Jon Fauer ASC www.fdtimes.com Sept 12, 2023

FILM AND DIGITAL TIMES

SONY BURANO Special Report

Above: Dion Beebe, ACS, ASC handheld with Sony BURANO on *Original*, a dance film directed by Unjoo Moon.

Cover: Axil Moon Beebe handheld with BURANO.
Photos: Gordon Dooley.

Photo © JaySi / Shutterstock

Above: This is Burano, Italy. It's a 45-minute vaporetto ride from Piazza San Marco in Venice to the north end of the Lagoon. Buildings are painted in beautifully bright colors that could work as an on-location color chart. The three-story houses are jammed together, side by side and painted different colors long ago to mark the property lines. Anther explanation is that the local fishermen and sailors used bright colors on their houses, the better to see them at night or in the rolling fog of the Lagoon. Burano is known for its seafood. Try the risotto de gò, but better to taste it in a Burano restaurant than try to catch the spiny grass goby (gò) fish yourself.

Below: This is BURANO, the new camera from Sony. Its Full Frame 8.6K sensor can capture every nuance and color painted on the houses of Burano island. BURANO, the camera, is the latest addition to the Sony Cinema Line.

With in-body image stabilization and in-camera variable ND filters, BURANO is unique, ergonomic, and extremely mobile. BURANO could fit in a backpack on a documentary about the Venetian Lagoon. BURANO might also work as a companion camera to its larger sibling, VENICE. Let's take a tour on the following pages.

New Sony BURANO

BURANO blends the front end styling of VENICE with the rear curves of FX6. BURANO has the same front PL Mount over a Lever-Lock E-mount. However, the front sensor block does not detach the way VENICE does, so there is no BURANO Rialto tethering. BURANO is 1 inch shorter and 3 pounds lighter than VENICE 2. The body is magnesium and aluminum.

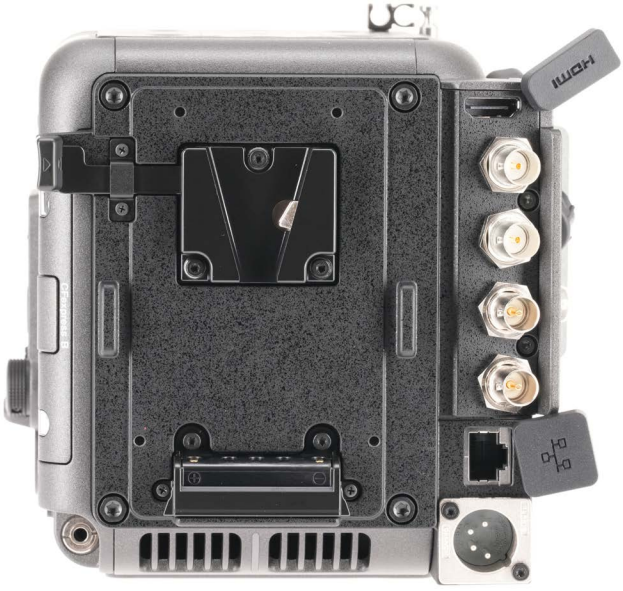
Size Comparison: Sony VENICE 2 8.6K

Sony BURANO Studio and Handheld Mode

Compact studio mode with PL mount SIGMA 65mm FF High Speed Cine Lens, IBIS image stabilized.

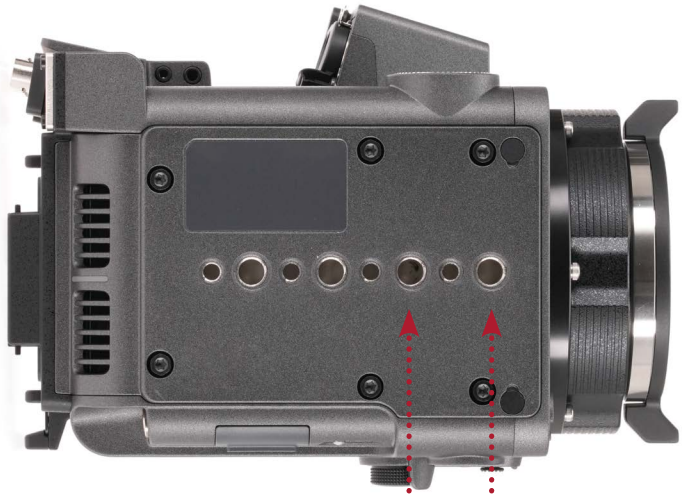
Nimble handheld mode with auto focus, IBIS image stabilized, FE 24-105mm G OSS E-mount Zoom

Sony BURANO Camera Body Views: E-mount



Sony BURANO Camera Body Views: PL Mount

BURNANO Top

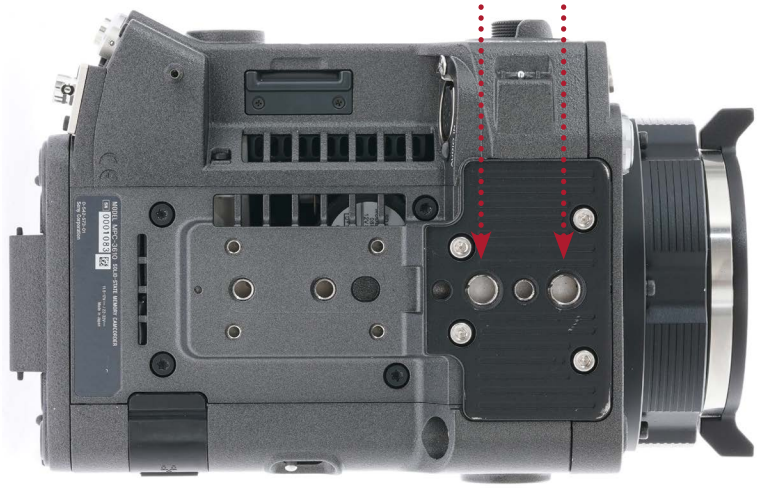


BURANO Bottom

Fortunately, BURANO and VENICE bottom forward 3/8-16 and 1/4-20 mounting threads are in the same position.

VENICE 2 Comparison:

VENICE 2 Top



VENICE 2 Bottom

BURANO PL Mount over E-mount

BURANO has the same front end as VENICE, although it cannot be removed for an Extension System.

At left, with native E-mount

Below: PL Mount attaches with 6x captive 2.5mm hex screws.

BURANO PL Mount

Front view of PL Mount

Rear view of PL Mount

3/4 side rear view

BURANO PL Mount

BURANO with PL Mount attached.

Sony BURANO Handheld

The EVF LCD connects with a cable similar to FX9 and F55. It is a 720P signal.

Sony BURANO with FE 24-105mm G OSS E-mount zoom lens, handgrip, EVF—nimble, ergonomic and light, sits comfortably on your shoulder even without a shoulder pad or base plate.

Handgrip and arm adjust quickly for waist level operating, or wherever you would like the camera to be.

Outputs at rear of BURANO, top to bottom:
HDMI
SDI OUT 1
SDI OUT 2
Timecode
Reference
Ethernet
12 V DC Input

The handgrip connects via a mini jack similar to FX9.

Nobu Takahashi, GM of Professional Imaging, introduces Sony BURANO

Nobutatsu (Nobu) Takahashi, General Manager of Professional Imaging Technology Business Unit, Sony Corporation (Sony Cinema Line) graciously volunteered to introduce the new Sony BURANO camera to FDTimes readers.

Jon: Nobu-san, congratulations on the new BURANO camera. How did it come about?

Nobu: Thank you very much. The idea began about five years ago. When we developed the strategy for the Cinema Line, we predicted that many OTT streamers would be creating new feature films and episodic dramas at around 2023. To address that market, we thought that we should have a highly mobile camera with a prestigious cinematic look. So that was the idea that sparked the idea for BURANO.

Rhetorically asking: couldn't they just use a regular VENICE?

Yes, that's one option they have at the moment. For very high budget filming, they use VENICE and other high-end cinema cameras, but at the same time they also need high mobility cameras for those productions. Not only for feature films and episodic dramas, but also for non-scripted content like documentaries or wildlife shows. Those genres are increasing rapidly in the OTT streaming area. Scripted and also non-scripted content is increasing a lot. That is why we think there is a demand for this high mobility camera. That was one of the main reasons we had to start this project.

