tool-free
- without arm removal
- Multi-position adjustability
- Better for back-mount users
- Reduced spring kick-back

Lower Profile Arm
Links minimize arm
interference

Updated
Bumpers

Twist-resistant Core
Easier Tuning of ISO Elasticity
Metric assembly components for easier service

STEADICAM®

Specifications

- Weight: 13 lb / 5.9 kg
- Boom Range: 29" / 737 mm
- Minimum Lift Capacity: 13-lb / 5.9kg
- Maximum Lift Capacity: 70-lb /31.8kg
- Easier tuning of ISO Elasticity settings
- Sleeker Design
- Twist-resistant core
- Lower Profile Arm links minimize operator interference
- Redesigned Socket Block for precision sled positioning, faster setup & on-the-fly adjustment, tool-free, without arm removal

- Multi-position adjustability
- Reduced spring kick-back
- Better for back-mount users
- Rubberized, larger & better spaced Lift & Ride Knobs
- Updated Bumpers
- New Arm Post Lever lock
- Dual bearing mounted 3/4" extendable post with rotational locking & drag control
- Metric Assembly Components for easier service

Steadicam Axis—with 3-Axis Volt Stabilization

Pan Tilt Roll Dampening

Steadicam Axis is Tiffen's professional, affordable Steadicam with 3-Axis Volt Stabilization—just like its bigger sibling, Volt3.

Steadicam Axis supports mid-weight camera packages up to 20 lb / 9 kg. It ships this summer 2024, so this 3-axis pan, tilt, roll Volt stabilizing system will be available before the VOLT3 becomes available.

This 3-Axis electronically assisted camera stabilizer provides greater and more subtle control of framing while still having tactile, hands-on control of the Steadicam post.

Tiffen engineers said, "Operators can achieve high quality camera movement, with faster set up times, greater range of movement, and a shallower learning curve than previous electronic gimbal systems. The time saving features also include absolute encoding for the pan axis and no need to re-align the sled upon start-up."

With a payload capacity of up to 20 lb, when supplied with a Steadicam A-30 Arm and A30 Vest, Steadicam Axis is an excellent choice for achieving smooth Steadicam shots professionally and cost effectively.

The Steadicam Axis, complete with Sled and Volt, A-30 Arm and A-30 vest, and a Gold-Mount or V-Mount battery plate lists for $8995.

Oh, and did we say that it's expected to ship soon, this summer?

tiffen.com/steadicam

New Tiffen MCS (Mag Control System) Magnetic Filters

Lens   MCS Adapter   MCS Filter   MCS Lens Cap

You probably saw Tiffen's new MagSafe 58mm Filter System for iPhone at NAB.

Now, the Tiffen Company adds a similar concept for stills and cine with a new mount and filter system. The Mag Control System (MCS) has magnetic attraction to simply and securely attach Tiffen filters to lens fronts.

Tiffen's Mag Control Filter System was developed to eliminate the hassle of threading filters on and off. MCS makes quick work of installing and removing filters. With their powerful magnets, filters stay locked in place. I even tried it while bouncing the camera around on the front of a car. I can't say it was *Ferrari, Formula 1* or *Gran Turismo* g-forces, but the bumps were big, the driving was fast, and the filters hung on.

I especially liked the MCS magnetic circular polarizer. Instead of having to tighten or loosen it to adjust the amount of polarization, rotating the filter on its magnetic surface was much simpler and more secure.

The system begins with its MCS adapter that is threaded onto your lens front. Ideally you get enough of them so they can stay on each lens. The MCS adapter is the surface onto which any Tiffen MCS filter magnetically attaches.

Tiffen MCS precision glass filters now consist of ND, Circular Pola, Color, Effects and an extensive array of diffusion—including Black Fog, Night Fog, Black Pro-Mist, Antique Black Pearlescent, Antique Pearlescent, Antique Satin, Smoque, Glimmerglass and many more.

All MCS filters are identified by their matte black finish and distinctive blue ring. Each MCS filter includes a matching lens cap that attaches to the filter front or to MCS adapter.

MCS Filter Adapters currently come in 58mm, 67mm, 77mm, and 82mm round, with step-up and step-down rings available to accommodate other sizes.

New Preston Cinema Systems MDR-5

Triple motor drive in the the palm of your hand.

The new MDR-5 (Motor Driver) from Preston Cinema Systems is lighter, smaller and more nimble than your familiar MDR-3 or 4.

The MDR-5 drives up to three digital lens motors and supports advanced Hand Unit 4 (HU4) and LR2 lens functions — all in a very compact package.

The MDR-5 housing is 83 x 81 x 36 mm / 3.3 x 3.1 x 1.4 in. It weighs Weight: 285 g / 10 oz.

There are 30 robust and secure 2.4GHz wireless channels to connect with your Preston FIZ devices.

Note that the MDR-4 is 73 x 104 x 41 mm / 2.9 x 4.1 x 1.6″) but only supports 2 motors. MDR-3 supports 4 motors but is about twice the weight and size.

There's a Micro SD card slot for recording lens metadata and updating firmware. Jam-sync timecode input is on the other side.

The USB-C port can be used to output metadata to SSD storage or for real-time data acquisition, and for firmware updates.

This view of the MDZR-5 shows 5-pin Timecode input connector, power indicator and antenna.

Things get even more interesting on the next page: Ethernet, RS-232 Serial and Command camera control, etc...

Preston Cinema Systems MDR-5

• FIZ — for Focus, Iris and Zoom Preston Digital Motor 7-pin cable connections.

• Dir — is for motor direction.

The MDR-5 has high current capability for fast and accurate motor positioning.

Actual current draw depends on the torque of the lens.

For a complete list of cables, accessories and more information, go to: *prestoncinema.com*

• Power input: 2-pin 11VDC – 34VDC
  6A at 14V or 3A at 28V (minimum).
  D-tap power connection to battery recommended.

• CMD (Command) to hard-wire to Hand Unit

• Camera, ETH (Ethernet), and Serial ports are for camera control, start-stop, menu functions, etc.

• Serial ports also connect to and support the Preston Light Ranger 2 (LR2) Sensor head that sits at the front of your camera.

• Zm+Serial is a combined RS-232 and Analog port to connect a Microforce Zoom Control by cable. For example, the Microforce is attached to your fluid head's pan bar.

MDR-5 is the latest in the Preston System of focus tools that include HU-4 and LR2

Light Ranger 2 (LR2W) Sensor head on camera.

Preston HU-4 controls Light Ranger 2 system seamlessly.

The Light Ranger 2 Video Interface connects to your monitor and provides a video overlay showing zones of focus. Photos by HD-Systems.

Preston Cinema UK

At BSC Expo London 2024: Howard Preston (left) with Chris Edwards, Company Director of Optical Support and Preston Cinema Systems UK.

Preston Cinema Systems, Santa Monica, CA has established Preston Cinema Systems UK and Preston Cinema Systems Europe. The UK office will be managed by Optical Support in London and the EU office will be managed by HD-Systems in Paris.

These sister companies are the exclusive distributors for Preston Cinema System products in the UK and EU. Both companies offer sales, on-site service, and support for in-warranty and out-of-warranty service. Furthermore, their experienced teams will continue to conduct training sessions for working focus pullers and rental house staff to share set-up procedures and best practices on the set.

Preston Cinema Systems resellers in both the UK and the EU provide comprehensive sales assistance. They can advise on integrating Preston FIZ wireless controls and Light Ranger focus assists with camera, lenses, and accessory packages. They also can help with financing information.

Chris Edwards said, "Optical Support became involved with Preston Cinema not long after we started as a company in 1996. The Preston Focus System has been the leader in the market and together with the new Light Ranger 2 has set the standard in the industry for a focus assist system. At Optical Support, we are 80% engineering and our relationship has grown and developed with Preston over many years leading to us offering sales, technical support and servicing throughout this time. With their support, we felt it was the right time to set the next stage and underline our commitment to Preston as the official UK representative. We are looking forward to dedicating our energy into offering full support to the resellers and customers to give them the best information, technical support and training in the UK."

Contacts:
- Preston Cinema UK   prestoncinema.co.uk
- Preston Cinema EU   prestoncinema.eu

EU and UK Resellers:
- CVP (UK and Belgium)   cvp.com
- Visual Impact UK   visuals.co.uk
- Band Pro (Munich)   bandpro.com
- Panastore UK   panastoreonline.co.uk

Preston Cinema EU

Olivier Garcia and Nicolas Pollacchi (right), Manager and Partner of HD-Systems and Preston Cinema EU. Below: Focus Puller workshop.

Nicolas Pollacchi said, "Preston Cinema EU is the brand name of our French company. For the past ten years, HD-Systems has been an official Preston Cinema Systems technical support partner. Howard wanted to strengthen his presence in Europe, and above all to make after-sales support and maintenance of his equipment more accessible to European customers.

"Gradually, we developed sales, training through workshops, presence at a number of European trade shows, and technical support. We are reachable by email or WhatsApp.

"Coming from film sets ourselves, we are able to discuss and advise camera assistants about the Preston systems. For example, focus pullers might like to buy their own kit but are not yet experts in the various configurations. Or they might like to learn more about the Light Ranger focus assist system. We are now the Preston Cinema representative for all of Europe."

prestoncinema.eu/contact

HD-Systems training session for Focus Pullers - Camera Assistants.

SmallHD Quantum 32

You're shooting for HDR delivery but not a single HDR monitor is on set. "Too expensive," says an executive producer.

Clearly that viewpoint will change when SmallHD's Quantum 32 Monitors begin shipping this summer.

These new, bright, affordable 31.5" OLED reference monitors are intended not only for grading and post-production suites, but also for discerning eyes on set: DPs, DITs and Directors.

The Quantum 32 displays HDR and SDR images using Quantum Dot OLED technology, with exceptional luminance, color uniformity and a wide viewing angle. It has a rugged and lightweight chassis with lots of mounting options and accessories. And real rotary dials!

Greg Smokler, VP Cine Products, said, "Our R&D team continues to pour effort into evolving our hardware/software platform to enable development of monitors that can achieve the color-critical requirements of the best eyes in the world. This collaboration with Samsung Display allows us to combine their world-leading quantum-dot OLED display technology with our Emmy Award-winning monitor platform to deliver the best monitor display SmallHD has ever made."

Quantum Dots

SmallHD said, "The monitor's Quantum Dot OLED self-emissive display panel is an innovative implementation of 2023 Nobel Prize-winning nanotechnology. Developed by Samsung Display, QD-OLEDs direct high-energy from blue Organic LED (OLED) light into a layer of printed red and green quantum dots.

"The quantum dots are optimized for maximum light transmission. When the quantum dot sub-pixels are excited by blue light, they become photoluminescent, emitting very pure red and green light while the blue light is directly passed through. The result is an exceptionally wide range of volumetric color expressions that more closely approximate human vision when compared to conventional OLED."

PageOS

The Quantum 32 has PageOS "inside," SmallHD's monitor operating system that includes exposure tools like EL Zone, Waveform, Vectorscope, and Monitor Calibration Wizard.

Body

The SmallHD unibody chassis has many mounting points, DC power IN and 2-pin accessory power OUT, a pre-threaded (M4) 100mm pattern mount, dovetail mounting rail for battery plates, and support for a new WiFi dongle. Quantum 32 includes a top handle and cheese plate inserts. *smallhd.com*

SmallHD Quantum 32 Specifications

- Display: Quantum Dot QD-OLED
- Screen Size: 31.5" / 80cm
- Monitor Resolution: 3840×2160
- Video Resolution: up to 4096x2160P
                      23.98,24,29.97,30,47.95,48,50,59.94,60
- Bit Depth: True 10-bit
- Color: 99% DCI-P3 / 80% BT.2020
- Contrast Ratio: 1,500,000:1
- Peak Brightness: 1000 nits
- SDI Input: 4x 2G/6G/3G/HD-SDI Inputs
- SDI Output: 4x 2G/6G/3G/HD-SDI Outputs
- HDMI Input: 1x HDMI 2.0 (4K60) Input
- HDMI Output: 1x HDMI 2.0 (4K60) Output
- Audio Output: Speaker, 1x 3.5mm Stereo Headphone Jack
- Control Ports: RJ-45 Ethernet
- Power Input: 1x 3-pin XLR
- Battery Options: Accessory 1x Dual-GM or VM BatteryPlate (26V)
- Power Outputs: 2x 2-pin (12V/2A combined), 1x USB-C (5V/1.5A), 2x USB (5V/2.4A) (Front/Rear)
- WiFi Adapter: RP-SMA (female) antenna connector
- Data I/O: 1x SD Card Slot, 1x RJ45 Ethernet, 1x RJ45 GPI
- Price: $12,999

Blackmagic URSA Cine 12K

Blackmagic Design introduced their new flagship Blackmagic URSA Cine 12K Large Format camera at NAB 2024. It has:

- Full Frame 12K (35.64 x 23.32 mm) sensor.
- 12,288 x 8,040 effective pixels.
- 80 fps at 12K 3:2 Open Gate. 224 fps at 8K 2.4:1. Wow. etc.
- 16 Stops of dynamic range.
- PL Mount. EF Mount included and LPL Mount as accessory.
- Internal IRNDs: Clear, 2, 4 and 6 stops.
- Optical Low Pass Filter.
- 8TB Removable Blackmagic Media Module.
- 6 Anamorphic de-squeeze options in all recording formats.

Tim Schumann, Blackmagic Design's Senior Product Manager (based in Australia) and David Hoffman, Business Development Manager for the Americas, introduced the URSA Cine 12K LF to FDTimes.

David began: "Blackmagic has been making cameras for 12 years now. This time, we wanted to build a high-end digital cinema camera that essentially incorporated all of the knowledge that we've gained over the last 12 years and that responded to a lot of the feedback from users. There were no limits on features or costs. We wanted to look at what it was that was going to be a high-end camera, built from the ground up, and not do something that was an iteration or a second generation."

Wait, wait—has it been 12 years already? It seems like yesterday when Blackmagic Design CEO Grant Petty held aloft their first 2.5K Blackmagic Cinema Camera at NAB 2012. It sort of looked like the control stick on an airplane. "It has handles so you can man-up and shoot," he said. "Or take all the parts off, and use it like a small stills camera." It was said that he had the camera built because he wasn't satisfied with the crop of cameras to take his own family videos. One year later, at NAB 2013, he introduced the new 16mm 2K Blackmagic Pocket Cinema Camera and a

Blackmagic Production Camera 4K with a 4K Super35 sensor and global shutter.

NAB 2014. Blackmagic introduced the first URSA camera, named Blackmagic URSA. It had huge, built-in 10" monitors on each side of the camera. The monitor on the left side folded out. The camera had a Super35 4K sensor, global shutter, 12 stops of dynamic range, and internal dual CFast 2.0 slots for 12-bit lossless compressed Cinema DNG RAW or Apple ProRes recording. You had a choice of PL, EF and B4 mounts—or no mount at all (to be used as a recorder for other cameras).

And so it went, an almost annual progression of innovative cameras. Along the way, many cinematic soothsayers predicted an eventual high-end motion picture camera. Here it is.

David Hoffman continued, "The URSA Cine 12K LF camera is a uniquely new product and a new category. We wanted to base it around a completely new Large Format 12K sensor design. We also wanted to think of it as not only a unique camera but also as part of a system that we have seen developing over the past five or six years. The URSA Cine supports the cloud-based storage and collaborative workflows that have been developed for DaVinci Resolve.

"Let's begin with the design. Even though it shares some of the design cues from our URSA family, we looked at every component, right down to each screw, and analyzed its purpose. Does it give you the freedom you need and if not, do we need to change or do remove it? For example, we heard that some of the buttons on earlier models clicked too loudly. Every button is now backlit and silent. Users also requested tool-less capability to attach accessories and change shooting modes: for example, moving the EVF forward or back or putting it on an extension arm. The engineers designed this new camera so you can work with it rapidly and without requiring any tools.

Tim Schumann jumped in: "We developed our own sensor with

Blackmagic URSA Cine 12K

an entirely new non-Bayer color filter array for the URSA Mini Pro 12K Super35 camera. Since this new sensor is a Full Frame 12K, the pixels are larger so the dynamic range is much higher and is now 16 stops. We're really proud of what the team has done. It's a pretty big technical achievement and breakthrough and it's one of the stepping stones of what we were working towards with the original Super35 12K design — to do something different and to actually come up with a different sensor design, like a new kind of film stock and try and do something outside of the box. The images that we've been getting out of this new sensor are just incredible. Last weekend we had the camera out on a Technoscope crane, on a Steadicam, flying on a drone, on an ARRI geared head and all sorts of different scenarios. The camera has performed really, really well with all those systems. So we're very happy with it."

URSA Cine 12K Details

The high brightness, 5" monitor with full menus and video on both sides of the camera is an idea that sort of goes back to the first URSA. Later models removed the camera right side monitor in favor of a Hirth-tooth rosette in the middle. But having a monitor on each side lets camera assistants, DITS and operators check important status parameters such as frame rates, ISO, shutter angle, codec, etc. from any angle – and give the camera operator the ability to use the EVF or a big monitor for viewing.

The monitor on the camera left (operator's) side folds out 90 degrees and rotates, so it can be viewed from the front or almost any position. When it's closed, there's a small status screen on the outside for basic settings, on the door, or you can flip it around 180° and click it back in so you have bright 5" monitors facing out both sides of the camera.

URSA Cine ships with a native PL mount installed. Locking EF and LPL mounts are also available as optional accessories. It's easy to swap mounts with just four 3mm hex screws. The mounts themselves are all individually shimmable.

The camera comes in a Pelican case with pre-cut foam. Not a cardboard box. Just add a lens and battery and you're ready to roll.

URSA Cine 12K uses a 24V power supply. It has a B-Mount on-board battery plate in back. The B-Mount battery interface is an open industry standard developed by Bebob, endorsed by ARRI and others. It supplies 24V at 15 amps or more. The internal release mechanism of the B-Mount Battery allows for smaller battery plates than with V- or Gold-Mount plates.

Blackmagic indicated that they will have a 12 volt V-Lock and Gold-Mount plate as well for those who already have batteries. But the higher voltage range is recommended for powering the camera as well as lens motors and multiple accessories. An Anton/Bauer 26 volt plate will also be possible.

Camera Left Side

Open the flip-out monitor for access to the media bay. The camera ships with a Blackmagic Media Module 8TB SSD. It's extremely fast — with 16 lanes of PCI Express.

David explained, "What's interesting is we've built our Cloud Store capability into the camera itself. The media on the drive is immediately available as soon as you stop recording to anyone who is connected via Ethernet as part of the Cloud Store connection. You could connect a DaVinci Resolve station and be working with the files straight from the camera via 10G Ethernet immediately.

"But it also allows you to pull the media module out and put it into the Blackmagic Media Dock. You don't have to offload the media. It is immediately available and ready to be edited or graded because it is high-speed storage. There are four 10G Ethernet ports. This speeds up the time from acquisition to edit and possibly delivery if you don't have time to copy the drives. Of course, you will do that and backup as well."

Blackmagic URSA Cine 12K

The camera has a new URSA Cine EVF. Tim Schumann said, "A lot of people liked the image that they got out of the original URSA Viewfinder, but it was limited in terms of ergonomics, and being able to mount it in different places. The new model has soft touch backlit buttons and it works over USB-C. As you select things, you can see what's been toggled on and off as the buttons change color, and they're programmable so you can control all sorts of things in the camera from the viewfinder itself. That's all set up through the camera's menus.

"And we've done an entire camera ecosystem here. We didn't want to just release a camera and then have everyone waiting on accessories. We've added all the things that we think are important.

"The viewfinder mounting mechanism is very flexible and versatile. It has a dovetail for you to remove the EVF quickly and easily. We've got an extension viewfinder attachment as well that works with standard eyepiece levelers. You get the extension arm with the larger of the URSA Cine kits or if you buy the viewfinder on its own.

"The top handle has a similar dovetail mounting mechanism and you can very quickly and easily remove the entire viewfinder system and the top rods completely.

"The camera will ship with an URSA Cine Baseplate 19 which works with 19 or 15mm rods, and it works with ARRI standard dovetail plates. When you position its lever in the central position, you can slide the camera backwards and forwards. And, if you push and move the level to the rear position, you can actually lift the camera straight up off the dovetail plate. The lever mechanism is forward of the shoulder pad. "There's an optional lightweight URSA Baseplate 15 as well which has the same dovetail mechanism."

Sensor and Anamorphic Desqueeze

The Full Frame 12K sensor is quite a technological leap forward from the previous Super35 12K sensor. It is 35.64 x 23.32mm — 12,288 x 8,040 pixels, which is a 1.5 aspect ratio (3:2) and very versatile for all types of delivery formats.

Every in-camera recording format has the option of anamorphic desqueeze. So: 2x, 1.8x, 1.66x, 1.6x, 1.5x, and 1.3x desqueeze across all formats. The Full Frame, full height 3:2 recording format will be particularly popular for both spherical and anamorphic widescreen. The Super35 "4-perf" sized 9K 3:2 and 9K 6:5 record formats are also interesting new ones. There's also 9K 16:9 and 17:9 which are both basically Super35 "3-perf" size and the 9K 2.4:1 which is effectively Super35 "2-perf".

User interface

Focus Pullers' delight: There is a UI that displays focus distance, aperture and focus marks just like the new focus tools in the latest version of the Blackmagic Camera app. It reads the lens metadata through the contacts of the lenses that are so equipped. It can also interpolate the full scale off the lens itself, depending on how much lens data is available. You can also choose between Metric and Imperial focus scales. Focus scales and lens data can be sent out to the set via the SDI outputs for focus pullers looking at bigger monitors on set.

The WiFi antennas on the back can also be used for streaming on set to video village via an ATEM Streaming Bridge locally or even being able to stream to the other side of the world.

Connectors in front

- 7-pin LEMO connector.
- 3-pin Fischer style RS Remote Start-Stop and 24V 2A.

Blackmagic URSA Cine 12K

- The Viewfinder port has a locking USB-C connector to supply power and video. The same cable and connections also carry standard USB control for the button presses and menus.
- There are three different USB-C cables in the kit: one long cable and two short ones, one of which has a right angle connector at both ends. The other cable has a right angle at one end and a straight connector at the other end.

The 3-pin Fischer connector's power output is also shared with the nearby 7-pin LEMO connector which has serial protocol to open up camera control via Blackmagic Camera Control REST API with wireless lens control MDRs, etc. The 7-pin LEMO also has 3 pins that mirror the RS connector functions, so, you could make it a second RS connector or you could use it to plug directly into a follow focus MDR.

Tim added, "We're in the early days with this camera and we've certainly been talking to those manufacturers already and once we've got this camera out there, we can continue those discussions a bit more."

Top

- On top right: 2 USB-C connectors under weather-resistant covers.
- On top, rear: 2x WiFi antennas, 2.5 and 5G.
- 2x 3-pin XLR connectors for Mic, Line or AES audio intput.

Right-Rear

2x 12G SDI BNC connectors. Each is independently configurable. You can send a clean feed out one and a dirty feed with your focus puller's screen on the other, or the standard heads-up display that you have on all the Blackmagic cameras. You can also switch on or off anything like focus peaking, zebras, false color.

- BNC Connector for Genlock or Timecode.

- RJ-45 10G Ethernet port – For web media management, camera control, Blackmagic Cloud media uploads, and more.
- 2-pin LEMO 12V 1.5A power out for lower voltage accessories
- 8-pin LEMO EXT. 24V DC power input connector (same connector used by ARRI ALEXA Mini, Mini LF)

Blackmagic Media Module

In addition to the 8TB M.2 solid state storage Media module, there will be a 2-slot CFexpress (Type B) module for people who already have CFexpress cards that they are using in their Blackmagic Cinema Camera or other cameras.

Tim said, "In terms of the capabilities of the camera, we wanted to lead with something that did not make excuses about data rates. We needed something that was able to handle absolutely anything that we could throw at it. The Blackmagic Media Module 8TB avoids any kind of bottleneck when recording onto the media and should for many years to come. We will have a 16TB model as well if 8TB is not enough for you."

David said, "When you plug the module into a dock, it's connected to your network and anyone who's attached to that network and has clearance can start working directly with the footage. They don't have to offload the media, they can actually work off the media module itself. That's part of the whole Cloud Store philosophy that we started a few years ago.

"If you don't use Cloud Store, you can also work with that media module directly with your DaVinci Resolve. With the 10G Ethernet connector on the back of the camera.

File Formats

URSA Cine 12K LF records Blackmagic RAW internally and also records simultaneous H. 264 proxy files.

Blackmagic URSA Cine 12K
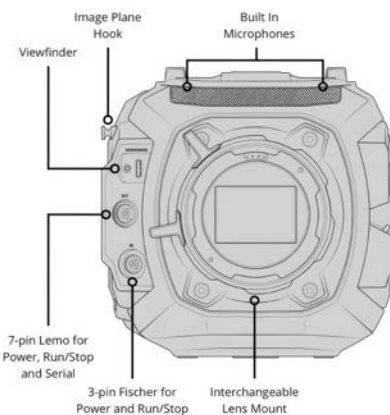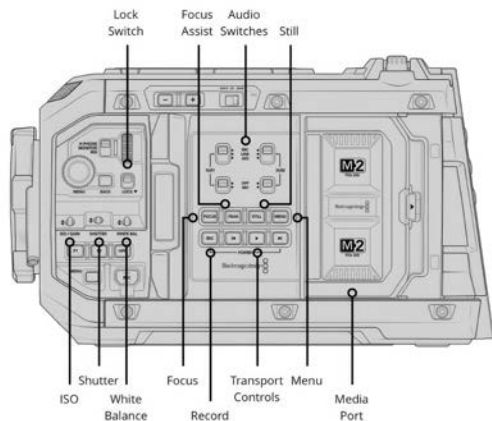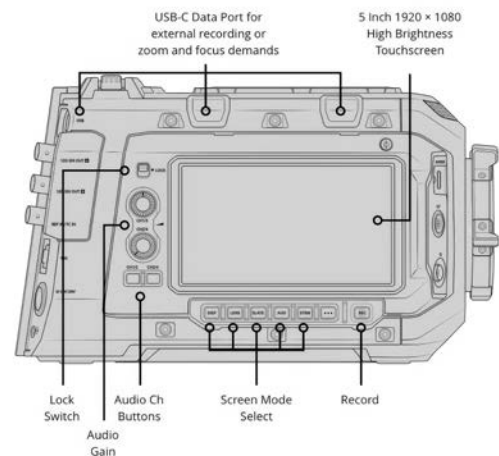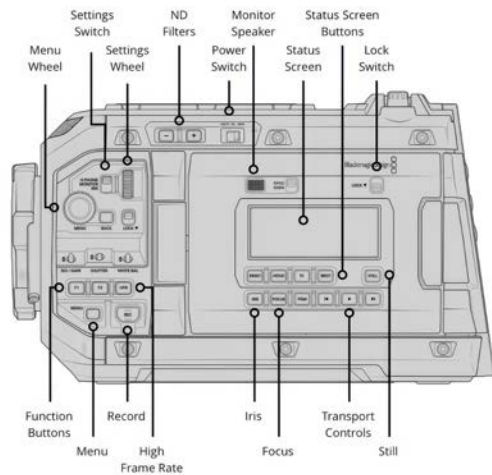
Remote Control

The familiar Blackmagic Camera Control app will connect to the camera via Bluetooth. You can also connect to the camera via its 10G Ethernet port or Wi-Fi and control the camera remotely with the web-based, configurable REST API. You can also offload media files from the camera via Ethernet or Wi-Fi.

The camera can also be controlled via the 7-pin LEMO serial connector on the front. This is useful for start-stop and camera control from FIZ Hand Units, as mentioned earlier.

Development and L-Mount Alliance

The latest Blackmagic Cinema Camera 6K and now the PYXIS 6K have an L-Mount. Since Blackmagic joined the L-Mount Alliance, I thought maybe an L-Mount would be lurking underneath the PL or LPL mount. Tim put that notion to rest, "Not on this model. I'm afraid with the ND filters, it's probably a stretch to get an L-Mount in there. And, looking at the style and size of the camera, we felt that the mounts that we've gone for are the most appropriate."

I asked how long this camera has been in development and who are the intended users.

Tim said, "It's the culmination of years of work. When we designed the first Super35 12K sensor, we had this Full Frame 12K sensor in mind as well. They kind of go hand in hand. It has been about four years since the Super35 12K camera was announced.

David said, "The initial idea was to provide a camera for the high-end creator. It would not be a super expensive, only in Hollywood product, but rather for cinematographers who wanted a camera that was incredibly well equipped. It's going to have a good price point, but it's really a high-end camera. It is for anyone who wants to go out and have a broad range of capabilities. It's not a catch-all camera, but rather it is purpose-built for high-end cinematographers and content creators."

Price

Our discussion led to what a "good price point" meant. David said, "it will start at around $15,000."

The video chat connection wasn't great, and I said, "Oh, $50,000 — that's fair."

"No, no," said David. "$15,000. One-five. [Actually, it's $14,999.]

"The ethos of the company and Grant Petty's original view is to find ways to eliminate the barrier to entry. We try to narrow the gap between the creator and the audience—remove the cost barrier, access barrier, technological barrier.

"Even though this is a highly sophisticated camera that delivers beautiful images, and has been years in development, it is really easy to use. Because we own our own manufacturing facilities, and design the sensors, we can get cost efficiencies in production that are passed on to the customer. It's not about reducing the price to undercut anybody in the market. It's about getting tools to creators as efficiently as possible and allowing them to get amazing footage with this camera."

blackmagicdesign.com/products/blackmagicursacine

Blackmagic PYXIS 6K

PYXIS with L-Mount

PYXIS with EF Mount

PYXIS with PL Mount

PYXIS with L-Mount SIGMA 85mm F1.4 DG DN | Art Lens

Blackmagic Design had another surprise at NAB 2024. Blackmagic's PYXIS 6K is like everything you wanted if your Blackmagic Cinema Camera 6K came in a cube. Specs are similar inside: a 36 x 24mm Full Frame 6K sensor with 13 stops of dynamic range recording Blackmagic RAW up to 6048 x 4032, including open gate 3:2, full height 6:5 anamorphic, onto internal CFexpress cards.

The PYXIS 6K comes in three models: L-Mount, PL or Locking EF. I would choose the L-Mount version because it accepts L-to-PL, L-to-EF adapters, and L-to-almost-anything-else adapters.

The choice between a PYXIS or Cinema Camera 6K comes down to shooting style. Whereas the Cinema Camera 6K looks and feels like an unobtrusive hybrid mirrorless video/style camera with a rear tilting monitor, the PYXIS is what you want when mounting to gimbals, drones, cars, remote heads and pretty much anything else that benefits from its many ¼-20 and ⅜-16 threaded mounts on top and bottom. PYXIS also has side cheeseplates. Its lightweight, rugged and compact body is made from CNC machined aluminum.

Blackmagic PYXIS 6K will be available in June at US $2,995.

Details

- 36 x 24mm Full Frame 6K sensor with optical low pass filter.
- Open Gate 3:2 6048 x 4032 up to 36 fps.
- 6K DCI 17:9 6048 x 3200 up to 48 fps.
- Full height 6:5 4832 x 4032 Anamorphic 6:5 up to 36 fps.
- Super35 4:3 4096 x 3072 up to 50 fps.
- 4K DCI 17:9 4096 x 2160 up to 60 fps
- Super16 16:9 2112 x 1184 up to 100 fps
- Choice of models with L-Mount, PL or locking EF lens mounts.
- Records full resolution up to 36 fps or 120 fps windowed.
- Built-in 4" 1920 x 1080 HDR 1500 nit LCD screen.
- Dual native ISO up to 25,600.
- Records Blackmagic RAW and H.264 proxies.
- Dual CFexpress card recording.
- Ethernet or mobile data for mobile remote streaming.
- Optional Blackmagic URSA Cine EVF.
- 12G-SDI for monitoring with status overlay.
- Mini XLR audio input with 48 volt phantom power.
- Complete streaming for YouTube, Facebook, Twitter and more.
- Uses high capacity BP-U series batteries.

blackmagicdesign.com/products/blackmagicpyxis

Krystian Winszewski, Signature Primes and Impression Filters

Krystian Winszewski is a director and cinematographer working on corporate films and commercials for major brands, lots of car jobs, educational and training videos, documentaries and content creation. He recently completed a five and a half minute short film *Jason Wright: Portrait of a Racing Driver* that has beautifully evocative and interesting scenes using ARRI Signature Primes and ARRI Impression Filters.   View it here: *youtu.be/9xNC2l9TNxE*

Jon: Please tell us about your short Ferrari film.