Did you get these ideas from market research—talking to DPs, rental houses, camera assistants, crews, directors, producers?

We are always listening to filmmakers all the time. My overall intention is to go into the market, not alone, but to also bring the engineers and product planners so that we understand what our customers need as a tool. At Sony, we have engineers and lots of development is going on already. These are the seeds of our technology development. We know that side of things, but we may not know the artistic and creative side. That art belongs to the filmmakers, cinematographers and directors. We have technology. And so, with art and technology, by multiplying those two together, we always should think about how our technology can contribute to the creativity of the filmmakers and to the industry of the cinema. And then we came up with the idea of BURANO, a very unique concept.

Lighter, smaller, more handholdable...

Shoulder-resting profile, with a compact body, and lightweight. Actually, BURANO is 33% lighter than VENICE. It's very good for high mobility shooting, with a lots of core technology development inside.

Such as continuously variable ND and image stabilization?

I was a mechanical engineer for more than 10 years when I started my career at Sony. There is a very specific engineering department that is in charge of core technology development. They are not necessarily working on an individual project but rather, they are looking at long-term technology development. They always like challenges. They want something different and to be first.

They had already been developing in-camera variable ND and in-body image stabilization. So, the challenge was to implement those concepts into a new camera. That was the technology part of the project.

There was also a research part of the project. We engaged an in-depth study of the cinema market when we started this project. It was important to understanding the market five years ago and then plan ahead so that research and the core technologies could come together in this new camera.

What kind of the research did you conduct?

Understanding the market is the most important part for me. But, when we started this project, most of the time was during the COVID pandemic. We had to quarantine for more than three years. That was challenging, but it allowed us to have online meetings for research. We reached out to colleagues in New York and Hollywood and around the world. Our discussions were not limited to filmmakers and cinematographers, but also producers, DITs, colorists, camera crews and rental houses. We wanted to learn what kind of challenges they had and what kind of jobs they were doing.

We found out that many of them were working on OTT feature films and episodic dramas. They said that those streaming feature films had rather high budgets. But at the same time, there was an increasing number of unscripted dramas, documentaries, wildlife shows, music videos, and commercials on the web is increasing. For the big budget streaming feature films and series, they usually rented VENICE or highly acclaimed cameras of other brands.

But at the same time, many of the people we met via online meetings mentioned that they owned their own cameras, maybe not the ones just mentioned, but they owned lighter, smaller, more handholdable cameras of all brands, including Sony's FX series. The reason was timing. They get a phone call. The producer wants to shoot next week or even tomorrow. If they own their cameras and lenses, then they are ready to go out and shoot right away. They are owner-operators and they are crewing the increasing number of these non-scripted show. And that is when I thought that we should have this new camera called BURANO. The solo owner-operator or filmmaker with a small crew would love this camera. So that was one finding that came out of our research.

After the research and technology discussions, what came next?

Product planners, with Toshi Kanayama in charge, took their understanding of the market to develop a strategy. The concept of the camera came next. That's very important. Understand the filmmakers first. Listen to the cinematographers. Then create the camera. The result was BURANO, a camera with a cinematic look and high mobility.

Who might use the camera the most after it is released? Will it be owner operators that you just mentioned—or rental houses and production companies?

We have to wait and see after the launch. It's interesting: our thoughts and the acceptance of the users can sometimes tend to be different. I think it's the filmmaker's choice. When we established the concept, we thought that lot about the solo operator or small crew who would love a camera with which they can film right away. I think it will be very good for those users.

I also think BURANO will also be very attractive to high-end DPs and camera crews to bring along on their feature film as a complement to a VENICE, as their second, third, and fourth camera.

I totally agree with that. To be different from the existing tools like VENICE is very important because we do have a very high-end VENICE camera as an option at this moment, but up until now, we did not have a lighter, more compact camera with image stabilization so the user can go handheld, perhaps at waist level, to move around and get closer to the actor. To be different from the others is very important and I call it unique. I always tell the engineers that we have to be unique. I have to be unique as a person. So does the engineer. But at the same time, the camera has to be unique as well. It has to have its own character.

We often obsess about lenses having character. And now you have created a camera that has character as well. I can picture it. The sun has set. It's magic hour. There's very little light left and the director wants a long dolly shot, but there's no time to lay track and no, they did not rent a remote head with gyro stabilization. The DP calls for BURANO. It goes on the dolly, and it's bouncing around on the bare, un-tracked ground. The internal image stabilizer steadies the image. The Director is happy because they can do a few more takes. The DP is happy because the internal variable ND lets them adjust exposure in fine increments as the sky gets darker. And the producer is happy because they got the shot.

Yes. If the camera is unique, filmmakers will find out new ways to use new tools. That's why we cannot foresee who will actually use this camera. That's always surprising. Another recent surprise is that real filmmakers are using the Sony FX3 camera so often. We had hoped those top-end cinematographers would use the FX3 when we first established the concept, and recently a lot of DPs are showing up in our DMPC (Digital Motion Picture Center) facility and they take out their FX3 from a backpack. They love it. That's amazing. .

Up until this point, I think manufacturers would either do a very high-end camera or an entry-level camera. There was very little in the middle. Why was the middle market avoided up to now?

That's true. There are not many other cameras in this range. When I started to think about the concept of this camera, I heard lots of feedback from the market that there is and there will be an increasing market for the mid-range. As I mentioned, not just the OTT drama, episodic dramas or feature films, but also non-scripted content will be rising because customers want content. And then we have another option for the viewer—streaming and on-demand streaming. In that sense, I think the mid-range camera, as you call it, is defined as mid-range only by its price. But aside from price, it is a very different concept of a camera that was never done before. What BURANO can do has been done before with lots of peripherals added to previous cameras, but it was not easy for the freelance camera operator or an independent filmmaker to have all those peripherals.

I think it's going to surprise a lot of people when BURANO launches because the rumor sites are proclaiming it is going to be like an FX11, just another step above the FX9. I never imagined that it was going to be this advanced or unique. How did you come up with the name? I thought maybe you were going to name it after a surfing spot like Malibu or Mavericks.

Kanayama-san led discussions not only with our Japanese colleagues, but at the same time we talked with the local sales companies around the world. We wanted the name to be unique and very easy to pronounce. Even the name of our company, Sony, is short and easy to pronounce. So I followed that idea and BURANO became the name of this camera, after a small island in the Venetian lagoon.

I like the name.

I like it and I'm glad that you do too. Then it is up to us and the

filmmakers to enjoy BURANO in use on their productions. After its release, we would like to get feedback from users so our software developers can plan future version updates and make this camera even better. These days, it's not just about releasing the product. It is also listening to the customers in order to polish the tools so that they will be able to do more artistic filmmaking. So that's our intent. We are eager to listen to the customers' voices.

So, if a DP or an assistant has an idea, whom should they contact at Sony?

They should contact their local Sony representative who will pass it on to us. We have a very good team worldwide. We all met in Tokyo at the end of June. All the representatives of the sales companies worldwide gathered in Yokohama. We have very tight connections with all our colleagues so that we can collect feedback from our worldwide customers.

That's good to hear. We members of the camera crew love to complain...er...give suggestions about the equipment and hope that someone listens. It's great that you are willing to listen.

I think that's very important. And not just collecting the feedback from the sales representatives, but at the same time, it's very important for someone in top management within Sony, or an engineer, to go to the market to understand and listen to the customers. That's a very important concept for me. That's why I often go to Los Angeles and I always show up at events and trade shows. I always try to bring an engineer along with me. Not just a product planner. But our engineers have to be on site to understand and feel what the customer or user feels.

Listening to the DPs and what they're doing is not just for the short term. It is for the long term. Understanding the needs of the DP very early in the timing of the development is very important. That's why we have the DMPC facility in Glendale. Sony's top management visited the DMPC around the time of Cine Gear and met with ten DPs at a round-table discussion about the future of filmmaking. Even Maki-san, the President and CEO of Sony Corporation, is listening to the DPs. That is very helpful in our planning and development for the cinema industries. I'm very lucky that our very good top managers, colleagues and my engineers all love filmmaking.

But if you meet 20 DPs, don't you get 20 different opinions?

We do. And we understand that. We think every comment is true because that's why they're very unique. They are artists. So the comments should be different. We try to find a common thread—what is the essential message from them so that we can translate the artistic requests to into engineering development

What areas do these engineers work in?