Krystian Winszewski: The driver's name is Jason Stuart Wright. We met through Setford & Company, the garage that looks after his Ferrari cars, preparing and maintaining them for races. Luckily enough, the garage is close to me near Portsmouth, England. When I started the project, the idea was just to film the Ferrari in the garage. Then I found out that Jason was racing in Dubai. As it happened, I was doing a music video there as well, so I managed to connect those two projects together and include the race.

Please discuss the equipment, cameras and lenses.

I was using my ARRI ALEXA Mini LF and Signature Primes. I own the equipment. Also, I was using ARRI Impression Filters for the first time. They are positive and negative diopters that attach magnetically to the rear of the lens. Those filters arrived right before I started the project and they were exactly what I was looking for to change the look of my Signature Primes. Don't get me wrong, they're beautiful lenses, absolutely stunning. With Impression Filters, I can change the characteristics of the look. I settled on the Plus 3 filter (330P positive diopter) which is the strongest. It creates a beautiful, almost anamorphic bokeh, which is very unusual to get with spherical lenses. It was important for me do this project with that filter, because was amazing with classic cars.

That filter reduces your depth of field as well?

It does. With the filter, the main subject is sharp in the center, and it gets softer toward the edges. That effect works best when you're filming with a fully open lens aperture, at T1.8.

You said you own Signature Primes?

Yes. I bought Signatures because I think they are the most beautiful and most universal lenses for the work I do, on any type of project—for music videos, commercials and dramatic films.

Which focal lengths did you use?

Mostly my 35, 47, 75 and 95 mm.

I guess you were handheld in the car with Jason and also filming with a camera car?

We did both. When you see the last shot of the film, the close-up of Jason's face and the steering wheel, that was the handheld on the 47mm prime. I managed to fit myself in the car, in a very small space.

And the race in Dubai?

All the racing footage is handheld.

What lenses were you using there?

Just the 47mm Signature Prime with Impression Filter.

You have some great shots with flares. I guess the Impression Filters help?

Yes, they add a bit of gentle flare. They're not too aggressive.

And the camera car?

It's aggressive. We used a MotoCrane ULTRA mounted on a

Krystian Winszewski, Signature Primes and Impression Filters

BTS Photos by Simon Heron and Joseph Harding.

Porsche Cayenne Turbo S four-wheel drive pursuit car, 550 horse-power vehicle with self-levelling suspension. The road was narrow and the shot involved the Porsche passing the Ferrari while the arm was above the driver (priceless) and the car (worth about $8 million). You see the driver from above, the camera twists around and we finish on the front of the Ferrari. There are four operators: the driver of the Porsche, the operator of the arm, the focus puller, and the operator of the remote head.

And you?

I had my hands full as director/DP.

Where did you film the driving shots?

Luckily, Jason knows the Duke of Richmond who owns Goodwood Estate. He allowed us to use his track and private road. It's a very famous venue for classic cars and historic auto racing.

Where is this film going to be distributed?

This has been a passion project. We won a number of awards, including cinematography and best automobile documentary.

How is your ALEXA Mini LF outfitted for handheld work?

I use a top handle and handgrips. Usually, I hold the camera by the top handle and support it from the bottom. Kind of like a football. I don't usually rest it on my shoulder, especially with cars that are very low to the ground.

Why do you own your own equipment?

My dream has always been to capture images. I started as a camera operator and then worked as a DP. I fell in love with ARRI images ever since I can remember. And then I bought an ALEXA Mini LF and the Signature Primes.

On your Ferrari film, did you establish the look in advance? Did you test the Impression Filters?

The first day of filming was in the garage. I was on a Steadicam. When I saw the images of the Ferrari with the Mini LF and Impressions, it was like magic. It was different from anything I'd seen before. It's a different look.

Where do you buy your equipment?

Mostly from CVP in London. I usually work with Aaron George. He is very helpful, always on the ball. In fact, he was the one who brought this film to the attention of Henning Raedlein at ARRI.

Where do you get your equipment repaired?

Well, so far nothing has broken.

Really? With all that bouncing around in cars, your camera and lenses are still okay?

Camera and lenses are good. Even with all the crazy stuff I film. And I look after my equipment carefully.

That's interesting about investing in yourself—I think every DP should have his or her own equipment. It will pay off. Not exactly on every job, but if you look at our Ferrari film, it's going to go onto ARRI website. I never dreamed that it would go there. That's my award and reward, to see this film being appreciated by fellow professionals.

krystianwinszewski.com   *@krystianwinszewski*

Krystian Winszewski, Signature Primes and Impression Filters

Above: AACTV Motocrane Ultra Arm tracking Jason Wright. Below: Krystian Winszewski in Ferrari.

Bright Tangerine Prodigy Air Deflector, Signatures and Impressions
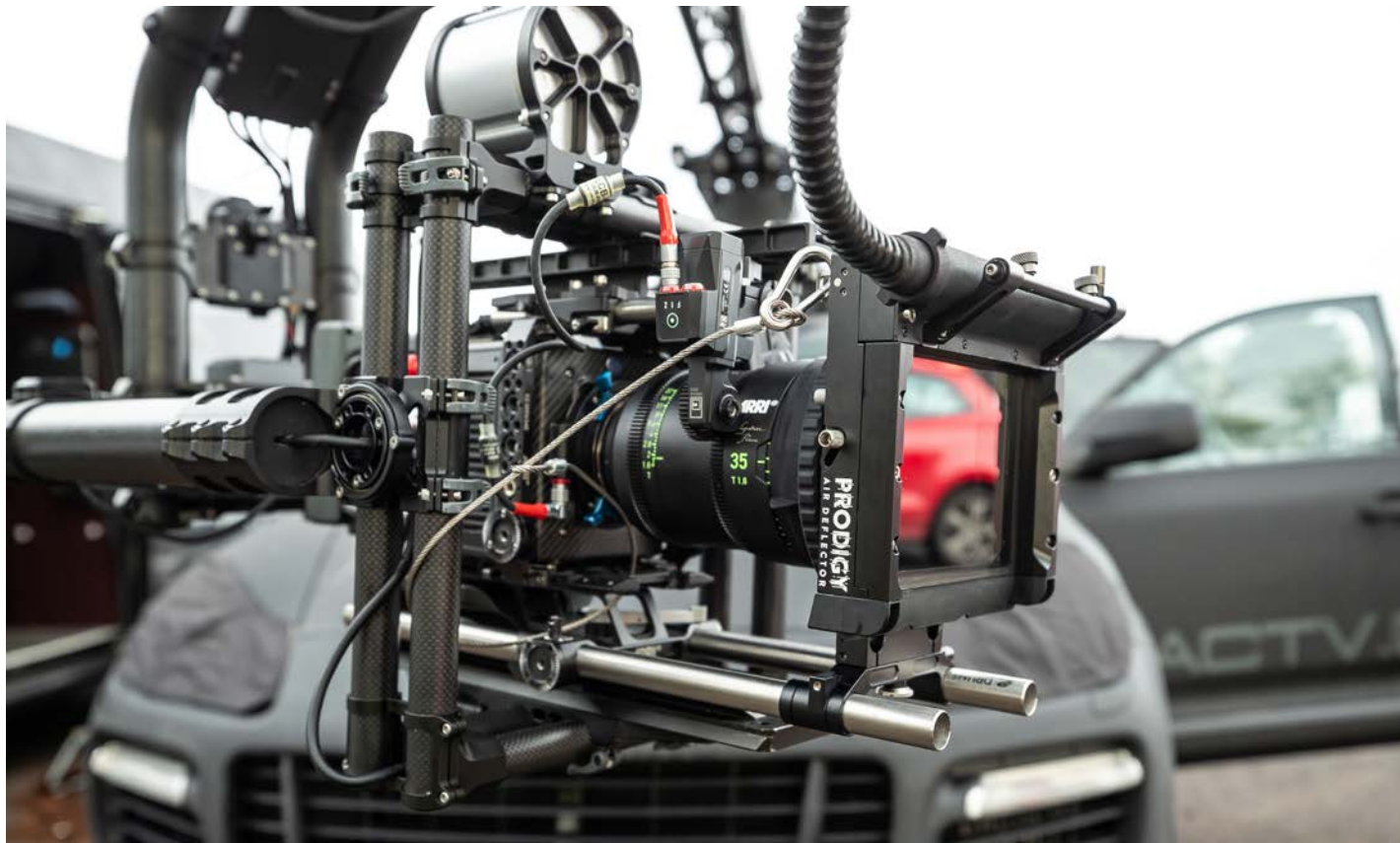
Bright Tangerine Prodigy Air Deflector on the Anglo American Camera Tracking Vehicles (AACTV) Porsche Cayenne Turbo S Motocrane Ultra Arm Pursuit Car. The Prodigy Air Deflector works by blowing pressurised air at more than 300 mph to keep the optically clear front filter clean and free of water, spray, rain, bugs and debris. It does not affect image quality or exposure, is resistant to impact, and doesn't spin.

Keiji Oishi and Jarred Land on Nikon and RED

Keiji Oishi and Jarred Land at NAB 2024.

Nikon completed its acquisition of RED Digital Cinema on April 8, 2024.

RED Fire Chief Jarred Land called. "I'm flying to Las Vegas. Can we meet with Keiji Oishi?"

Geoffrey Coalter at Nikon Inc, Frank Fusco at RED, and probably a squadron of others organized our meeting at 2pm on April 15 in a conference room at NAB.

Jon: Can you please tell us the background to the acquisition of RED by Nikon?

Keiji Oishi: The first point I want to emphasize is that by combining the competencies of the two companies—Nikon and RED, we aim to develop a distinctive product in the fast-growing professional digital cinema camera market. The second point is that there is a precedent for this—the excellent synergy we at Nikon have with MRMC (Mark Roberts Motion Control), a company we acquired in 2016. The third reason is that we would like to leverage the expertise of all three companies—Nikon, RED and MRMC—to provide new value and experiences to cinematographers and to the market. That is the answer from Nikon's side.

Keiji Oishi and Jarred Land on Nikon and RED

This reminds me of *Rashomon*, the same story told from different points of view. Unlike the Kurosawa film, I suspect we will arrive at the same conclusion. Let me add two more questions: when did the idea first begin and why did you do it?

Jarred Land: I'll take a swing at the background. We obviously knew who Nikon was and they knew who RED was. Over the years, a number of companies were interested in buying RED. We're a high-level company that a lot of people know about, but when we were in negotiations, Jim Jannard had a chance to talk to Hiroyuki "Ike" Ikegami, Executive Vice President, General Manager of the Imaging Business Unit at Nikon Corporation.

It was really interesting because when we first met Nikon, we didn't think there was going to be that much synergy—just very different cultures, very different companies, different camera markets and we didn't know about the Z 9 and the Z 8. Jim and I immediately went out and bought Z 9 cameras to see what it was like. And we were like, "Wow, this is a whole new top of the line camera." And Keiji was responsible for both the Z 9 and the Z 8.

We were very impressed. Jim's talks with Ike went very well and he could feel the passion.

Keiji, you were the product planner on those excellent cameras? Congratulations.

Keiji: Thanks so much. Yes. I was in charge of the product planning section and the product strategy section as well.

Jarred: We thought this could be a really good idea for these two companies to come together. In our eyes, it was a new kind of Nikon and we saw a lot of that in ourselves: the hunger, drive, passion and people who know about cameras. We saw that.

This almost brings us back to 2005, when you first started with the idea building a cinema camera that acted like a still camera at 24 frames a second. So, this feels almost full circle.

Jarred: Absolutely. DSMC stands for Digital Still Motion Camera. Jim and I were both still shooters. That's where we came from, and cinematography too, but we knew that's what movies were—24 images a second. It was amazing to us that nobody was putting those concepts together.

Anyway, we developed a synergy with Nikon. The patent discussions were kind of pushed aside. It really had little influence because we found a new kind of union, not a romance, but a passion together and then we said, why don't we talk about this? Jim flew to Japan and I flew there in July, so this happened very quickly. Nikon executives came to visit me at RED Studios and the rest of the team in August 2023. It all just worked together so well.

Keiji: From the Nikon side, we have a similar answer. I would like to add a few words. Of course, as Jarred mentioned, the lawsuit led us to learn more about the RED company and its history as well. We had the opportunity to speak with RED founder Jim Jannard and President Jarred Land at that moment. We saw that the high-end professional market and the creator market were both part of the overall professional digital cinema camera market. Most importantly, we saw the growing market for content creators and its need for video, which we addressed with our announcements of the Z 9 and Z 8 as Jarred mentioned.

On the other hand, we recognized that it would take time for us to expand into those markets on our own. We were looking for a solution from our point of view, and then the lawsuits allowed us to learn more about RED and its product as well. We realized that our respective companies' competencies were complementary. Our opportunity to speak with founders Jim and Jarred confirmed that we shared the same passion and goals, which led to the story that Jarred explained.

What is the strategy going forward?

Keiji: May I go first?

Jarred: Please.

You gentlemen really do get along nicely.

Jarred: This is really fun, I love this.

Keiji: It's a good solution for us, so yes. From our point of view, as the entire Nikon group, we will continue to support RED's excellent product lineup, including cameras like the V-RAPTOR [X], launched this January, and KOMODO-X. Support includes marketing, sales, product updates and service. This means there is no change in sales, or support or warranties as they are now. Because we know customers may be worried about the health of the future lineup, we want to say that we will keep the RF mount in the product line. So please choose RED cameras with confidence.

We would also like to introduce RED cameras with a Z Mount as one of the options in the future. It will be in addition to the RF mount currently offered, but it could take a couple of years. We also will look forward to the synergies with MRMC mainly in the cinema and broadcast fields. There are a number of things we need to consider.

Jarred: Electrical connections and communication between the lens and the camera. Metadata.

Keiji: We will continue to provide service for the RED brand because it is very important, not only for us but also for the customer. All the current RED products will continue to be sold and serviced. Warranty work will also continue under the RED brand name. There will be no change to the current product lineup, partnerships and distribution.

Going forward, Keiji, are you going to dress like Jarred, hat backwards? And Jarred, are you going to wear a sports jacket?

Jarred: We'll do that.

Keiji: For five months?

Jarred: For Halloween, maybe. Once a year. We'll trade. I love that idea.

Getting back to the question about strategy moving forward…

Jarred: Lens mounts are important. We adopted the RF mount because that's what we knew at that time. But if you remember, the RED One had a Nikon F mount. That was before the Z mount was available, and the data communication was much simpler. Then we had EF mounts.

We're not going to take away people's Canon mounts, because that would be unfair to the customer.

Nikon glass is legendary. Can we ask about lenses?

Jarred: Oh, Keiji has heard a lot about lenses from me. Nikon

Keiji Oishi and Jarred Land on Nikon and RED

lenses are amazing. Many high-end people remember that a lot of very expensive cinema lenses for the last 50 years have been rehoused Nikon, NIKKOR glass. Panavision lenses, ARRI lenses. Some of the best lenses that have shot some of the most incredible images. I would love to see Nikon bringing back some of those.

Can you imagine the romance, the feeling and the expertise of those classic cinema lenses with all of Nikon's optical ability and some of the expertise that RED add? Nikon has character and emotion. I get very excited about the thought of Nikon cinema lenses. No promises, that's a lot of work for these guys to figure out. But I think that it is a very big opportunity.

Keiji: Let's talk about the current Z lens lineup. What we do we have in the market so far? The Nikkor Z lens series is designed for our mirrorless cameras. But these lenses have a great capability to shoot video as well because there is minimal focus breathing and the motors are silent. They also have a great optical advantage—high resolution, with a beautiful look thanks to the Z mount's shortest flange focal depth (16 mm) and widest inside diameter (55 mm) of any Full Frame mirrorless interchangeable lens camera.

But we know, as Jarred mentioned, that there are a lot of people who love our old lenses. Those nice vintage Nikkor lenses have their own unique look which has been appealing to cinematographers and photographers alike. We understand those requirements. However, our current Z lens series has been designed for higher resolution and precise image reproduction. In the future, we would like to take these different approaches into consideration for an additional cinema lens lineup if we have a chance. We do understand the market requirements.

Jarred: I love that answer. I'm so excited to know that.

Will the new products combine technology of both companies?

Keiji: Yes. May I talk about the camera body? The answer is yes from Nikon. But again, it will take at least a few years to release products with new combined technology.

For example, Nikon's competence, product development, and exceptional reliability of the product is based on our more than 100 years' history and know-how in image processing, as well as optics technology and user interface. But we also welcome leading knowledge of the RED's cinema cameras, including unique image compression technology and color science. So again, it will take a couple of years to be launched, but it will be something utilizing this kind of RED technology together with Nikon's, and it will make the customer happy. This is what we want to state at the moment.

Will you co-brand RED plus Nikon, or will the brands stay separate in the future?

Keiji: I think it's not decided yet officially. But, because the RED brand is very important not only for us but also for the customer, the RED brand stays the same. But we may have the opportunity to do some additional co-branding together with RED.

Jarred: I think co-branding is great. RED and Nikon are two premier brands in cinema, equal opportunities, where you don't need to do it, but if you do, it's beautiful to think of it as empowered by both. There are so many options available, but it's not trying to elevate one at the expense of the other. I think that's very important.

And co-branding looks good on the RED + Nikon T-shirts you already have in your booths here at NAB.

Jarred: Think about how powerful RED cameras are in the sensor design, and then look at the EXPEED 7 image processing engine that Nikon creates. It is about 10 times more powerful than the last one, and way more powerful than what we have. So you think about the capability of taking the Nikon processor, for example, and putting it inside a RED camera, and all of these things can make the RED cameras better.

Will you combine the R&D and engineering teams of both companies, or will you keep them separate?

Keiji: From our side, yes, we will keep them as they are now—separate, but communicating with each other. After the acquisition was finished just a few days ago, our team has already stopped by the RED R&D facility to talk other about the future possibilities, and each team already shared each other's competencies in terms of technical knowledge and future direction.

Jarred: This is important, because it is a great example of how things will work. I like what you've just said, Keiji, because it's what I noticed. I visited RED headquarters in Irvine, CA on Friday. Everybody was a little bit nervous, and we have these conference rooms that are like a big warehouse with things hanging down from the ceiling and large shipping crates all around. You've been there…

Not your typical corporate conference room.

Jarred: I was kind of nervous going in there, and I had my dog with me. Then I looked inside this conference room where the Nikon and RED engineers were meeting and talking. I'm not kidding, it looked like they had been working together for 10 years.

It was not one side of the table Nikon, other side RED. They were next to each other, looking at each other's stuff, working on things. The moment I saw that, I was so happy. Because all of this doesn't matter if the product isn't good. The engineers are responsible for the product. So if the engineers are happy, and working together, then we just figure out what to ask them.

Will manufacturing be combined as well? Because you both have impressive, big manufacturing facilities.

Keiji: We will not combine but keep them as they are for now, of course. We are considering the possibility of injecting Nikon's production technology into RED's at some point. There is no big change so far, in terms of integration, but we will inject something new into the RED manufacturing.

Jarred: It's about different techniques for very large scale and small scale production.

Keiji, can you please tell us about your background? How did you get started at Nikon? What have you been doing. You seem like an interesting, cool guy.

Jarred: Yes, he is.

Keiji: You think so? Thanks so much. I started my career with Nikon in 2008. When I got my job at Nikon, I was a product manager for the cameras. My first product was the D5300. This DSLR was the first camera with built-in Wi-Fi capability. The next one I was in charge of as a product manager was D5500. It had a more composite body with a thinner size. Next, I was in charge of the

Keiji Oishi and Jarred Land on Nikon and RED

D500. It was a high-end APS-C DSLR camera. After that I was sent to Nikon Inc, the sales subsidiary in the U.S. based in New York.

Long Island Expressway Exit 49? I visited often.

Keiji: Oh, you know it. So, I spent four years there, from 2015 to 2019. I was in charge of sales and budgeting for the entire U.S. market. Then I returned back to my original team in Japan as manager of the entire imaging business unit's product planning, and also for the product strategy side. I spent another four years in that role, and now I have moved here. This is my career.

Were you responsible for the Z Mount camera development?

Keiji: Actually, the Z Mount started in 2018 when I was still in New York. After the first two products, Z 6 and Z 7, were launched, I moved to my position in Japan. I was in charge of developing Z 9, Z 8, and Z 50.

Jarred: The best ones. The Z 6 and Z 7 were good but the Z 9 and Z 8 are a totally different level.

Keiji: Because we had a lot of input from users after we launched the first ones.

Jarred: That's the beautiful part about this: community feedback. A lot of what we do, and that has been most of my job, was really the community and feedback from customers.

Jon: Jarred, are you going to continue with community outreach and so on?

Jarred: Officially, I'm an advisor. How would you define advisor?

Keiji: Actually, the meaning of advisor is different in Japan than in the U.S. It takes on greater importance because we always welcome Jarred's great input all the time. Jarred's input is very important for us to evolve our product and business. We always welcome his great input and insight, injecting into products and the business. So, his existence is very important for us. This is what I want to say.

If we think of the great cinema companies in the last 100 years, there have always been interesting characters who guided their companies.

Going back to 1917, there were August Arnold and Robert Richter, two German classmates whose hobby was making movies. Fast forward to Panavision, founded by Robert Gottschalk, who knew everybody. Jean-Pierre Beauviala started Aaton because he wasn't satisfied with handheld cameras at the time and he was out there listening and talking to fellow DPs. Gabriel Bauer created Moviecam because he wanted a quieter camera.

And then you have Jarred and Jim who were the faces of RED for so many years. Do you think that can continue along with its large and loyal community?

Keiji: Yes, it is a very important part for us. Also Jarred continues to meet users with his RED Studios business, which he still owns with Jim, and he's in charge of every kind of touch point with the great customers, and he's a well-known person in this market. Most of the very important input comes through Jarred.

Jarred: It's about finding that nice in-between. What I do naturally is basically advise: this is my vision and this is what we should do,

and Keiji understands that's the most important relationship. The community and marketing are things these two companies have to figure out how to combine together. They have a great marketing team as well, so there's a lot of learning going on.

What happens to the studio?

Jarred: That's still ours. Jim and I still own the studio. So that's not part of the deal.

Remind us again how you and Jim started RED.

Jarred: Jim found me through my user forum. I had the DVX user, and still have it. Jim was a member of the DVX user forum because he had Panasonic DVX100 [introduced in 2002] and HVX200 [introduced in 2005] cameras. We started talking and then I was kind of an advisor to him. Then we created this community together and started RED. We didn't have real titles back then.

You had funny titles like Fire Chief.

Jarred: Yeah, my official title was Fire Chief. Jim's was Madman. That was his kind of thing. We were not a very structured corporation because we just were inventors and creators and artists at the beginning. And then we let other people do the business parts of it internally, of course, but we found whoever we could to help us with that. It's very important to keep that, I think. That's why we had the studio. Jim and I worked out of the studio because getting sucked into the day-to-day stuff takes away from the customer. And I've been very vocal. I honestly spent more time with the customers than employees.

We started RED with the customers as a community because we were one of them. We are shooters and we created RED to make a camera. We wanted to shoot. That's why it started. It wasn't to make money or to change the world or anything. We just wanted to make a camera because nobody was making the camera that we wanted to shoot with.

Which is what all those other camera company founders I mentioned did as well.

Jarred: Absolutely. You make it for yourself and hopefully others will follow. Field of dreams.

Camera of dreams. So, what happens next? Where are you going from here? Especially as the two worlds of Stills and Cine are converging.

Keiji: Oh yes. We think RED technology and their engineers are all really outstanding.

It's amazing. And we think RED sensor technology is also great in terms of dynamic range, global shutter, et cetera.

We think that RED has great color science and we recognize that software development is efficient in RED. So there are a lot of advantages in RED technology and RED knowledge. From our point of view, Nikon also has great competence in some things like ASIC engine development technology and purchasing procurement for larger volume production. We also have our own design and manufacturing technology at Nikon. Our software resources are also impressive. And of course, our optics technology is well known in the market.

And so, by combining these two companies, we are sure that we can make great products in the future.

Checco Varese, ASC: Angénieux Optimo Primes, VENICE 2

Checco Varese, ASC. Angénieux Optimo Prime, VENICE 2. Photo: Darko Sikman, courtesy of Hulu.

Jon: Tell us about *Under the Bridge*.

Checco Varese, ASC: I read the script. It was interesting in that it was not a police procedural or 12 angry men in a jury. We were doing a human story. It was a story about belonging or not belonging, about pertinence, about racism. There is a clash of cultures and a lot of layers, but the layers were subtle in the script. Then I met the director, Gita Patel who was very visual and passionate about the story. The confluence of all those elements made me interested. And then you know me, it's a pilot, or prototype as it's often called, so I jumped on it and we did it.

We shot in Vancouver because it happened in Vancouver. That was very refreshing actually, to shoot something where it happens. Too often, we shoot Toronto for New York, Budapest for Miami, Miami for Albuquerque, Mexico City for the moon. Finally, I'm shooting in Vancouver for Vancouver, which was refreshing.

By doing the pilot, the prototype, how did you establish the look of the show?

I can happily say that I set the look for the prototype, the pilot.

How did you decide on that look?

Well, you tell me please. I'm a very bad judge of my cuisine. We shot with the Sony VENICE 2. How detailed you want to go into technical details?

Oh, FDTimes loves technical things.

I'm agnostic about cameras. I shot projects with ARRI, with VENICE, with RED, but in this particular case, and for the last few years, I've been a big fan of the Sony VENICE for many reasons. I think they've done a great job in their color science. The colors are wonderful. Vancouver is very green and the skin tone of our main character is darker olive. Remember when you and I used to talk about Fujifilm and Kodak?

Sony colors are very beautiful for everything. It's like splitting hairs between the major camera brands, but Sony has a tendency to handle the greens very beautifully. And then it has all the things that my assistants want, it has many little buttons that you touch to change settings. I don't even know what they do, nor that I care. But the rendering of the dark, the shadows and the rendering of the highlights is great. Especially because the main

Checco Varese, ASC on *Under the Bridge*

Checco Varese, ASC handheld. Photo: Darko Sikman, courtesy of Hulu.

event in the film happens at night under a bridge. I'm not going to spoil the story.

I needed a camera that could keep the darkness, sensual and scary at the same time, but also I needed a camera that I could work with at 3,200 ISO and still have an exposure. So that was the reason to choose the VENICE 2. And then, I also use another camera in the Sony Cinema Line, which is the FX3. It is a small camera that looks like a mirrorless still camera, but it's a true 4K Full Frame Sony cine camera. I used it in tight places with E-mount autofocus lenses. It was amazing. When I gave the footage to my colorist, he asked, "Is this the same camera?" Yes it is.

What about lenses?

I did a lot of testing, and as you know me, I'm also agnostic about lenses. I just finished a project with the Leitz cine lenses. Before that I did some ZEISS cine lens projects. For *Under the Bridge*, I used the Angénieux Optimo Primes.

You used Optimo Primes before?

I have done three productions with Optimo Primes. The first was *Daisy Jones & The Six.* The second is this one, *Under the Bridge*,

and I'm shooting a pilot now in Miami with Angénieux Optimo Primes. I think they're wonderful lenses.

Why haven't we seen them on more films?

Well, they are still very young lenses. They're like two and a half years, three years old. As I told the team at Angénieux, "If lenses were to be compared with wine, Optimo Primes would be the champagne of lenses."

They have a bubbly, sort of irreverent quality. It is interesting to use them and to have that naturalistic quality, not documentary, but natural style. And yet they have enough personality to make you feel that you're watching a "studio movie," But there is a naturalistic way in the approach.

Were you using the Optimo Primes' IOP (Integrated or Internal Optical Palette, with internal optical element, interchangeable iris, rear filter, front filter)?

Yes. I have been using the same IOP, which I like a lot. It's the Glimmerglass ⅛ internal optical element. I have the whole set. But the ⅛ is the one I have been using.

Checco Varese, ASC: Angénieux Optimo Primes, VENICE 2

Do you use all the Optimo Prime focal lengths (18, 21, 24, 28, 32, 40, 50, 60, 75, 100, 135, 200 mm)?

I used them all. Unless there is a very specific shot, I usually tend not to go longer than the 100mm or 135mm.

I remember you and I talked about *The 33,* the mine collapse in Chile. You used zooms then. Why are you shooting with primes now?

The large format Optimo Primes are very nice. I did use Angénieux zooms on this show, *Under the Bridge*, as well. I used the whole family of Angénieux zooms. The reason for the large format Primes is that I like to use them wide open, at T1.8 or T2. The fall off of the focus is very nice, very cinematic. I hate to use the words organic and cinematic because everything is cinematic, but it's very evocative. With the large format zooms, obviously your maximum aperture is T2.9 for the Angénieux Ultra Compacts (21-56 mm and 37-102 mm) or T4.2 for the Ultra 12x (36-435 mm). But I've been using these primes and zooms with great success. The Steadicam operators are happy with the Optimo Primes because they're small and light.

Do your focus pullers hate you because you're wide open?

They hate me anyway, so it is better to them a good reason :) No, most of the time, I am the bottom of barrel, the aperture barrel, wide open. But then if we go on a 75mm or 100mm, obviously we change it because the out of focus is too radical. One has to be careful when you have two people in a car and you have two profiles, you don't want to be wide open and racking focus constantly. So you may want to stop down a little bit. So, I'm very pleased and happy with this project. Riley Keough, the wonder actress whom I also worked with on *Daisy Jones & the Six* was one of the reasons and I wanted to work with her again. Also, Lily Gladstone, who was in *Killers of the Flower Moon*, played the police officer who investigates the case in *Under the Bridge*. She was amazing.

Did you have a show LUT on your VENICE 2?

I've been lucky to work with Company 3 for 15 or 20 years on every project. I talk to Stefan Sonnenfeld, and the colorist to come up with a couple of LUTs. But as you know, I work with the DIT constantly, so I'm creating CDLs on every shot.

Yes, constantly. I'm proud to say that the director's cut, most of the time, other than a few shots, looks almost like the final product. And the final product is even better. Because it's not the show LUT, but the fact that the CDLs are applied in a dramatic way. You play the color and the darkness of a scene or the drama of the script or the drama of the scene. I'm happy when I see that the final product is very similar to the dailies. And that is an homage to my obsession with post.

Were you there for grading?

Yes. We did a pre-grading, then we did a post pre-grading, and we did a post post grading. And then at the very end, our creator Quinn Shephard and showrunner Samir Mehta were fantastic. They went in and reapplied a little bit of grading. I wouldn't say reapplied, but they changed a few things that they liked better. But that's fine with me because it's their show. It's like I always see myself as a writer. Once you finish the script, it doesn't belong to me anymore. I write with shadows, so once I'm delivering my grading, that's that, it's not mine anymore.

Were there particularly interesting things about your lighting on this show?

We had some very large night exteriors that are always challenging in the logistics of it, not in the aesthetics of it. But also we had wonderful sets designed by Jennifer Morton. She did an amazing job. I also had the great support of Hulu.

I've done three shows with them, and they always have been very generous. I had full freedom in terms of lighting equipment to support the camera language and the intent of the director and the showrunners. Quinn Shephard and Samir Mehta were constantly with us, supporting us.

Did you work with local crew?

Everyone was from Vancouver. Vancouver is a wonderful city to work in.

Where do you live, by the way?

Well, usually I live on American Airlines Flight 328, but other than that, home is Los Angeles.

When you started *Under the Bridge*, did you test the Optimo Primes with different IOPs?

First of all, I tested four or five lenses from different manufacturers and ran the footage by the producer, the director, and everyone liked my choice. I didn't change the IOP. In Daisy Jones, we used the same Glimmerglass Internal Element, but we also used filters on the rear of the lenses. Certain scenes had the old Fogal stocking nets at the rear. Other scenes had Tiffen Black Promist 1/8 in the back. We played more in Daisy Jones. *Under the Bridge* is more naturalistic. I didn't want to use any gadgets or gimmicks because it takes you out of the story, in my opinion.

Good point. You didn't use vintage lenses on *Daisy Jones*, which is a period piece about the LA music scene of the 1970s.

I have a theory. One audience member is as intelligent as one audience member. 100,000 audience members are really intelligent because you have to put all those instincts and all those feelings and all that intelligence together, so it's 100,000 intelligent people. I tend to try not to knock them on the head with anything. I try to be as naturalistic as I can, poetic and dramatic and funny and dark and bright and playful. But I try not to use a swing and tilt head when somebody's drunk and then do lens vignetting when it's a flashback.

There are some new set of lenses that are very affected by their characteristics. That's great if somebody wants to use them, but I'm not that kind of guy. Remember 10 years ago we were all starting to shoot anamorphic because we could?