I try to arrange one person from each area of development. I try to bring one electrical engineer, ideally one mechanical engineer, and one software engineer. Sometimes I bring the industrial designer. I think I brought three creative designers to NAB. They're very important. They know how the products should be designed ergonomically. In that sense, they have to watch how filmmakers are using the camera. Everyone on the development team should understand who's using it and how they're using the camera.

Is the sensor in BURANO the same as VENICE?

No. In the specifications, they share some common numbers but the sensor itself is different.

And yet, the two cameras match beautifully.

Oh, yes. The color filter array is the same. It was our intent to match the BURANO and the VENICE cameras. And not just VENICE, but at the same time we try to match all the Cinema Line cameras. That's one of the main concepts of the cinema line look and availability.

The user interface on BURANO is logical and intuitive. It reminded me of FX3 and some Alpha cameras.

The details are not exactly the same as VENICE, but for the major functions, we made it easier for the customer to use the menus.

BURANO has the same clever E-mount and PL-mount front end.

We want to give customers the option to use any lens they want. In that sense, the PL mount is a must. But at the same time, our research showed that for web commercials, music videos and non-scripted content, users all appreciated autofocus very much. That's why we thought that E-mount might benefit those users and customers. We were very lucky to find out that they are very interested in Sony's autofocus on E-mount lenses.

We have very good glass in Sony G Master lenses these days, with autofocus, auto iris and very high technology.

It is always good that when you have new options added to your filmmaking. You can do your filming with PL lenses that have their unique look to do the storytelling, but at the same time, having options with autofocus technology may help you create something new. You'll decide how to use it, but we are giving you the option by understanding your needs.

We see a lot of multiple cameras lately. Is this the future?

Yes. BURANO has a short profile and in-body image stabilization. It's different from VENICE. Being unique, it can work in combination with existing cameras like VENICE. I think that'll give lots of options to the filmmakers. At the same time, new ways of filming are increasing. There might be other options for the customer. I have seen not only huge stages for the feature films, but at the same time there are many mid-sized and small-sized studios for virtual production and XR wok. I visited a lot of them. I feel that younger filmmakers tend to try something new—new styles, new ways of shooting.

In the Cinema Line department, we have three terms: imagine, create, inspire. Not only do the DPs use their imagination for storytelling and creating a film that inspires the audience, but at the same time we, the engineers and myself, everybody in Sony, also in the sales companies, need to have imagination for the future of filmmaking. Then we create the camera and its system. And finally, we inspire DPs and the audience and they inspire us. I think those are very good words to represent the activities that we are doing together with the creators and filmmakers.

Those words should inspire filmmakers to embrace your Cinema Line, confident in knowing that someone is listening.

You are the ones who are inspiring me a lot.

Thank you very much.

Sony Cinema Line: FX3, FX6, FX9...

FX3

FX3 3.8K
Sensor: 12.1 MP actual / 10.2 MP effective
Sensor size: 35.6 x 23.8 mm
Steadishot: Image Stabilization of Sensor
No Internal ND
Phase Detect Auto Focus
Base/Enhanced ISO: 800 and 12,800
Max Res: 3840 x 2160p XAVC S-I 4:2:2 10-Bit
Variable framerate UHD: 1-120 fps
External RAW: 44264 x 2408 16-Bit HDMI
Alpha style E-mount — Full Frame & Super35
Weight (body only): .640 kg / 22.6 oz
Size (body only): 129.7 mm / 5.1" wide 77.8 mm / 3.1" high 84.6 mm / 3.3" deep
Sony Z-Series 7.2V DC
Camera Introduced Feb 2021

FX6

FX6 4K
Sensor: 12.1 MP actual / 10.2 MP effective
Sensor size: 35.6 x 23.8 mm
No Steadishot
Internal Variable ND: Clear, ND.6 - ND2.1
Phase Detect Auto Focus
Base/Enhanced ISO: 800 and 12,800
Max Res: 4096 x 2160p XAVC-I 4:2:2 10-Bit
Variable framerate 4K: 1-60 / UHD: 1-60 fps
External RAW: 4096 x 2160 16-Bit SDI
Alpha style E-mount — Full Frame & S35
Weight (body only): .885 kg / 1 lb 15.4 oz
Size (body only): 110 mm / 4.33" wide 115 mm / 4.5" high 140 mm / 5.5" deep
Battery: Sony BP-U Series 14.4V DC
Camera Introduced November 2020

FX9

FX9 4K
Sensor: 20.5 MP actual / 19 MP effective
Sensor size: 35.6 x 23.8 mm
No Steadishot
Internal Variable ND: Clear, ND.6 - ND2.1
Phase Detect Auto Focus
Dual base ISO: 800 and 4000
Max Res: 4096 x 2160p XAVC-I 4:2:2 10-bit
Variable framerate 4K: 1-60 / UHD: 1-120 fps
External RAW: 4096 x 2160 16-Bit SDI
Lever Lock E-mount — Full Frame & S35
Weight (body only): 2.0 kg / 4.4 lb
Size (body only): 146 mm / 5.75" wide 142.5 mm / 5.61" high 229 mm / 9.02" deep
Battery: Sony BP-U Series 14.4V DC
Camera Introduced September 2019

Note: Some of the specifications on this page and the next are from FDTimes research, math or estimates — and are not official Sony details.

Sony Cinema Line: VENICE, VENICE 2, BURANO

VENICE

VENICE 6K
Sensor: 24 MP
Sensor size: 35.9 x 24 mm
No Steadishot
Internal ND: Clear, ND.3 - ND2.4
No AF
Dual base ISO: 500 and 2500
Max Res: 6048 x 4032 X-OCN 16-Bit
Variable framerate 6K 3:2 FF 1-60 fps
Internal RAW: 6048 x 4032 16-Bit
PL Mount & Lever Lock E-mount—FF & S35
Weight (body+PL): kg / lb
Size (body only): 147 mm / 5.875" wide 158 mm / 6.25"" high 235 mm / 9.375" long
Battery: 14.8v V-Mount rear plate
Camera Introduced September 2017

VENICE 2

VENICE 2 8.6K
Sensor: 50 MP
Sensor size: 35.9 x 24 mm
No Steadishot
Internal ND: Clear, ND.3 - ND2.4
No AF
Dual base ISO: 800 and 3200
Max Res: 8640 x 5760 X-OCN 16-Bit
Variable framerate 8K 3:2 FF 1-30 fps
Internal X-OCN XT/ST/LT: 8640 x 5760 16-Bit
PL Mount & Lever Lock E-mount—FF & S35
Weight (body+PL): 4.3 kg / 9 lb 7.7 oz
Size (body only): 152 mm / 5.98" wide 158 mm / 6.25" high 250 mm / 9.84" long
Battery: 14.8v V-Mount rear plate
Camera Introduced November 2021

BURANO

BURANO 8.6K
Sensor: 57 MP
Sensor size: 35.9 x 24 mm
Steadishot: Image Stabilization of Sensor
Internal Variable ND: Clear, ND.6 - ND2.1
Phase Detect Auto Focus
Dual base ISO: 800 and 3200
Max Res: 8632 x 4856 X-OCN 16-Bit
Variable framerate 8K 17:9 1-30 fps
Internal X-OCN LT: 8632 x 4856 16-Bit
PL Mount & Lever Lock E-mount—FF & S35
Weight (body+PL): 2.9 kg / 6.39 lb
Size (body only): 146 mm / 5.75" wide 143 mm / 5.625" high 218 mm / 8.58" long
Battery: 14.8v V-Mount rear plate
Camera Introduced September 2023

The Sony Cinema Line also includes the FX30, an APS-C variant of the the FX3, and the FR7, a Full Frame PTZ camera.

FX30
Sensor: 20 MP Super35 (23.3 x 15.5 mm)
Camera Introduced September 2022

FR7 PTZ Camera
Sensor: 10.3 MP Full Frame
Camera Introduced September 2022

BURANO Product Planners, Product Manager and Project Leader

Toshiyuki (Toshi) Kanayama

Takuro Ema

Yukie Sugaya from the Sony HQ PR Team got the BURANO Team up early for an online meeting and briefing with FDTimes. It was 7am at Sony headquarters in Yokohama and 8pm in New York. The cast of characters included Toshiyuki (Toshi) Kanayama and Takuro Ema from the BURANO Product Planning Team. Katsuya Kondo is the BURANO Product Manager and a legendary engineer. Yasuo Sakai is the Project Leader of BURANO.