Not because we wanted to, but just because we could. And then every movie, including a romantic comedy, had a horizontal blue streak. And a flashlight aiming into the lens. So I don't think I should use every trick in the book. If I use tricks, I don't even want Jon Fauer to realize what tricks I'm using. I want to trick even you. We have to make believe without pounding you on the head.

I always think that, as cinematographers, we're not the writers, but we're the commas and the dots and the exclamation points of what the writer gave. I don't want my episode or my movie with 27 exclamation points, I want one and where it needs to be. I'm not

Checco Varese, ASC on *Under the Bridge*

Checco Varese, ASC with Optimo Prime and VENICE 2 in Rialto mode. Photo: Darko Sikman, courtesy of Hulu.

a big fan of these very affected lenses. Though I may contradict myself on my next project, and I'll do it with some lenses where I put Vaseline on the front and distress the look, then I'll tell you that I had a very good reason for that. But for now, I haven't done it. No, that's not me.

I like your description of the Optimo Primes as champagne.

Playful, bubbly, they have a personality. With the VENICE 2, they're fantastic. I'm sure they're fantastic with the ARRI too, but with the VENICE they're fantastic. Their out of focus quality, bokeh, or the depth of field is not that dramatic so that, all of a sudden you go, oh my God, what is happening back there? You still intuitively understand what's back there. They're super nice.

And your assistants, who probably don't really hate you, can hold the Optimo Primes with one hand to change the lens.

Yes. They are small and light.

Tell us more about the FX3 and did you use G Master lenses?

No, I used the Sony ZEISS little, inexpensive E-mount lenses. With the Sony FX3 camera, you also have the ability to put an E-mount to PL Mount adapter in front and add a wireless video transmitter and a thing, and a thing, and another thing, and then it almost becomes a VENICE. But the beauty of those cameras is that you don't sacrifice quality. You sacrifice a few things: they don't have internal ND, so you need to put an ND outside. They don't record in RAW, you need to have an Atomos Ninja or something for external RAW recording. We had that. So you come out of HDMI and you go into the Ninja. But basically it's the

similar color science. If you were to ask my DIT, he would tell you that the "BTS-Rec-ISO-0.53-4-etc" is different, but I don't know that, nor I care. It's a great camera, so you grab it. I have one on my cart or on the camera cart, and I say, "Okay, let's take a second, and let me do one shot." I grab that camera, I turn it on, and I run into the set and do one more take.

It gives you that ability to go, to grab it with one hand and do a shot that's almost like a crane move. Obviously it's a handheld crane move. The first time we used it was on Dopesick, a project I did for Hulu,.

I remember my DIT on that project, Daniele Colombera, said, "Hey, look, I have a box here. They just send me this prototype new camera called the FX3." I looked at it, and that night we were shooting a scene where a guy comes to a pharmacy, breaks a glass, runs, jumps over a counter, goes to the back of the pharmacy and steals some Oxycontin. And I said, "Daniele, I want to shoot that scene with that new FX3 camera." He goes, "Nobody has ever used it. Are you crazy?" I replied, "No, never. What's the worst that can happen? Nobody going to fire me for one shot and we're three days before wrapping and by the time they view the dailies, I'll be done."

So we shot with that FX3 camera, and I started telling everyone about that camera. And I've used it ever since. Even on a recent action movie, I had two of them. I was running with the camera, hiding to stay out of view of the other cameras and I was in the middle of the action like one of the background actors with the little FX3 camera.

Litepanels Astra IP

For all those wet, cold, miserable, rainy, water soaked locations, the new Astra IP Bi-Color LED fixtures from Litepanels are here. They are IP65-rated water-resistant, tough and lightweight — and come in three sizes: 1/2, 1x1, 2x1.
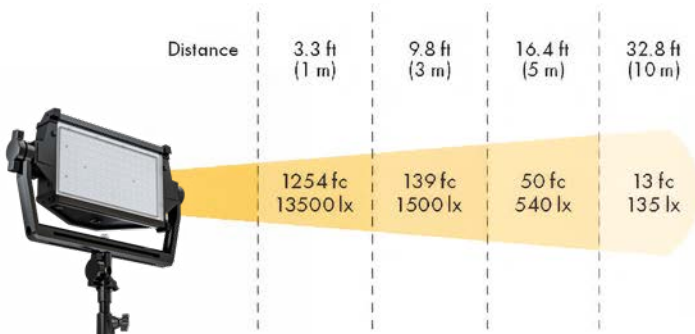
Litepanels Astra IP Specs

- LED Panel: Bi-Color
- Beam Angle: 30°
- High-output, intense beam
- IP65-rated Bi-Color panel
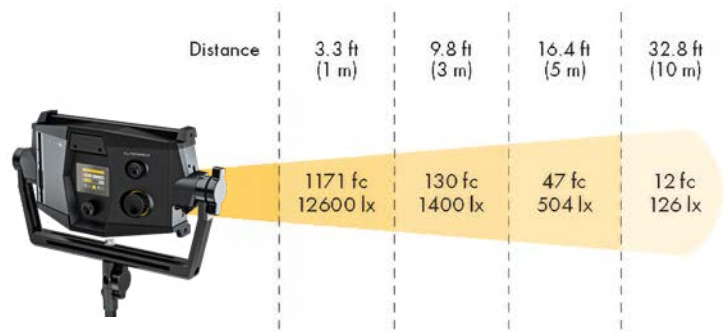- Integrated Bluetooth for app control.

- Optional Astra IP DMX module.
- Optional weatherproof battery brackets.
- Color Temp: 2700°-6500°K
- CRI Average: 95.   TCLI Average: 95
- Interchangable Diffusers: Domed (not included), Medium (included)
- Optics: 30° custom TIR lens
- Lighting Control Modes: CCT/FX with LCD menu control
- Preset CCT modes with quick select
- Customizable user presets with quick select
- Dimming Control: Constant Current 0-100% Continuous (flicker free)
- Remote Control Options: Bluetooth [integrated],
- DMX, RDM [requires separate module]
- Weights: Half: 6.2 lb. 1x1: 9.7 lb. 2x1: 17.2 lb.

ASTRA IP HALF

Daylight 5600K

Distance	3.3 ft (1 m)	9.8 ft (3 m)	16.4 ft (5 m)	32.8 ft (10 m)
	1254 fc 13500 lx	139 fc 1500 lx	50 fc 540 lx	13 fc 135 lx

Tungsten 3200K

Distance	3.3 ft (1 m)	9.8 ft (3 m)	16.4 ft (5 m)	32.8 ft (10 m)
	1171 fc 12600 lx	130 fc 1400 lx	47 fc 504 lx	12 fc 126 lx

ASTRA IP 1x1

Daylight 5600K

Distance	3.3 ft (1 m)	9.8 ft (3 m)	16.4 ft (5 m)	32.8 ft (10 m)
	2508 fc 27000 lx	279 fc 3000 lx	100 fc 1080 lx	25 fc 270 lx

Tungsten 3200K

Distance	3.3 ft (1 m)	9.8 ft (3 m)	16.4 ft (5 m)	32.8 ft (10 m)
	2341 fc 25200 lx	260 fc 2800 lx	94 fc 1010 lx	23 fc 252 lx
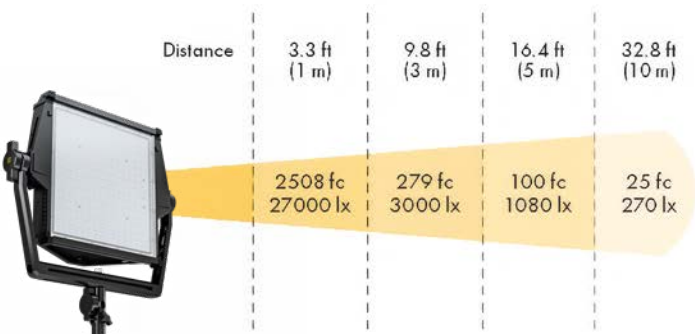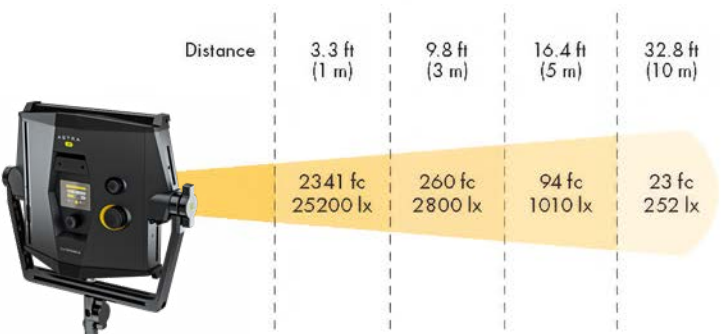
ASTRA IP 2x1

Daylight 5600K

Distance	3.3 ft (1 m)	9.8 ft (3 m)	16.4 ft (5 m)	32.8 ft (10 m)
	4599 fc 49500 lx	511 fc 5500 lx	184 fc 1980 lx	46 fc 495 lx

Tungsten 3200K

Distance	3.3 ft (1 m)	9.8 ft (3 m)	16.4 ft (5 m)	32.8 ft (10 m)
	4347 fc 46800 lx	483 fc 5200 lx	174 fc 1870 lx	43 fc 468 lx
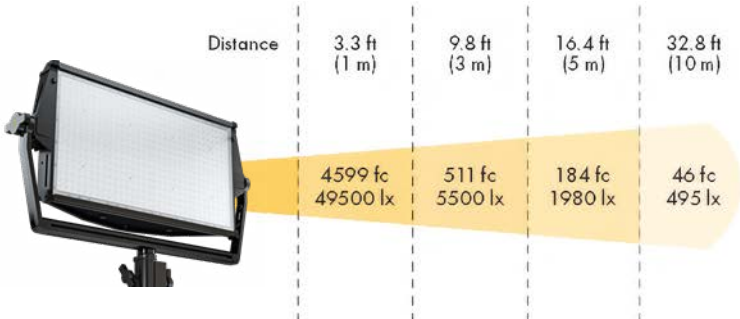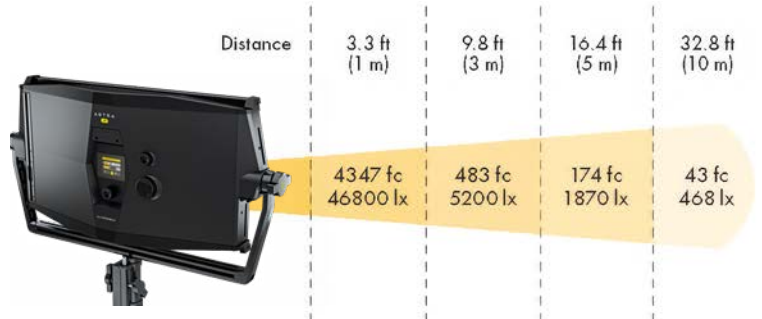
Anton/Bauer VCLX LI Battery

VCLX 2 charger can attach to VCLX LI Battery

Until now, the Anton/Bauer VCLX lunch-box block battery sitting on your dolly or at the feet of your tripod was Nickel Metal Hydride (NiMH). Maximum power output was about 700 Wh. It weighed about 29.4 lb / 13.3 kg.

Anton/Bauer's new VCLX LI batteries use Lithium-Ion cells to deliver more than twice the power and weigh less.

The VCLX LI Battery delivers 14.4 VDC, 28 VDC, and 48 VDC at 1600Wh. So, for example, your camera package thirsts for about 300 Watts at 28V DC — that's 135 Watts of power, along with another 165 watts for monitor, wireless transmitter, wireless focus lens motors and receiver, focus assist and lens light. The VCLX will power that package for 5.3 hours (1600 ÷ 300 = 5.3).

- Power output: two 4-pin XLR connectors for 14.4V and one 3-pin XLR connector for 28V or 48V.
- The VCLX LI Battery is compatible with Anton/Bauer's VCLX 2 charger, delivering a full charge in about 8 hours.
- Integral Realtime LCD monitor
- Detailed battery information is displayed on the battery's LCD screen, can be downloaded as a CSV file, or viewed on Anton/Bauer's Fleet Management app via the battery's built-in Wi-Fi.
- Smart electronic fuses have automatic reset and self-heal capability.
- Microprocessor Fuel Computer enables precise monitoring of energy flow, factoring in battery age and charge cycles.
- Built-in Self Test (BIST) assesses battery health and performance.
- Multi-voltage output (14.4V, 28V, 48V) and high power output is useful for cameras, monitors and lights.
- Tactile buttons for functions and menu navigation.

- Low voltage cut-off at 10V safeguards against battery damage.
- Capacity: 1642Wh
- Max Output: 750W
- Regulated DC Output: 28V, 16A or 48V, 16A and 5V (USB)
- Variable DC Output: 12 - 17V
- High current output: 24 Amps at 14.4V 16 Amps at 28V or 48V
- IP65 rated Anodized lightweight aluminum chassis with durable over-molded elastomer end caps and handle protection.
- LCD Screen: 2.4" color LCD displays run-time to the minute with load, time to full when charging, as well as system and fault Information.
- Smart Electronic Fuses
- Discharge Temperature Range: -4 to 138.2°F / -20 to 59°C
- Charging Temperature Range: 32 to 104°F / 0 to 40°C
- Dims: 10.04 x 12.99 x 6.02 in / 255 x 330 x 153 mm (WxHxD)
- Weight: 25.50 lb / 11.56 kg

antonbauer.com

Salty-E Dog News

Salty-E Dog, Anton/Bauer's award-winning, 9kWh sustainable sodium chemistry battery is shipping now. It is ready for rental at: Quixote Studios Pacoima CA, MPS Studios Dallas, and Tetrode Power Lancaster PA.

New OConnor 2575E Platinum: carbon fiber cover and new paint scheme

The OConnor fluid head origin story began 75 years ago.

Chadwell O'Connor, was a prolific inventor working as chief engineer at Pasadena Power and Light in California. But his passion was steam locomotives. As the age of steam began to fade, O'Connor wanted to immortalize them on film. However, the friction head he was probably using made it difficult to pan his Bell & Howell camera smoothly. To solve this, O'Connor designed and built a fluid head that let him follow the moving trains elegantly.

From the OConnor archives:

In 1949, while filming at Glendale Station with his new fluid head, another steam train enthusiast approached O'Connor and asked to look through the viewfinder. This stranger seemed to know his way around a camera, so O'Connor let him try the fluid head. The man was impressed and asked O'Connor to build a fluid head to solve his own pan and tilt problems on his film project. The man was none other than Walt Disney.

Disney was so pleased with the fluid head that he immediately ordered ten more. The result was the acclaimed documentary The Living Desert, which won the Academy Award for Documentary Feature in 1953.

O'Connor founded a part-time business in 1952 to make the heads, first building them in his garage and then from a small factory on Green Street in Pasadena. By 1969, the business was so successful that he left the power company and founded OConnor Engineering. Somewhere along the line, the apostrophe dropped. O'Connor's invention transformed cinematography, demonstrating the profound impact of his innovative engineering on filmmaking.

My first tripod was an early, used OConnor 50 fluid head with OConnor wooden legs. I got to know Chad because he was always hands-on in helping cameramen with repairs.

Another hands-on helpful tripod expert is Steven Turner, Head of Product - Camera Supports at Videndum Production Solutions.

He called with news of an update to the venerable 2575 head.

Steve Turner said, "I thought it would be a shame not to celebrate the 75 years since Chadwell O'Connor met Walt Disney at the train station. So that's what our new OConnor 2575E is all about.

"Since its introduction, we have made several facelifts to the 2575: 2575B, 2575C, and 2575D. Each update brought minor adjustments because the original design perfected drag and counterbalance, the main engines of cinematic movement, the first time.

The 2575E continues this trend with primarily cosmetic changes, reflecting the evolving needs of cinematographers and incorporating operational use feedback from camera operators. Plus, we wanted to celebrate with a special platinum or diamond jubilee edition."

Steve listed the new improvements:

1. Normally it says "Ultimate 2575E" on all the heads. For a short period, it's going to say "Platinum 2575E." And then, after a year or so, it will go back to being an Ultimate 2575E" head.

2. The new 2575E gets a carbon fiber cover.

3. The paint scheme now matches the 2560.

4. The platform release and locking lever is improved.

5. The horizontal center lock gets a big upgrade.

Steve explained, "Camera operators have told me that the spring-loaded horizontal locking flip lever on the 2575D can be activated accidentally in the middle of a take. So now, to lock the head, you have to keep your thumb on the red button as you're tilting to lock it horizontally."