Toshi: Let us briefly introduce a new CineAlta camera. It is a very new concept. As you know, VENICE is our highest quality cinema camera. And then, we have the FX9 which is kind of a run and gun style camera, good for mobility. And now, between these two, we introduce a new camera that we call BURANO.

Beginning about five or six years ago, we heard that streaming was on the increase. Companies that provide internet streaming services wanted to have a lot more content. But the budgets might be limited by the quantity that would be needed. Also, some of this content would be created by a small staff, or even in one person. So, that's why we came up with the concept of this compact and small, lightweight, and high mobility camera. Even in one person can shoot with it. But this camera still has very high quality and a cinematic look.

First of all, to achieve high mobility, we realized that it needed in-body variable ND filters. Second, this is a world's first digital cinema camera with a PL Mount that has in-body image stabilization. In the past, of course, we had in-body image stabilization E-mount cameras, but this is first for a PL mount as well. We hope this is helpful for documentary and wildlife cinematographers.

And third, the sensor has phase detection AF (Auto Focus) for E-mount lenses.

BURANO is an 8K Full Frame camera with a phase detection, touch-screen AF, with Dual Base 800/3200 ISO, 16-stops of exposure latitude, and it can record internal raw X-OCN LT. It has the same PL mount over E-mount design as the VENICE. Among its many resolutions and frame rates, BURANO will shoot 8K 30P Full Frame and high frame rate (slow motion) 4K 120P in Super 35 crop mode. You can record not only X-OCN, but also XAVC. (VENICE records ProRes but not XAVC.)

The handgrip with remote controls is similar to the FX9, but we have improved its usability. We heard customers telling us that it was difficult to change the angle of the arm. But now we have improved it so it is very easy to adjust.

Jon: Does the addition of phase detect on the sensor in any way change or soften the image compared to VENICE?

No. The image will match the look of VENICE 1 and 2. It's not the same sensor, but the image science is similar. Also, we have the s709 preset that can cover the entire Cinema Line and match the look. And that includes FX3, 6 and 9.

Would you please tell us about LUTs?

BURANO is getting 4 new looks that can be selected from the menu. They are called WARM, COOL, VINTAGE, and TEAL AND ORANGE. These new looks are variations of s709. In addition to s709, we are adding these four new looks as presets.

The WARM LUT aims to create a soft and smooth atmosphere. Highlight areas are warmer and richer. Skintones look smooth, lively and healthy. There's no change in other areas.

Then COOL LUT is my favorite new look. The idea is to create a cool feeling. Shadow areas take on a soft blueish glow that feels almost illuminate by a blue neon light. It is like a cool city that has

not yet woken up. Or magic hour. My favorite.

The concept of the VINTAGE LUT is low saturation. It's like a color photo that has faded more toward black and white and the brightness has decreased.

TEAL AND ORANGE is kind of the current new style for a look. There is a contrast between foreground and background and people in the frame. It looks kind of blueish.

These LUTS, or call them Looks, are a jumping off point. You can add to them, refine them, create your own and load them into the camera. For people who do not have time budget or experience for color grading, it is easy to use these looks, we think. We're thinking about possibly expanding this look library in the future, but we are starting with these four basic looks for BURANO.

Are these LUTs embedded into the clip metadata?

Yes. We've embedded the cube file metadata into the video file and into the clip. Also, we are planning to provide dot cube files as well for post-production.

If you're shooting X-OCN LT, the LUTs are not baked in. It's just metadata. And if you're shooting XAVC?

There are two options. Not baking it in and with the embedded cube file, or baked. So, you have a choice. In Cine EI, we cannot bake. But in custom mode, we need to input the cube file into the other file in the camera, and then use that cube file.

Would you please tell us about the planning, design and styling of BURANO?

After talking to users—DPs, camera assistants and rental houses—we heard that the user interface was very important for them. We realized there were six frequently adjusted items that should be visible in the display panel menu and they should be easy to change. Internally, we call them the Big Six.

Big Six means a function on the display panel that allows you to select items that you frequently adjust or values you want to instantly check during shooting. It includes FPS, EI, Shutter angle, ND, LUT and White Balance. We incorporated that into BURANO and made sure that the display could be attached almost anywhere on the camera and would be flexible to be used by the camera operator of assistant. So, it's very flexible.

How does the image stabilization work?

Takuro: It is a new technology in BURANO. For example, FX3 has image stabilization, but no ND filter. FX6 and FX9 have a variable ND filter, but no image stabilization. To combine both is very difficult. So, our super engineers achieve that combination for BURANO. It is a world's first technology.

Is it delicate and are precautions necessary when shipping?

Takuro: It works pretty much the same way as the Alpha cameras work. The sensor gets locked magnetically when the camera or the stabilization is off.

What does the menu setting "PL stabilization" mean?

Toshi: We have designed a stabilization program especially for PL mount lenses. The menu changes when you use an E-mount lens. If PL lens and body can communicate the focal lengths via Cooke /i, it's automatically set. If not, you can select the focal length and that helps determine the aggressiveness of the stabilization.

BURANO also records lens data in the video file as metadata?

Takuro: Yes, it records Cooke /i.

At this point, Takuro decides to turn the tables and question the questioner.

Takuro: Whom do you think will be interested in this kind of camera? Rental houses or more owner-operators? And where do you think this camera will sit?

Jon: As you said, it's everybody. BURANO has a really broad appeal with something for everyone. It's affordable enough for owner-operators to have. I always enjoyed owning my own cameras because they helped logistically and creatively. When Tanya Lyon kindly sent a BURANO here, it proved to be high-end and robust enough for rental houses to enjoy as well because it's very solidly built.

Toshi: Yes, It's a metal body, made of magnesium, even for the flap that covers the media card.

Jon: So, it will be rugged for rental houses. It will be great for documentaries and streaming services, but I think it will also wind up on big movies. A big movie might have, three or four VENICE 2 cameras, and they might have 10 or more BURANOs. We're seeing many movies using multiple cameras. It sometimes seems as if it's easier and faster to have a camera attached to each lens than losing time by having to change lenses.

Some examples are the many VENICE and VENICE Extension System (RIALTO) rigs that Claudio Miranda, ASC had on *Top Gun: Maverick*, as did Jacques Jouffret, ASC on *Gran Turismo*.

Takuro: This camera is a new challenge for us. There are many functions and also the concept itself is something new, which Sony hasn't been able to challenge for a long time. So, we would like to have lots of customer feedback so we know if we were right—and if we need to correct something, we can work on it as soon as possible.

Jon: How was the concept different from what came before?

Takuro: It's not totally different, but in a cinematic way, we tried to combine mobility as much as possible. We engaged the auto focus system for the first time in a CineAlta system. Stabilization is also part of the new concept. We weren't a hundred percent sure that all the customers will accept these things. So, we like to hear your opinion.

Jon: Those were my two favorite things on BURANO: stabilization and really good auto focus for when you're shooting solo. When I used the camera, I was amazed that the IBIS (in-body image stabilization) did not interfere with panning. In the past, using IBIS could result in lag. When you stopped panning, the image would keep going. This was not the case. I liked the way you could adjust it.

Takuro: We hope everyone else likes it as well.

Jon: Where is BURANO designed?

Takuro: Everybody is at our Yokohama headquarters.

Jon:

I look forward to visiting in November. Thank you.

Studio mode PL Mount

The EVF is mounted facing rear.

with SIGMA 65mm FF PL Mount Prime

Attach the EVF Monitor on the camera right side for a VENICE style menu main display

Handheld mode E-mount

The EVF is mounted facing out because the eyepiece loupe has a 90° mirror.

Sony BURANO handgrip

EVF Positions

The EVF slides along a NATO rail and can be positioned almost anywhere: left side, right side, front, rear.

Camera System

A wise camera assistant once said, “Cameras are only as good as their lenses and AKS (All Kinds of Stuff — accessories).”

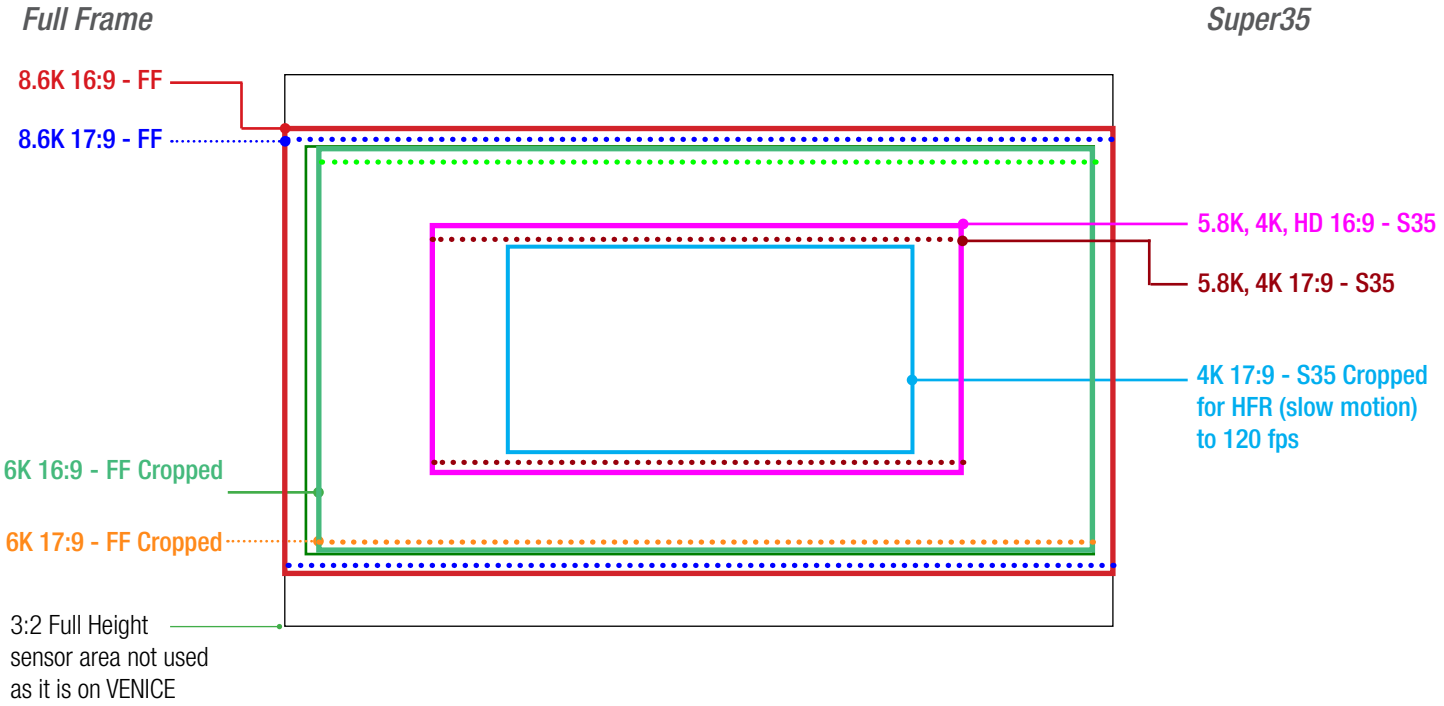
BURANO arrives at the same time as the new Angénieux EZ-3 Zoom lens, among many other choices. More about the EZ-3 lens in the following pages.

Wooden Camera Cage and AKS

The team at Creative Solutions got 3D outlines of the new BURANO camera just a couple of weeks ago. You can almost hear the CNC machines carving solid blocks of aluminum into sculpted cages, plates, handgrips, rods and baseplates for the new camera. These are renderings. The real ones will be coming soon.

Of note: see the D-Box accessory power distribution breakout box at the rear that was on everyone’s wish list.

BURANO Imager Modes, Aspect Ratios, Formats, Resolution, etc.



Imager Mode	Format [6]	Resolution	W x H (mm)	Project Frame Rate	fps
8.6K 16:9	Full Frame	8632 x 4856	35.9 x 20.2	23.98, 25, 29.97	1-30
8.6K 17:9	Full Frame	8632 x 4552	35.9 x1 8.9	23.98, 24, 25, 29.97	1-30
6K 16:9	Full Frame cropped	6052 x 3404	33.6 x 18.9	23.98, 25, 29.97, 50, 59.94	1-60
6K 17:9	Full Frame cropped	6052 x 3192	33.6 x 17.7	23.98, 24, 25, 29.97, 50, 59.94	1-60
5.8K 16:9	Super35	5760 x 3240	24.0 x 13.5	23.98, 25, 29.97, 50, 59.94	1-60
S35 5.8K 17:9	Super35	5760 x 3036	24.0 x 12.6	23.98, 24, 25, 29.97, 50, 59.94	1-60
4K 17:9	Super35 cropped	4096 x 2160	17.0 x 9.0 [7]	23.98, 24, 25, 29.97, 50, 59.94	1-60, 100, 120

If an imager mode is not shown in the chart above, you can still choose any aspect ratio you desire with user-defined frame lines. Then, simply pick the closest sensor mode that fits, and crop the remainder in post.

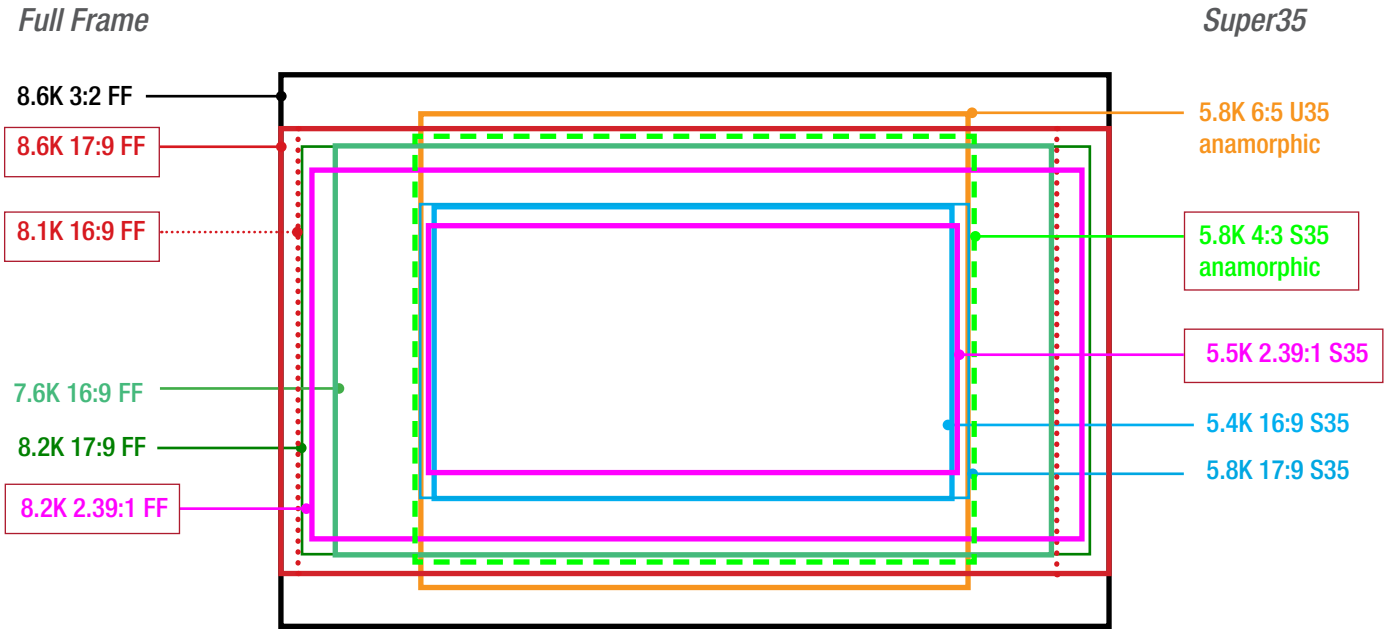
6: FF=Full Frame. S35 = Super35.

7: Super35 cropped is slightly larger than Super16 film format, which is 12.52mm wide x 7.41mm high.

In case anyone is wondering whether there will be more options, Nobu Takahashi said, in his interview, "After the release, we would like to get feedback from users so our software developers can plan future version updates and make this camera even better. These days, it's not just about releasing the product. It is also listening to the customers in order to polish the tools so that they will be able to do more artistic filmmaking."

The chart on the next page is a good example of how Sony adds additional functions, frame lines, formats and imager modes to their cameras.