6. The top of the baseplate gets a red index mark saying "MITCHELL KEY" to facilitate putting the head up on the tripod.

7. The bubble level is now easier to see. It has an improved LED and circuit that shines from below the bubble through a little lens and a diffuser that makes it much clearer to see the bubble.

www.ocon.com

OConnor 2575E Platinum Edition

Platform release and locking lever

Platform release and locking lever. To release: lift the red hook of the latch, grab the lever at the same time and pull it out in one action. There's a little hinge at the black line on the silver part that's actually a hinge. That's where it lifts up and allows you to release the lever.

Horizontal center lock and release buttons

Center lock:

Push the red button while tilting to lock horizontally.

The green button will pop out.

Push the green button when you're ready to resume tilting.

Red index mark: MITCHELL KEY

Under-lit bubble level

ZEISS Nano Primes and Sony BURANO on McLaren

Timothy Fare-Matthews is the partner and Managing Director / Lead DP at First and Ten Productions, based out of Dubai. He specializes in documentary, commercial and automotive work.

Jorrie van der Walt is a cinematographer and film producer based in Cape Town, South Africa, working on features, commercials, etc. He also runs a rental company with cameras that includes ALEXA Mini, VENICE 2 and a lot of owner-operator equipment.

Marco Auricchio is ZEISS Cinema Sales Specialist and Content Creator in Italy, Middle East and Africa. Herman Mostert is Cinema line Marketing and Demand Creation Manager.

The team converged on Bainskloof Pass, Western Cape, South Africa to work with brand new ZEISS Nano Prime lenses on Sony BURANO and VENICE cameras.

Jon: Please describe this production.

Tim: This was a production for Gulf Oil. They have an arrangement with McLaren motorcars. The concept was to show their partnership together. Our hero car was a 4-liter twin-turbocharged V8 McLaren 750S. The engines in these high performance cars are crafted to tolerate extreme temperatures. So the oil is very important. The concept was to showcase how Gulf Oil is trusted by many—for regular road cars up to these super-cars.

Jon: Tell us about the camera and lens equipment.

Tim: It's been my absolute pleasure shooting with the ZEISS Nano Primes, especially paired with the Sony E-mount system. This job in particular was perfect for the BURANO and VENICE 2.

I would say this was a 90% BURANO production. VENICE 2 was the B camera, strange as that may sound.

For me, the BURANO was the much more preferred camera of choice on this job because of the extra features that come with it to make it more economically pleasing. BURANO's image stabilization and E-mount were especially useful. The VENICE 2 was only used in its Rialto tethered setup, being rigged to a car. But all cameras were all fitted with the Nano Primes, all E-mount.

What file format were you recording on all these cameras?

Tim: The BURANO recorded X-OCN LT, and the VENICE 2 also shot in the same way.

Why use Nano Primes rather than, say, ZEISS Supremes?

Jorrie: I think one of the big benefits with the Nano Primes, especially on the VENICE Rialto, is how small it is because your Rialto's PL mount also gets removed. It is actually a very compact setup. It literally shortens the body length by about two inches. And that worked really well on the Rialto. I think the reason for me to try work with the Nano Primes is because I'm really interested to see where it lands up. I'm used to ZEISS CP.3 Primes as well. The main reason for buying CP3s a while ago was to have a very affordable Full Frame glass option. But I must say that the Nanos are a lot closer in look to the Supremes.

Tim: They do give you a very interesting look. It's one of the reasons why we're also shooting in South Africa. I feel that the productions here give us a lot more bang for your buck, so to speak. We were talking about doing this in Dubai, but thanks to lots of peoples' support, and with ZEISS, Sony and Jorrie's team, we were able to put together a package for this client to shoot in South Africa. It is good to highlight that we know this world is moving very quickly. Our production budgets are getting smaller, more demanding and with fewer crew. So the need for more cost-

ZEISS Nano Primes and Sony BURANO on McLaren

effective and lighter equipment is more important than ever.

The Nanos Primes are much more affordable than the Supremes, but the look is incredibly close. We wanted something very cinematic-looking. So the Nanos, for the price, size and the look are a winning combination.

Jorrie: For me, the most impressive lens in the Nano Prime set is the 18mm. You can clearly see these lenses were all designed at the same time. The front diameters all match and you've got a screw-on filter option which is helpful with the Rialto if you don't have space for a mattebox. You can put a UV filter straight on your lens without adding that additional distance and weight. It just compacts your whole setup, which is really impressive.

Tell us about the making of.

Marco: South Africa and the so-called "Sollywood" are a big hub for media and film production. For many years, the most important brands and car commercials have been produced in Cape Town.

Tim: Our agency developed the storyboard. It's a 30 to 45 second film with voice-over along with an array of visuals. The film starts with the car driving up a mountain, showing the beautiful scenery. It's abstract and you don't get a sense of the car yet. There's exciting sound design and then the car comes roaring into shot. We see the driver enjoying the drive, feeling comfortable and confident with the car. And then we incorporate an average road user and vehicle to illustrate that Gulf caters not just to super-cars, but to everyone.

Jorrie: The location is about 80 km outside of Cape Town. The road was spectacular with a brand-new surface. We were able to

lock-off a segment of about four kilometers. When I drove that segment with my own car, I think it took four to five minutes one way, but with the McLaren it was like one minute.

But the big challenge was keeping the road clear of baboons.

Sorry, keeping what clear off the road?

Baboons. They live in this mountainous region. So we had a significant number of people at different posts along the route during our lock-offs to keep everybody and everything safe. There can be 30 to 40 baboons in one troop. You wait for them to pass by. It is a nature reserve as well.

How big a camera crew did you have?

Jorrie: The crew was about 50 people. A large majority was our lock-off team and road maintenance crew. I think, on the technical side, the camera team had about 18 people. We had a tracking company that brought in a Dragon arm on one of their vehicles. And there was a drone unit as well.

Jon: Let's talk a little more about the Nano Primes and the look.

Tim: We had the McLaren driver and two other models involved, showcasing a diverse range of skin tones that looked fantastic. The overall look is very cinematic, sharp yet dreamy, with beautiful bokeh. It closely resembles the look of the Supremes.

The Supremes are phenomenal, but given their compact size and competitive price, the Nanos should make a big impact in the market. I'm excited to see the response once people start using them. When we were filming with the Nanos on the BURANO,

ZEISS Nano Primes and Sony BURANO on McLaren

we were cramped up against the dashboard with the camera stripped down. The monitor was in an awkward position, making it difficult to adjust the focus or iris. Having the electronic lens data being fed into the camera to show what T-stop I was on, and all those other bits of information, helped in situations like that. I think that's exactly what the Nanos are for. They offer a new layer of premium lens choices for productions with smaller budgets.

Jorrie: In our market in South Africa, there are a lot of movies where your principle camera's going to be a VENICE and then probably a BURANO as second. On lower market jobs, You'll probably have a BURANO as A camera and an FX9 or FX6 as your B and C cameras.

The fact that these lenses are E-mount and they can basically communicate down the whole cinema line of Sony cameras is a big benefit. Apart from being a really good lenses for the price, the fact that the Nano Primes are so versatile, on so many different cameras shooting in the same color space, is a massive benefit. It just gives you so much flexibility.

And what about the E-mount? You're shooting cars and rigging. There's probably a lot of vibration and bouncing. You're on an arm and driving fast. Talk about the robustness of the E-mount compared to PL.

Jorrie: Because you've got the locking E-mount mechanism on the BURANO and VENICE, there's no risk. The locking E-mount mechanism is extremely solid. On the other hand, if you were using PL lenses and you now need to shoot on your FX9 or FX6, then

you would need a PL adapter. It's so much more secure and robust to go straight onto all those camera bodies with E-mount lenses.

Interesting. For your rig shots and camera car shots, did you need a lens support or did you just rely on the E-mount?

Tim: E-mount only. The Nano Primes are quite light. Even the 100 mm is surprisingly light. They feel solid and very well made.

Did you shoot wide open, T1.5, to see interesting bokeh?

Tim: Yes, there was a nicely rigged shot we got through the windscreen where we mounted the camera to the bonnet of the McLaren. That was at T1.5 or close to it.

On a lot of the camera car work, we weren't as shallow on the depth of field because obviously the 1st AC would've had kittens. I think it was the perfect lens for this production. And I'm going to be using them again.

There seems to be a trend for old vintage distressed lenses. Can you address that compared to the Nano Primes?

Tim: Technology's moved so far now compared to the analog days that, with the tools we now have in post-production, it's important for me to recognize that I would prefer to shoot through a lens that is sharp because I can manipulate the softness and fall-off later. Vintage glass has its place, and I still use vintage lenses from time to time, but it's only for specific things. Most of the time, I'm in the business to deliver an asset to a client who needs to convey or do something that is above and beyond the actual look of a film.

Let's not beat around the bush here. From my perspective, I want to get the job across the line and have the client as happy as possible. I don't want tools letting me down. So, I'd rather always favor reliability and ergonomics over anything else. But the look is next in line for choice of kit. This content matches what we shot last year with Gulf Oil on the Supreme Primes and yet we worked on a tighter budget this year. Knowing that makes me very happy.

Jorrie: If I can weigh in, my approach is a little bit different because I also do long form. Lensing is a big character of storytelling for me. Where I think we're sitting with cameras that have become so good and the color rendering is so precise, a lot comes down to the lenses to bring the character and what I actually want to show and tell in the film that I'm doing. I think that's why there's a tendency of people moving back to old 35mm glass and getting different identities for whatever film they're making or whatever look they want to make. But saying that on the Full Frame side, your options are actually limited. There are not nearly as many Full Frame options as Super35 glass out there.

And that's the exciting thing: the Supreme Primes bring character that's Full Frame. And now you actually have these mid-market Nano Primes that provide a very similar look. The Nano Primes really have character, they have a creaminess to the look that's actually not just sharp and digital. I think that's the thing that excites me about these lenses.

I've done a lot of films with the ZEISS CP.3s but the new Nano Primes are definitely in a different league when it comes to lens character and roll off as well. They just feel more high-end. They're sharp but not overly sharp, and the bokeh are really elegant. So yes, a big part of my storytelling is the character of my glass.

Nanlite PavoSlim 240B, 240C, 60CL

PavoSlim 120C

PavoSlim 240C

PavoSlim 60C

PavoSlim 160CL

Nanlite PavoSlim lights are thin, lightweight, rugged and versatile. Now, the family is growing

Nanlite's new 240B, 240C and 60CL PavoSlim LED flat panel panel fixtures join the PavoSlim 120B, 120C, 60B and 60C.

PavoSlim LED panels are less than 2 inches thin.

The PavoSlim 240B (bi-color) and 240C (RGBWW) measure 2' x 2' and hinge across the middle, so the fixture folds with the LED sides facing inward and protected.

The 60CL (RGBWW — and L as in Long) measures 2' x 0.5'.

All PavoSlims come with a softbox and eggcrate.

- Maximum output of the PavoSlim 240B is 22,990 lux @1m (5600K) and 24,970 lux@1m (5600K) for the PavoSlim 240C. Power input is a mere 260W — about the same as your old tungsten reading lamp.

- PavoSlim 60CL draws 72W and delivers a maximum of 7,094 lux@1m (5600K).

- CCT range of the 240B is 2700K-6500K, with a CRI/TLCI average of 95/97.

- CCT range of the 240C and 60CL is 2700K-7500K with adjustable green / magenta ±150 along with CCT, HSI, RGBW, Gel and Effect modes. CRI/TLCI average is 96/97.

- The 240B and C fixtures have many power supply options: AC, DC and 14.4-14.8V or 26V. The 60CL can also be powered by an NP-F 7.4V battery.

- These PavoSlims come with built-in LumenRadio CRMX that connects to wireless DMX. Additional wireless remote connections include Nanlink Bluetooth via the free Nanlink app or the accessory WS-RC-C2 2.4 GHz handheld remote control or WS-TB-1 transmitter. *nanlite.com*

Nanlink app on tablet controlling Nanlite PavoSlim fixtures

Lens Cuff

Gregory Karydis worked his way from First AC to DIT, DP and VFX artist. Along the way, he wondered whether there was a better way to connect lenses motors to lenses.

Now there is. Greg describes his product, The Lens Cuff:

"The idea was to create a closed system between the lens and the motors and eliminate all external off-axis forces. Lens Cuffs come in 5 sizes (for now): 65mm, 75mm, 85mm, 95mm and 114mm diameters and with step-down inserts that can accommodate lens barrel diameters from 57.5mm up to 114mm.

"Since The Lens Cuff attaches directly to the lens itself, any length 15mm rod can be used. Each Lens Cuff also has a 3/8" thread at the bottom to provide lens support in case it is attached to very long or front heavy lenses.   *thelenscuff.com*
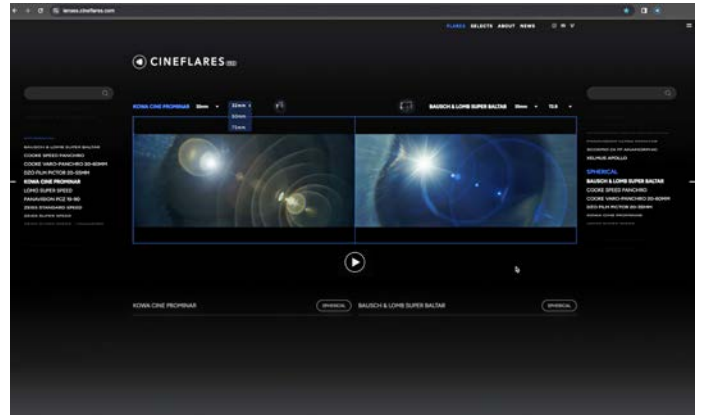
Lens Cuff

15mm rod with threaded end for Sprig cable managers

95mm step-down inserts

114mm step-down inserts

Markus Förderer's CINEFLARES

There are flares you want and flares that could get you in trouble. That carefully orchestrated vintage flare may be wonderful in a scene. But how happy will the director and producer be when that gorgeous flare completely obscures the mega million dollar visage of the star actor in the pivotal dramatic scene?

Markus Förderer, ASC BVK has been carefully cataloging and curating lens flares. He has created CINEFLARES, a helpful resource for cinematographers, directors, VFX artists, film students, game designers, and creatives. It's an interactive lens flare library that Markus carefully put together over many months.

CINEFLARES lets you explore and compare a large selection of cine lenses. Each lens was analyzed under controlled conditions using motion control repeatable moves and high-resolution large format cameras. By capturing a bright point light source against a deep black background, each lens exhibits its distinctive flare pattern, contrast-holding ability, and individual color response—revealing its unique fingerprint or lens flare.
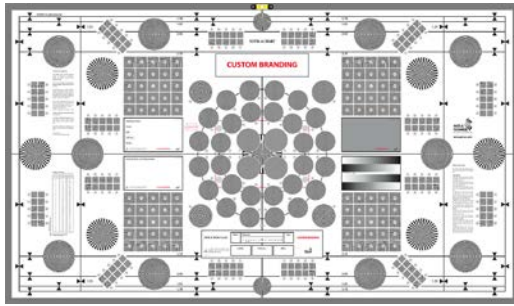
The CINEFLARES library of cine lenses ranges from wide open to stopped down, from vintage to modern, and continues to grow.
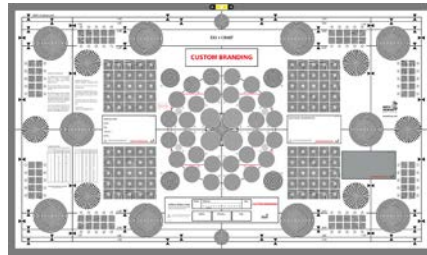
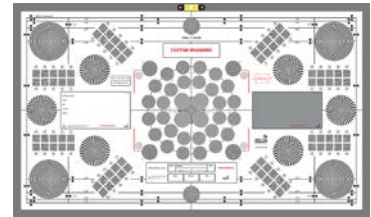*cineflares.com*   *@cinelensflares*
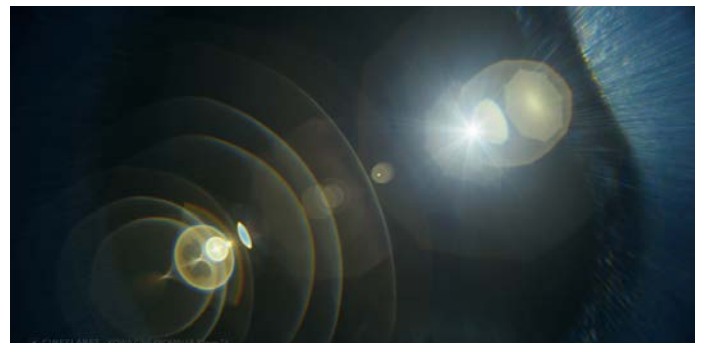
Prêt À Tourner Lens Charts

YOTTA Chart 158 x 92 cm / 62 x 32 in
for Full Frame sensors

EXA Chart 122 x 72 cm / 48 x 28 in
for Super35 sensors

TERA Chart 90 x 55 cm / 35 x 22 in
for small sensors

by Stéphane Paillard, head manager of Prêt À Tourner

Prêt À Tourner (P.A.T.) charts are popping up everywhere: rental houses, lens repair shops and major manufacturers' facilities.

Charts come in three sizes to check and calibrate spherical lenses. Chart sizes is determined by the camera sensor size—to cover the entire lens field at an optimized test distance. Full Frame, Super 35 or small sensors chart size is also decided by the area of your wall. P.A.T. offers charts tailored to everyone's testing needs. Some tests will focus on calibration, others on optical resolution.

Camera assistants checking out their equipment at a rental house may be more interested in testing precise focus distance calibration. Chart readings should be simple and immediate. For this purpose, P.A.T. offers charts arranged with Siemens stars.
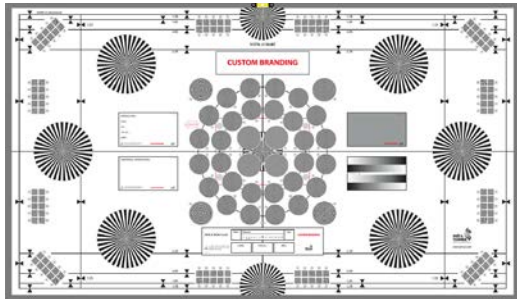
Camera and lens departments at rental houses, as well as many owner-operators, will be interested in knowing the lens resolution across its entire field. P.A.T. charts designed for resolution testing will also facilitate flatness and distortion readings, letting you quantify the resolution and sharpness of the lens.

All charts feature a tool developed by P.A.T. — the optical calibra-

tion scale (see below). Working with the lens charts, you don't have to put the lens on a projector to check whether the flange focal depth is off. It works with the practical combination of both the lens and camera you are using. Attach the special P.A.T. focus calibration strip on the lens to see the variation between actual and marked focus distance. The read-out tells you the amount of shimming necessary. These tests can be very useful:

1. Assisting communication between camera assistants and the rental house in case of lens calibration issues during tests or suspected lens misalignment on a shoot. The assistant can obtain Prêt À Tourner travel-sized calibration and resolution charts from cinema and photo stores.

2. Conducting resolution and sharpness comparisons between various lenses and creating a database. Compare resolution and sharpness between lenses (viewable via split screen on a computer, for example) and assess the possibility of matching them on the same shoot.

3. Analyzing the quality of a lens over time. Successive shoots will inevitably alter the optical quality of the lens glass. It is now possible to record this evolution for better qualitative monitoring of equipment.

In summary, Prêt À Tourner meets all optical testing configurations today by offering target sizes and styles adapted to all your needs for calibration and optical resolution testing.

Prêt À Tourner charts are distributed in the U.S.A. by BandPro and travel-sized charts by 16x9Inc.

For more information: *pat-acc.net/en/*
bandpro.com   16x19inc

Second Edition BLACKWING7 Binaries

TRIBE7 introduces a limited run of Second Edition BLACKWING7 Binary Prime Lenses. This release builds on the legacy of the original prototypical Binary lenses, introduced five years ago. 10 sets were made in 2019 as test and evaluation optics.

The original all-chrome BLACKWING7 Binary design injected creative analog artifacts such as spherical aberration and halation and had very distinctive flare characteristics. These lenses helped to establish the optical prescriptions for series production and allowed TRIBE7 to explore fundamentals of look variation through proprietary lens coating and un-coating, culminating in the S, T and X standard production lenses released for sale in 2020.

Neil Fanthom, co-founder and CEO of TRIBE7, explains:

"Binary lenses have been—and continue to be—used on high-end film and TV productions. We got a lot of feedback from DPs on the original look of the Binaries. And so, we re-tuned and optimized those lenses over time, but always kept a level of modularity in our back pocket to allow the look of the first-run prototypes to be re-created if ever needed.

"The new Second Edition Blackwing7 Binaries pay complete homage to their prototypical predecessors, while offering filmmakers greater creative control through new modular components such as custom-tuned optics, flare control systems and its SKIN program of alternative coatings for Blackwing7 front lens elements.

"Due to the very limited volume nature of the Second Edition Binary run, a modest number of rental companies and Cinematographers, who have been with us since the start, were offered the lenses on a first refusal basis as a kind of thank you for keeping the faith. However, one large client we've developed a strong relationship with over the years has invested heavily in the new build, and is taking multiple sets. They'll help guide our lens tuning program in the coming years, for sure.

"Blackwing7 primes are inherently multi-format lenses, originally designed to fully cover 65mm imaging systems such as the ARRI ALEXA 65, Blackmagic 17K 65mm Cine Camera, Fujifilm GFX100 II as well as Panavision System 65 and Arriflex 765 65mm format film cameras.

"We also kept an eye on how the Blackwings performed in Super35, Full Frame and up—to make sure that customers who invested in our lenses could use them across all cameras, in all formats. Essentially, we wanted the lenses to be future-proof for all camera and capture technologies, no matter the format or recording medium. Our lens design and manufacturing partner IB/E Optics totally supported this concept.

"The larger the format, the more expression you'll see in our lenses, and TRIBE7 sees the rise of 65 playing a big part in filmmaking, with accessibility to 65mm capture being democratized and an option on the horizon for many more productions.

"TRIBE7 is committed to rounding out the BLACKWING7 spherical lens program with additional wide focal lengths. The 20.7mm and 23.7mm Binaries were made in 2020 and 2022, and the new 17mm T1.9 is in development now. All of our new wide-angle lenses are designed to extend the BLACKWING7 focal length range to cover formats from Super35 to Full Frame (Large Format) and into 65mm.

"We'll also extend our lens tuning capabilities with access for owner-operators and rental companies alike. We believe that lens tuning is the future. Tuning lenses you know and trust just makes sense and is a skill most rental companies either have or are developing.

"TRIBE7 is committed to spherical optics. Co-founder-CEO Bradford Young, ASC and I had considered an anamorphic lens program a few years ago but choosing which capture format (Super35, Full Frame, 65mm), and which lens squeeze (1.3, 1.5, 1.65, 1.8, 2.0) to choose was frustratingly complicated. It's not possible to create small, light, fast and reasonably-priced multi-format anamorphic primes with variable squeeze factors, otherwise we'd have done it.

"Also, some of the largest rental companies have poured a creative lifetime on anamorphic lens leadership. They are best placed to drive the future of anamorphic capture and we respect and admire their influence and legacy."

Larger Format Dimensions

- Original 65mm analog film image dimensions are around 43mm wide x 22.5mm high (48.53 mm diagonal).
- Arriflex 765 analog film camera is 52.5 x 23.0 mm (57 mm diagonal). ALEXA 65 is 54.12 x 25.58 mm (diagonal 59.86 mm).
- Fujifilm GFX100 II is 43.8 x 32.9 mm (54.78mm diagonal).
- Blackmagic URSA Cine 17K 65mm is 50.808 x 23.316 mm (55.9 mm diagonal).

For more information, visit: *blackwing7.com*

Infinity Photo-Optical DipR

The DipR lens from Infinity Photo-Optical is submersible to 25.4 cm (10 in) and can be used in and out of the water. It covers Full Frame and focuses to 2x macro.

The DipR has a hydrophobic front element that sheds water droplets immediately.

For more information: ts-160system.com

Specs

- Focal Length: 60mm Macro
- Magnification: 2x at 10mm (0.4 in)
- Focus Range: 5 mm (0.2 in) to Infinity
- Coverage: Full Frame — 43 mm image circle diameter
- Focus Gear: Standard 0.8M
- Length Overall: 409.27 mm (16 in)
- Lens Diameter: 52 mm (2 in)
- Weight: 0.907 kg (2 lb)
- Lens Mount: T2 threads, PL Mount, most still camera lens mounts.
- Submersible to 25.4 cm (10 in)

Kipon 1.25x CINE Expander
(PL to PL Mount)

You probably own a bunch of venerable, valuable 35mm lenses dating back to the analog film days.

They were designed to cover Standard Academy format, whatever "Standard" really meant. Wouldn't it be nice to expand their image circles to cover current Super35 digital sensors?

Remember, Denny Clairmont's Ground Glass Guide was 92 pages long. He preferred terms like Normal35 (N35) for an image area of 21 x 15.2 mm / 25.92 mm Ø and Full Aperture 24 x 18 mm / 30 mm Ø.

The KIPON BAVEYES Cine 1.25x Expander enlarges the image circle of "Standard 35mm" lenses so they can be used on current Super35 digital cameras. For example, lenses like the Angénieux Legacy line of zooms will fill the entire Super35 sensor area, and not have to be cropped in post.

Some Compatible Lenses:

- Angénieux OPTIMO 12x 24-290mm T2.8
- Angénieux OPTIMO 17-80mm T2.2
- Angénieux OPTIMO 28-340mm T3.2
- Angénieux OPTIMO 19.5-94mm
- Canon K35 Macro Zoom 25-120mm T2.8
- Lomo Anamorphic 40-120mm T3.1

Specs:

- Expands the Image Circle of a 35mm lens by a factor of 1.25x
- Magnification: 1.25x
- Reduces the T-Stop of a Super35 lens by a factor of 1.25x

Maximum Image Diameter:	48mm
Maximum Aperture Pass Through:	F2
Maximum Rear Depth (PL Mount):	17.5mm
Mount:	PL to PL Mount
Lens Design:	5 Lenses, 4 Groups
Length:	0.55 inches / 14mm
Weight	0.3 kg / 0.66 lb

Available from Band Pro Film and Digital.   *bandpro.com*

Ron Sim, CSC — SIMMOD and CINEXYZ
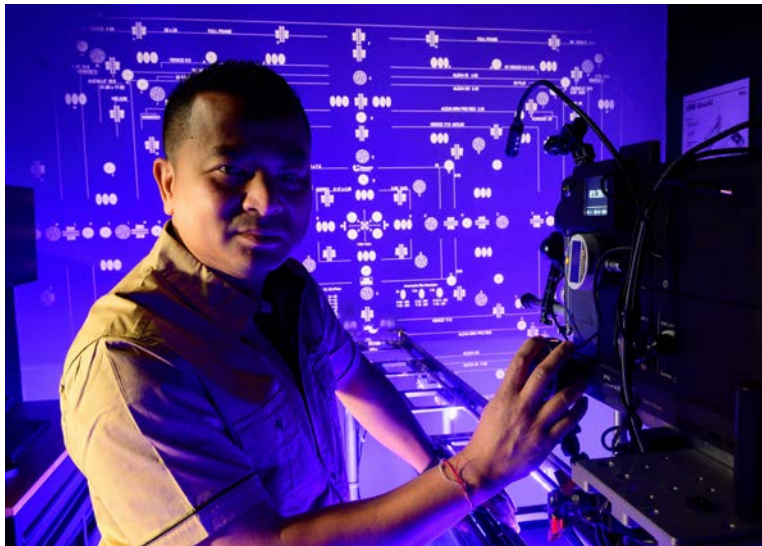
Ron Sim, CSC with his Chrosziel TP7 II and MYTWorks Opti-Glide

CINEXYZ is a new company to help people in our industry develop good ideas into actual products. You are probably familiar with the founder—Cinematographer Ron Sim, CSC. He also runs SIMMOD, famous for lens mount adapters, affordable vintage lens modifications, accessories, magnetic rear filters, and custom lens caps—the latest complete with trackable AirTags inside, and more. We discussed this new adventure and his earlier ones.

Jon: How is CINEXYZ different from SIMMOD?

Ron: SIMMOD makes products that we design, develop, build and sell. CINEXYZ builds on that experience, but it's focused on collaboration and innovation in the film and video industry. We offer services from concept to production, including expert consultation, market research, design, prototyping, machining, patent law navigation, and product marketing.

Where are you located?

We are located in Windsor, Ontario, Canada. This includes our R&D facility, rapid prototyping and distribution. We have two CNC machines and a 5-axis CNC system to prototype various designs and parts very quickly.

How does a cinematographer like yourself know so much about machining, prototyping and manufacturing?

I grew up here in Windsor, Ontario, the automotive capital of Canada. We're across the river from Detroit, Michigan, the automotive capital of America. So, I grew up with an abundance of knowledge in the machining and manufacturing spectrum because of all the industry that's here. My dad was a mold maker and machinist. So, I was destined to be an engineer and machinist. But then I decided to follow my heart's desire and went into the arts and cinematography instead—much to my parents' disappointment.

I can imagine they were horrified.

They were horrified. They're survivors of the Cambodian killing fields where the Khmer Rouge killed artists and educated people.

Did you go to film school?

I did. I went to Sheridan College Film School in Toronto. I studied under Cinematographer-Director Richard Leiterman, CSC *(Silence of the North, The Climb).*

Film school, parents are appalled. What happened next?

My biggest fear in film school was graduating without a job because that was what my parents had told me all along: you're going to finish film school and you're never going to find a job. Then 9/11 happened. Because I had been shooting news for local stations in the summers, I happened to be registered with some of the networks as a stringer, and they asked if anybody wanted to go to Afghanistan. I raised my hand just before graduation and took the training. And next thing you know, I was in Afghanistan.

As a combat cameraman? What did your parents say then?

My parents wanted to disown me, because that was not what they had fought so hard to escape. That was not the life that they wanted me to have. I missed my graduation ceremony. Three months later I got my degree in a FedEx box, which I still have here in the original box. But I felt that I could make a difference in viewers' opinions and perspectives as my contribution to the world at that time. I worked not only in Afghanistan. The Middle East was the hotspot, but I went to Haiti, Pakistan, Southeast Asia. I traveled to 78 countries, wherever there was a natural or man-made disaster.

And then you got into commercials and building equipment?

I came home one day from Afghanistan in the cold of winter and I called Linda, a friend. She asked me where I was going next? I said, "I'm going to Libya". I liked talking to Linda because she never asked me what happened or where I was. I never wanted to talk about what I saw. But this time, she said, "Maybe you shouldn't go to Libya. There's just something about it." Usually, when somebody tells me I shouldn't do something, I do it 10 times over. But for the first time in my life, I thought, maybe she's right. I didn't go. That was Benghazi 2012. I never went back to a war zone after that. Linda and I are now happily married.

Tell us me more about CINEXYZ.

The reason I started CINEXYZ was because, at SIMMOD, I would get emails daily asking if I could make something, a custom lens ring, a custom adapter. But I was not in a position to drop everything and make something one-off. Nevertheless, I wondered whether the demand for custom work might be larger than expected. Let's say you want to drill a bunch of holes in your Sony FX9 and make a new handle. There are two ways to go. One is just to make a one-off just for yourself. If you want to pay the fees to draw 3D renders and do CNC machining, you could be looking at a thousand dollars for this one handle.

The second option is for the DP, Assistant or customer who comes to us with that request and consider partnering. If it's a contraption that I believe in, then I might get involved and see how we can work costs out. Or, I might recommend doing thorough market research in terms of how this will be approached and how receptive the end user would be. Some of our clients already are not only the DPs, they're actual industry partners and major brand names that have contracted us to make little parts for them.

Hopefully your parents are proud how it all worked out?

It took them forever to realize what I do. They don't understand why anybody would pay me to do what I do. But, they're thinking, oh, he finally did something with his life and he finally has a real job.

simmodlens.com   cinexyz.com

Coral 1.5x Anamorphic FF from Second Reef

Ahoy there. A second reef is a way to shorten the sail when the wind blows 30 knots or more. As UK Sailmakers notes, "These are conditions where most day races have been cancelled. Those doing distance races need a second reef."

And now we're sailing into interesting waters. The fog has lifted. Why had Philip Vischer (above, center) recently joined Alexander Schwarz (left) and James Bouchie (right) at Second Reef?