Comparison to VENICE 2 V2.00 Imager Modes



Red Rows indicate new Imager Modes introduced in V2.00 update

Imager Mode	Format [2]	Resolution	W x H (mm)	Project Frame Rate [3]	fps [4]	License [5]
5.4K 16:9	S35	5434 x 3056	22.6 x 12.7	23, 24, 25, 29, 47, 50, 59	1-60, 66, 72, 75, 88, 90	-
5.5K 2.39:1	S35	5480x2296	22.8 x 9.55	23, 24, 25, 29, 47, 50, 59	1-60, 66, 72, 75, 88, 90, 96, 100, 110, 120	-
5.8K 17:9	S35	5792 x 3056	24.1 x 12.7	23, 24, 25, 29, 47, 50, 59	1-60, 66, 72, 75, 88, 90	-
5.8K 6:5	U35	5792 x 4854	24.1 x 20.2	23, 24, 25, 29, 47	1-48	Anamorphic
5.8K 4:3	S35	5792 x 4276	24.1 x 17.8	23, 24, 25, 29, 47, 50, 59	1-60	Anamorphic
7.6K 16:9	FF	7680 x 4320	32.0 x 18.0	23, 24, 25, 29, 47, 50, 59	1-60	Full Frame
8.1K 16:9	FF	8100x4556	33.8 x 19.0	23, 24, 25, 29	1-48	Full Frame
8.2K 17:9	FF	8192 x 4320	34.1 x 18.0	23, 24, 25, 29, 47, 50, 59	1-60	Full Frame
8.2K 2.39:1	FF	8192x3432	34.1 x 14.3	23, 24, 25, 29, 47, 50, 59	1-60, 66, 72	Full Frame
8.6K 17:9	FF	8640x4556	35.9 x 19.0	23, 24, 25, 29, 47	1-48	Full Frame
8.6K 3:2	FF	8640 x 5760	35.9 x 24.0	23, 24, 25, 29	1-30	Full Frame

If an imager mode is not shown in the chart above, you can still choose any aspect ratio you desire with user-defined frame lines.
Then, simply pick the closest sensor mode that fits, and crop the remainder in post.

2: FF=Full Frame. S35 = Super35. U35 is Angénieux's good designation of formats larger than Super35, with image heights greater than 18 mm and usually around 20 mm. It can also be called S35+ but neither designation is official to Sony.

3: For simplicity, Project Frame Rate numbers are abbreviated. 23=23.98; 24=24; 25=25; 29=29.97; 47=47.95; 50=50; 59=59.94

4: These frames rates are for standard base ISO 800.
In high base ISO 3200, 1-7 fps is not available.

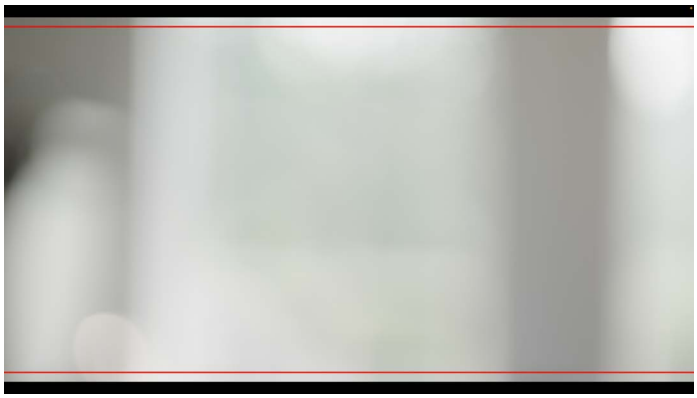
5: You only need the Anamorphic License if you want to desqueeze the image on the EVF or monitors. If you are shooting with spherical lenses and would like this sensor mode, then you can select it without a license.

BURANO Menus

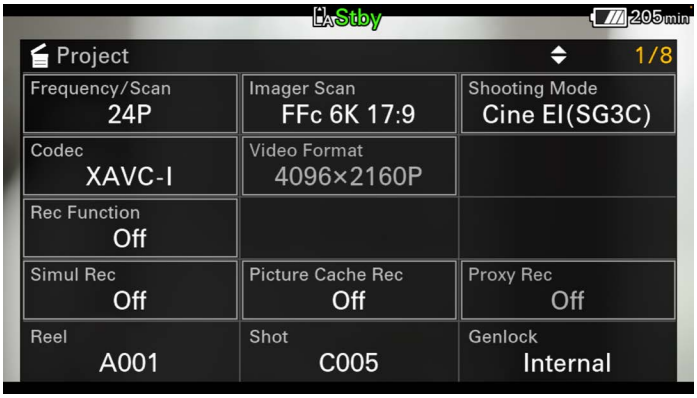
If you are using E-mount autofocus lenses, the EVF touchscreen is your Portkey to the magical world of really good touch-to-focus operation.

The Big Six Menu. You can attach the EVF Monitor to the camera right side Of BURANO for a VENICE style menu main Big Six view, Quick Menus and Deep Dive Menus as well.

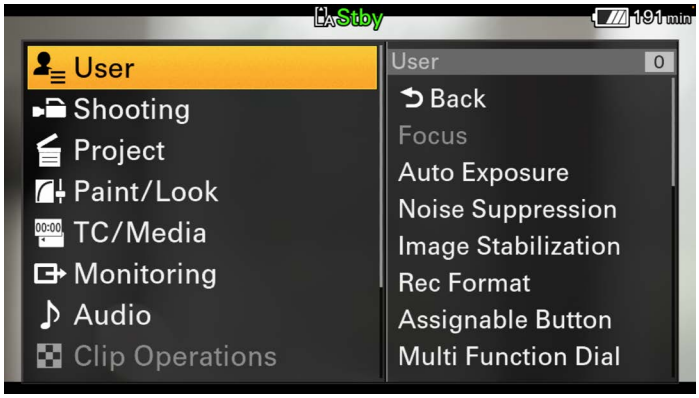
View on LCD monitor.



1push DISP button to fill screen and avoid text.



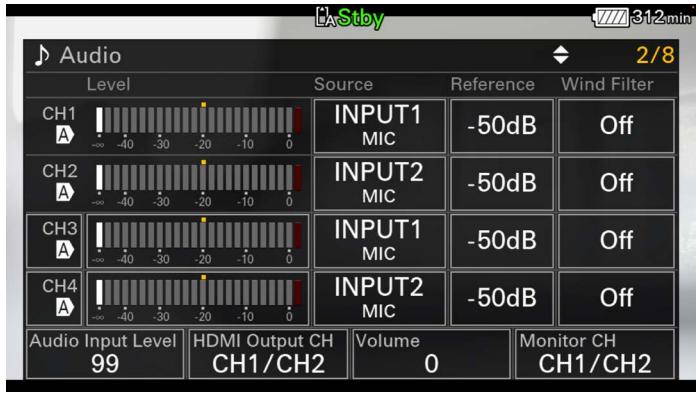
Simple menu - touch screen to select or use dial.



Deep Dive Menu -- push MENU button for 2 seconds.

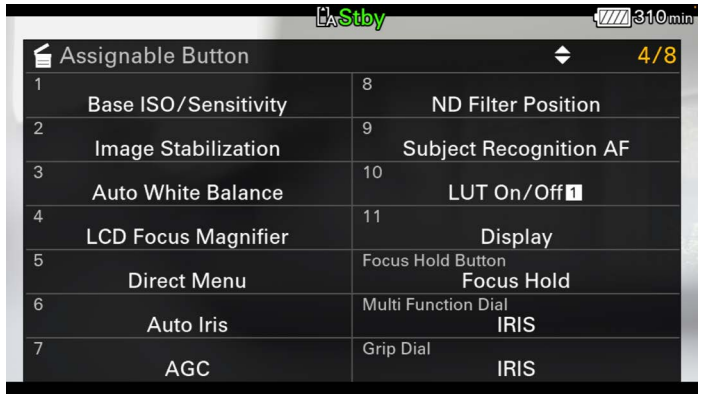
Quick Menus - one push of MENU button

Project Settings.