Splice the mainbrace (navy order to give the crew an extra ration of grog). Second Reef introduced their new Coral Anamorphic 1.5x squeeze Full Frame Prime Lenses at Koerner's PNW Pacific Northwest Lens Summit on May 3, 2024. A 50mm pre-production lens arrived at FDTimes the next day.

Alex, Jim and Philip discussed the new lenses and their growing business.

Jim: We represent Tribe7 and we brought a skinned 27mm Blackwing7 to show at PNW Lens Summit. We also represent IB/E Optics sales in the Americas, UK, Africa, Australia and New Zealand and we're building a reseller network in those regions.

Jon: But the big news is the introduction of your Coral Anamorphic lenses?

Jim: We already finished three of a five focal length set: 50mm, 75mm and 90mm. The 35mm and 120mm are in the works.

We made five sets of prototypes; they are unfinished aluminum color. There are only 11 sets of the blue limited edition lenses, and we have been working closely with the cinematographers who purchased them to get the lenses right. That group includes Phedon Papamichael ASC, GSC; Eric Alan Edwards ASC; James Friend ASC, BSC; Romain Lacourbas AFC, ASC; Bjorn Carpentier SBC; and Bartosz Nalazek PSC. The serial production lenses will be traditional black.

Jon: What's special about the lenses?

Philip: Close focus: 17" for the 50mm and 2'1" for the 75mm and the 90mm. Light weight. Compact. A beautiful anamorphic look. It's a 1.5x squeeze anamorphic with true oval bokeh.

The bokeh are smooth on the lens you lent me and look as if they have come from a classic 2x squeeze. How is that possible?

Alex: A 1.5x squeeze anamorphic normally gives you kind of an egg-shaped bokeh in the background. These Coral lenses have a true oval iris with a 1.3:1 form factor to give you bokeh in the out of focus areas that appear as if they come from a 2x squeeze anamorphic.

Jim: It was difficult to get the movement of all the iris blades correct so they remain oval shaped at all apertures. But we thought it was very important, and this hadn't been done earlier on 1.5x anamorphic squeeze ratio lenses.

Why 1.5x and not 2x Anamorphics?

Philip: We capture more real estate on the sensor, resulting in higher resolution of the image. If you have a 2x squeeze on a Full Frame 1.5:1 sensor, you have to crop a lot of the image in post for 2.39:1 or 2:1 release.

Alex: The Coral lenses have classic anamorphic barrel distortion side to side. Also, field curvature has been optimized so that more than one third of the frame in the center remains in focus when you're wide open. As a result, not everybody's forehead is soft.

Jim: We wanted the Corals to become a workhorse anamorphic lens that would be controllable enough and interesting enough to be used on larger projects like features and high-end productions.

Tell us about lens flares.

Alex: It has a bluish flare, but it is not excessive. We didn't want to

Coral 1.5x Anamorphic FF from Second Reef

Oval Iris

Smooth, classic anamorphic oval bokeh

go too heavy, because we didn't want to create a special lens that you would use on music videos and nothing more.

And there's lens data.

Alex: They have /i lens metadata coming through the standard 4 pins at 12 o'clock position on the PL lens mount and also available from a 4-pin Fischer connector on the right side.

Compact and light?

Philip: The lens is small. You can hold it with one hand.

No lens support is needed. They weigh about 4.5 lb / 2 kg each.

Jim: We kept the glass to an absolute minimum in order to keep it light. The barrels are aluminum. We tried to think about everybody on the job. We thought about the first AC for example, so the gears are all in the same place on all lenses all across the set. And they have parallax-free focus and iris marks on both sides. We also wanted to think about the lens technicians. They can align the front diopter anamorphic blocks on a projector in less than 15 minutes.

Alex: It can be a big problem to adjust an anamorphic lens if it got hit or whatever, and the two cylinders are not aligned. They call it "anamorphic twist."

Jim: We wanted to make it easier for a rental house to actually do this. You simply remove the PL mount, remove a few more screws and open the lens up from the rear. These are front anamorphic lenses and the anamorphic cylinders are in front, but the adjustment is accessible from the rear of the lens. This is much easier than taking it apart from the front.

Alex: The setup is basically as follows: you have the spherical taking lens, an iris, some elements are behind the iris, some are in front of the iris. Towards the front of the lens, there are two blocks of cylinder elements. And then there's a diopter group of moving elements. That's the classical diopter focus system. Both cylinders are in the front of the iris, which makes it a true front anamorphic lens. Both cylinders are, of course, fixed, but adjustable.

If something happens to the lens and a cylinder gets slightly out of alignment with the other, then you can use the mechanism that we've built in, and you go into the lens from the rear. So you don't have to disturb anything, you just remove the rear cover and put it back on, fix the screws and everything is done. We showed this to lens technicians at PNW Lens Summit and they were really happy. The adjustment is typically a tenth of a millimeter. It takes

just seconds to adjust. The most time is removing the PL mount and putting it back on again.

Where are the Coral Anamorphic Lenses built?

Jim: IB/E Optics in Freyung, Bavaria, Germany designed and built these lenses to our product management specifications. We spent three years listening to cinematographers and rental houses. And then we wanted to work with IB/E because I have a long history with Klaus Eckerl. His company has a lot of experience with all kinds of lenses and the manufacturing facility is very advanced. Their lens design and manufacturing teams are superb.

So we set sail on an anamorphic project that we felt would tick all the boxes and enter the market at a sweet spot, to bring something new without copying anybody or doing what anybody else was doing. We wanted to give cinematographers a new color on their palette, while thinking about everybody else who touches the lens—to include the technician, the first AC, the cinematographer obviously, and the people in post production because we included metadata.

Alex: That was important for us. And also make it an artistic lens. Not crazy, not overcorrected, but not boring. We even engraved the words on the barrel: Artistic Organic Imperfektion.

second-reef.com/coral-anamorphic/

Krypton OR Lenses

Krypton OR is a new Alexandria, VA company founded by Director/Cinematographer Franco Campos-Lopez Benyunes. Their new series of spherical primes lenses, as of June 2024, includes: 21mm, 24mm, 28mm, 35mm, 40mm, 50mm, 57mm, 85mm, 100mm and 135mm. A 14mm and 200mm are in the works. They all cover Full Frame and VV. Franco explained:

When and why did you start this project?

I found myself working too often with lenses that didn't have close focus ability, were too big and heavy, weren't fast enough, or lenses that were boring. I wanted to just take the best of the lenses I love, that are not mechanically fit for professional work, and just come up with a new brand and flavor. I wanted to please my own aesthetic. That's how the crazy dream of picking up, mixing parts, changing parts and standardizing certain aspects such as iris blades became a thing and here we are, releasing a new set.

What are the donor lenses?

Our process is not something we can claim to have created. ARRI, Panavision and many others have been doing this for decades. For us, having an uber-consistent match in terms of color wasn't the vital aspect. So we opted for the lenses I loved the most. We settled on Konica Hexanons AR and Pentax SMC, in both cases the more modern editions. While this is in essence a rehousing, what makes us different is the fact we have mixed and matched parts from these lenses based on personal taste, we've changed iris blades, totally revamped close focus ability to impressive new standards, and so many other things that it is a totally new lens. While we want to have a policy of full transparency and not play the enigma game, we definitely don't want potential buyers to get a certain look in mind based on the donor lenses.

Technical specifications?

They have an image circle ranging from 42mm to 60mm. All lenses have 16 matte-finish iris blades, except for the 21mm and 40mm. To keep them small, those have 14 iris blades. We improved the close focus in all of them. 290 degrees focus rotation in the entire set. Gear module on the iris and focus ring is 0.8. They all have a 110mm front element, PL mount with the option for EF and LPL at extra cost.

Why did you decide to partner with WhitePoint Optics?

After talking to Turkka and Timo from WhitePoint, I saw they were familiar with the donor lenses, willing to take the risk and so it made me feel we shared the same work ethic and philosophy and it was a good fit. Price was also competitive and I was familiar with their quality of production.

Turkka Syrjäläinen, Managing Director of Whitepoint Optics, also replied:

We are always looking for ways to delight the market with new, innovative looks and designs which is why we have partnered with many of the household names in the vintage or special cinema lens sector. The PL mounted Canon Dream Lens was done with Old Fast Glass, Neo Super Baltar was done with Brian Caldwell and Vintage Lens Co (UK). We have also done a project with Ancient Optics and a host of other players in the field. When Krypton OR approached us with the project, we didn't hesitate to jump to the challenge. They had a very specific idea for a carefully curated selection of lenses, a clear view of the redesign and re-engineering goals and we were the right partner to follow the process through.

Describe the process from Whitepoint's point of view?

It all starts from the client's ideas and needs and we work using the latest 3D design environments to carefully create a digital twin of the upcoming project. Even in a more traditional rehousing project, we offer the client a lot of freedom in customization and design. Then we move into the physical construction. As our lenses state, we each lens is handmade in Finland. Our technicians are trained watchmakers and micro-mechanics and each lens is crafted with precision and accuracy. We are continuously striving for higher quality and this actually has emanated from within our team as an homage to the high quality artisanal tradition of the Finnish watchmaker.

How long does it take to make Krypton OR primes?

We have allocated a separate lane for this project and are ready to start delivering within 6 months of the first order. All orders are handled via Krypton OR and they will communicate each order case by case depending on the range and selection of source lenses.

For more Krypton OR information, pricing and pre-orders, visit: *kryptonoroptics.com*

OFG Customs 65

As Bill Bennett, ASC said, maybe not kidding, "Never accept a camera the way the manufacturer intended." Mark Lafleur of Old Fast Glass Rental house in Los Angeles might agree.

Mark writes, "Our sister company OFG Customs, has released the OFG Customs 65. It's a modified Fujifilm GFX100 II inside a custom camera housing that adds new features, an integrated Atomos Ninja Ultra RAW recorder (up to 12-Bit ProRes RAW), and additional things for professional cinematography. Compact mirrorless cameras can often be hassle to build out for use on set. Old fast Glass put all the electronics and cables inside the new housing for the GFX100 II.

"The camera got bigger and heavier. It's about the size of a VENICE 2, and weighs 10 pounds. But the idea was to build a high-end "studio" version of the camera, knowing other GFX100 II bodies could be added to a production when smaller cameras are needed for gimbal or car mounting, for example. Think of the "OFG 65" as A-Cam, and the smaller "stock" GFX100 II cameras as B and C-Cam. The beauty is that all the cameras share the same huge sensor, and all will have matching looks and matching codecs for smoother post production.

"The GFX100 II has a 55mm diagonal (43.8 x 32.9mm) Medium Format sensor that is larger than Full Frame, Large Format or VistaVision. The modification to the GFX100 II is a permanent one. It's not a traditional 'cage'. So once it is rehoused, it isn't coming back.

"The goal was to make a camera system that was immediately familiar to camera assistants and cinematographers. Pull it out of a case, add a battery and a lens, and you can start shooting. High end productions require additional accessories like rangefinders, monitors, FIZ motors, wireless video transmitter, etc. The OFG Customs 65 has power distribution to power everything, and the ability to use remote run/stop, which is a must for most professional productions. Every spare inch of the housing is cheese plate, allowing camera assistants abundant mounting options.

"Using the ARRI BUD base plate allows the use of ARRI's complete line of shoulder pads and stabilizer plates, making it easy to go from tripod to handheld to Steadicam without using any tools, and it makes balancing the camera quick and easy. The top handle can be compact or extended. The end result is a camera that is very familiar to ACs and DPs."

For now the camera is a rental only item at Old Fast Glass, but they are currently looking into doing sales in limited volume. The OFG Customs 65 adds:

- Remote run/stop (3-pin RS connector)
- Gold Mount battery plate (V-Mount is optional)
- Dual stainless steel, shimmable LPL/PL combo mount
- SDI and HDMI monitoring
- 3 x 2-Pin LEMO, 3 x 2-Pin Fischer, 2 x D-Tap ports
- Pin XLR AC power
- ARRI BUD-1 baseplate system
- Custom cage with top handle and EVF bracket
- 2 cooling fans

SIGMA 28-45 F1.8 DG DN ART

June 3, 2024. SIGMA announced: "The new SIGMA 28-45mm F1.8 DG DN | A lens is the world's first zoom lens with a constant F1.8 aperture for Full Frame mirrorless cameras. It is available in E-mount and L-Mount.

With 3 aspherical and 5 SLD glass elements that suppress axial and chromatic aberrations, this new 28mm to 45mm zoom lens achieves performance comparable to prime lenses. The minimum focusing distance is 30 cm (11.8 inches) throughout the entire zoom range. Maximum magnification is 1:4 at 45mm."
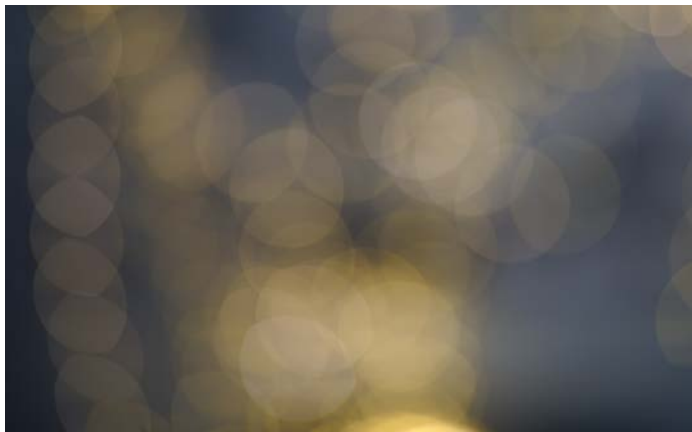
Bigger, softer bokeh: F1.8 at 45mm on SIGMA 28-45 F1.8 DG DN | A

SIGMA 24-70 F2.8 DG DN II ART

May 16, 2024. SIGMA introduced the new 24-70mm F2.8 DG DN II | A for L-Mount and Sony E-mount mirrorless cameras.

As with the new SIGMA 28-45mm F1.8 zoom lens, filmmakers and photographers will be thrilled by the dedicated and declickable iris ring.

The new 24-70mm is approximately 7% smaller and 10% lighter than the previous SIGMA 24-70. It weighs 745 g (26.3 oz) and focuses to 17 cm (6.7 in). This is the zoom lens to take anywhere—24-70 is a very versatile range. *sigma-global.com*
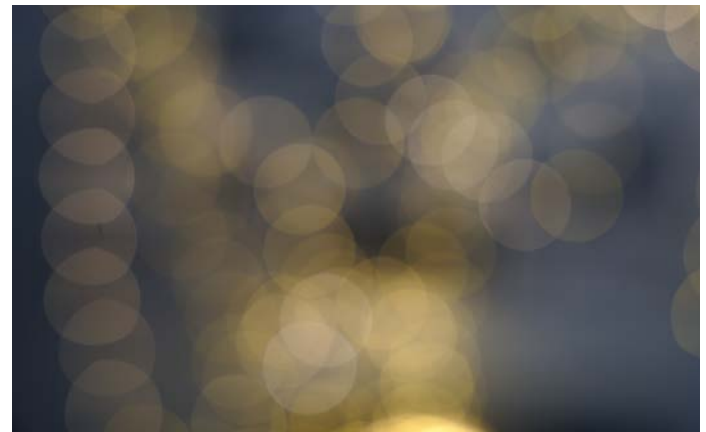
Bokeh: F2.8 at 45mm on SIGMA 24-70 F2.8 DG DN II | A

Sizes: SIGMA 28-45, 24-70 II, 24-70 and 28-70

New SIGMA Art Zoom
28-45mm F1.8 DG DN | A

New SIGMA Art Zoom
24-70mm F2.8 DG DN II | A

Previous SIGMA Art Zoom
24-70mm F2.8 DG DN | A

SIGMA Contemporary Zoom
28-70mm F2.8 DG DN | C

Co-Producers

CINEPAD⁶   ORCA   matthews studio equipment   CINEMATOGRAPHY electronics

Associate Producers

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Rental Houses

CAMALOT AUDIOVISUAL FACILITIES   RVZ LOCATION   BECINE   CAMERAS BY OTTO NEMENZ   LJUD & BILD MEDIA AB

nac IMAGE TECHNOLOGY   KOERNER CAMERA SYSTEMS   K FILM RENTAL   HD systems camera rental   SERVICE VISION

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CARTONI PROFESSIONAL CAMERA SUPPORT

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Co-Producers, Associate Producers, Rental Houses, Media and Production Partners on previous page