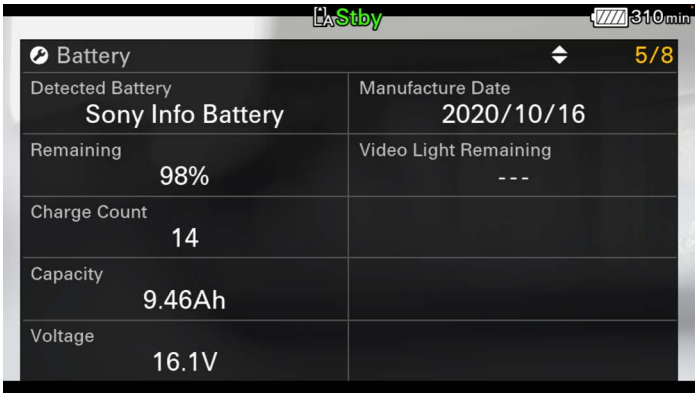


Audio Settings.

Monitoring Menu.

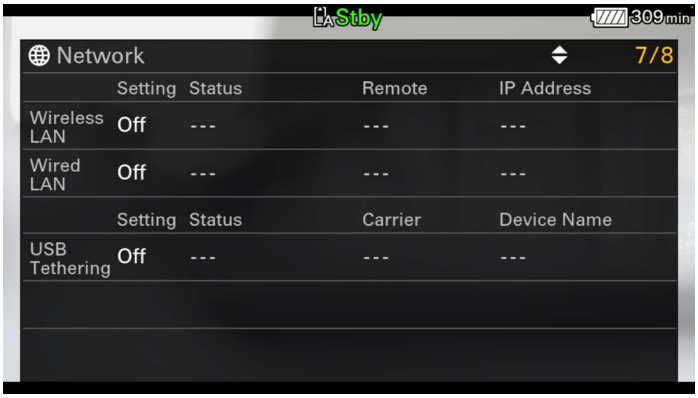


Assign user buttons here.



Battery Status

Media remaining.

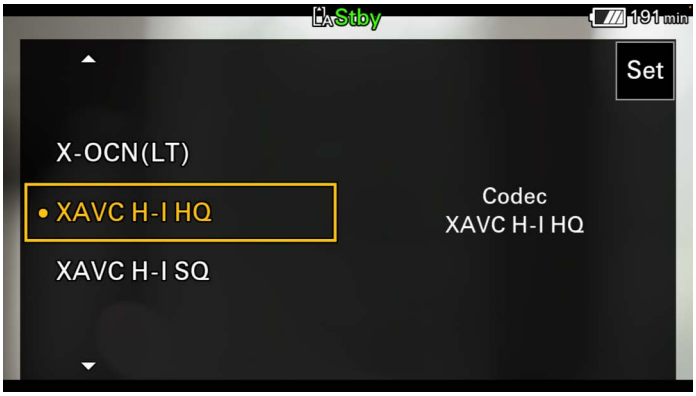


Network, Wireless, Wired and USB status.

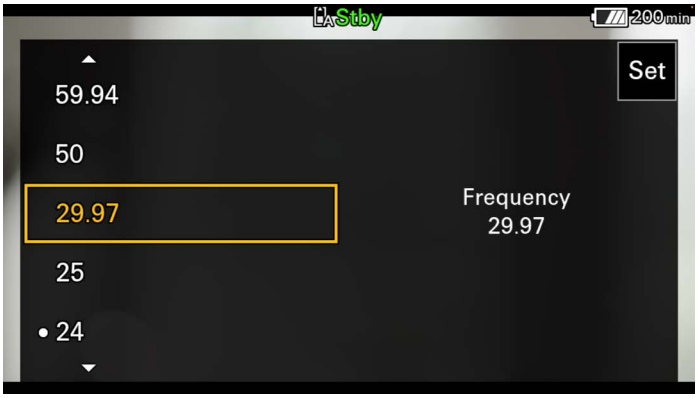
File Transfer status.

Quick Menu Setup

Project Menu set for Full Frame Cropped, 6K 17:9.

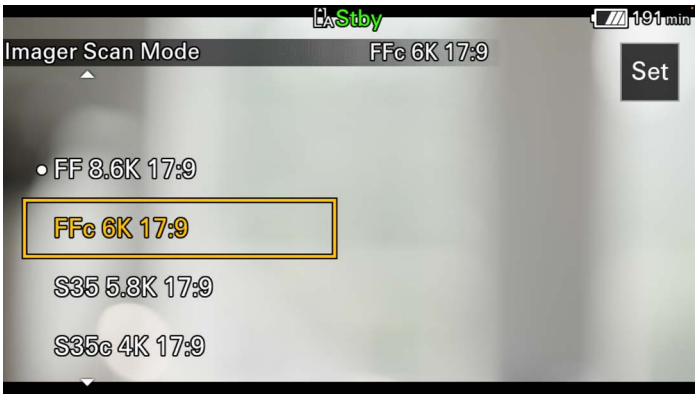


Select Codec: X-OCN (LT) or X-AVC-I HQ or X-AVC-I SQ.



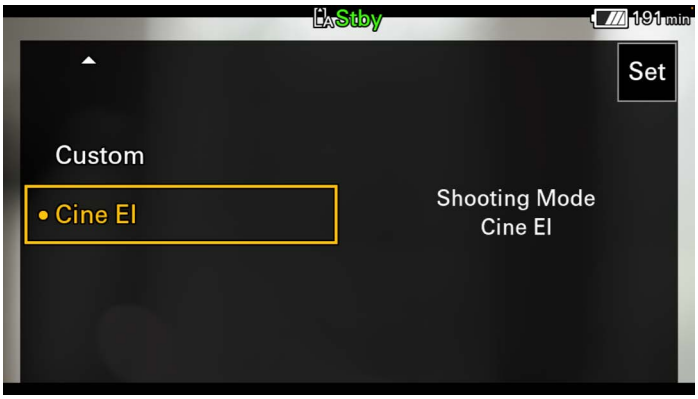
Frequency Scan is like the speed at which the footage is played back.

Imager Scan is the sensor resolution.



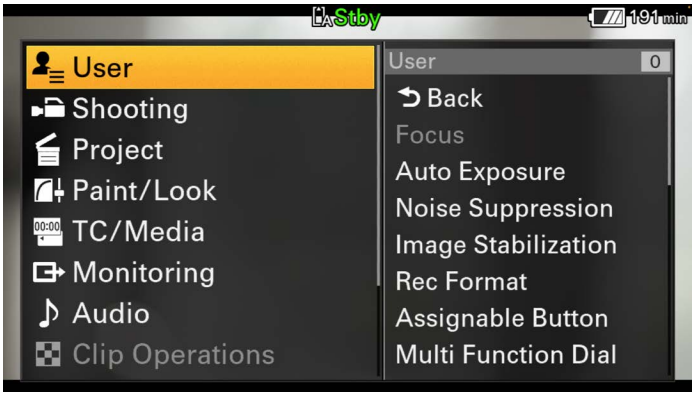
Resolution: Full Frame Cropped, 6K 17:9.

Shooting Mode: CINE EI or Custom.

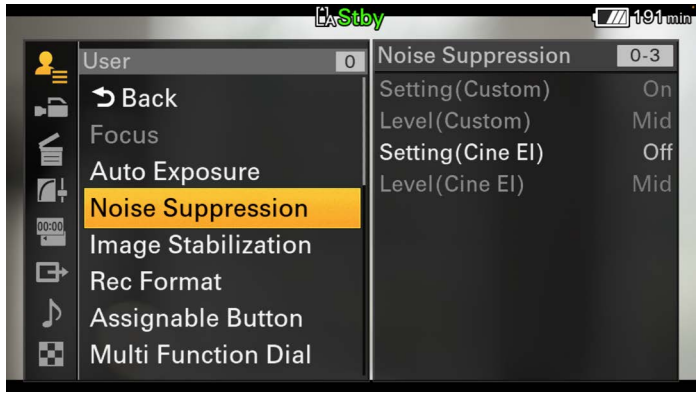


Video Format.

Deep Dive Menu



Deep diving begins with the User Menu.



Noise suppression OFF.

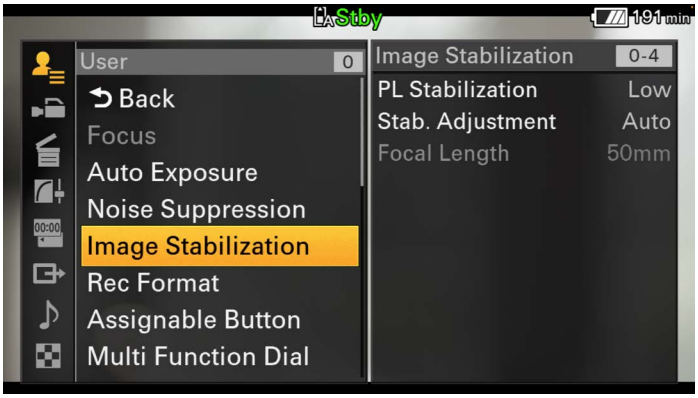
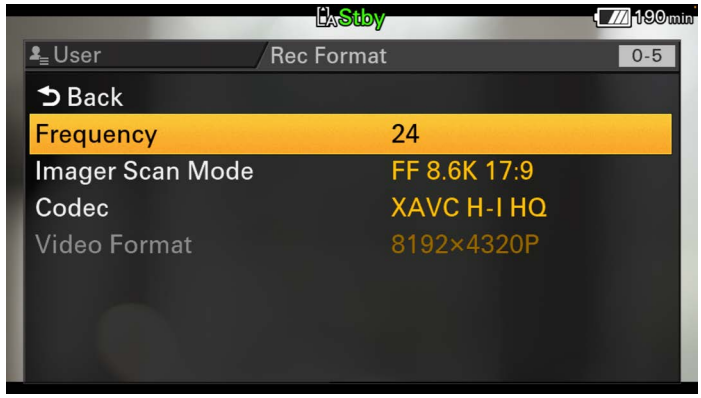
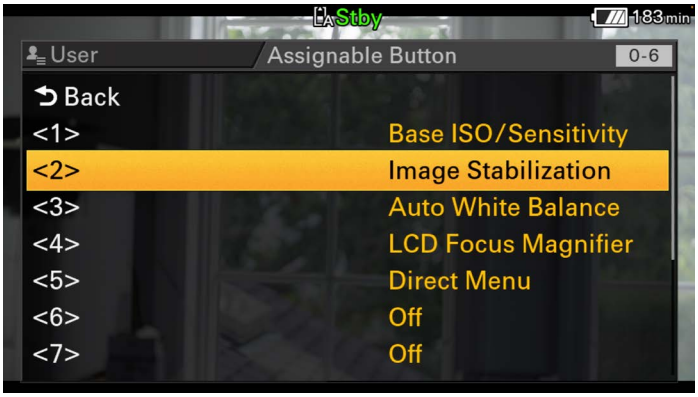


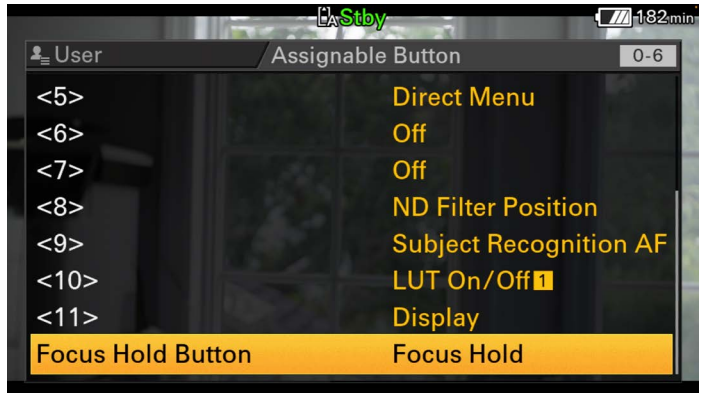
Image Stabilization: Yes please. We liked 3-axis with PL set to LOW, Auto. With E-mount lenses you can have up to 5-axis Steadishot.



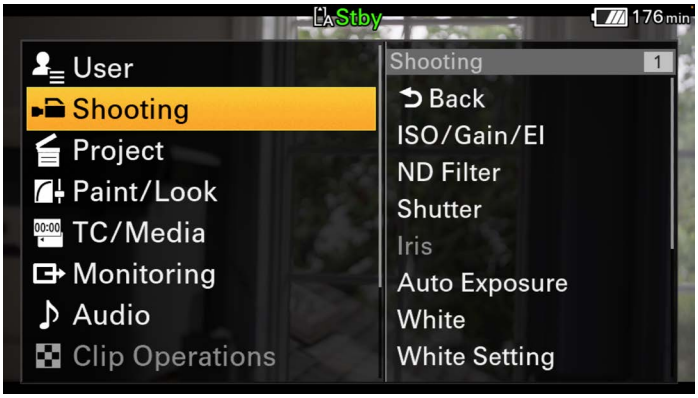
Recording Formats.



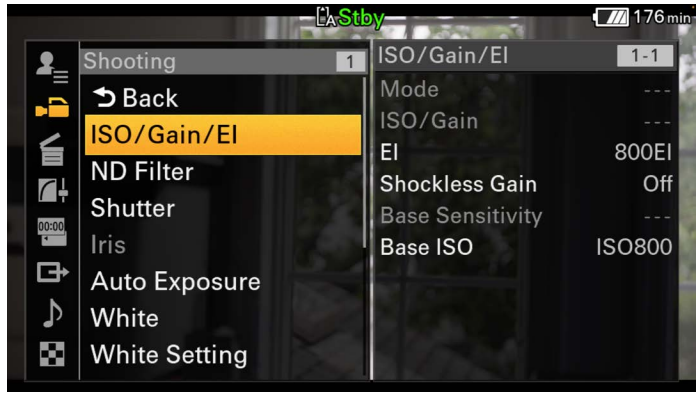
Assignable buttons are helpful. Use chart tape to identify on body.



Focus Hold Button.



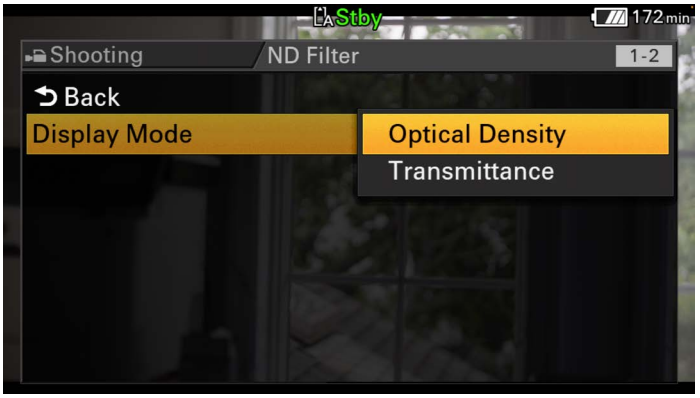
Shooting menu.



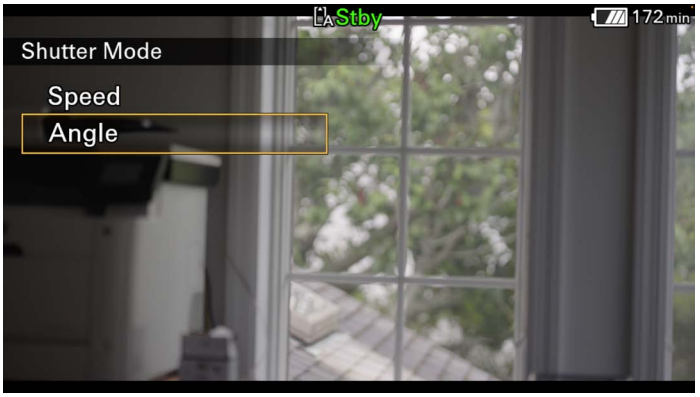
Base ISO of 800 or 3200. Shockless means smooth transition.

wha
spee

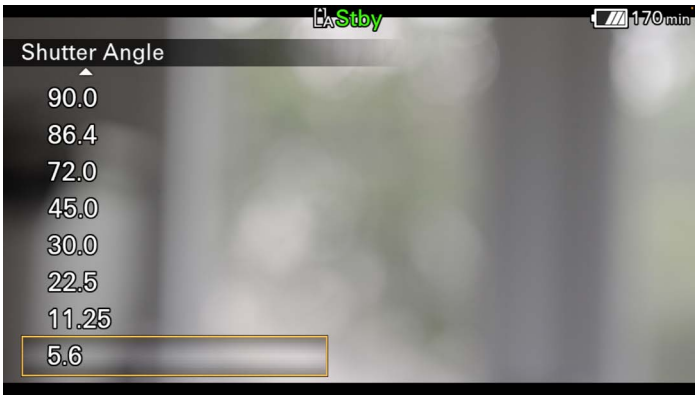
Deep Dive Menu

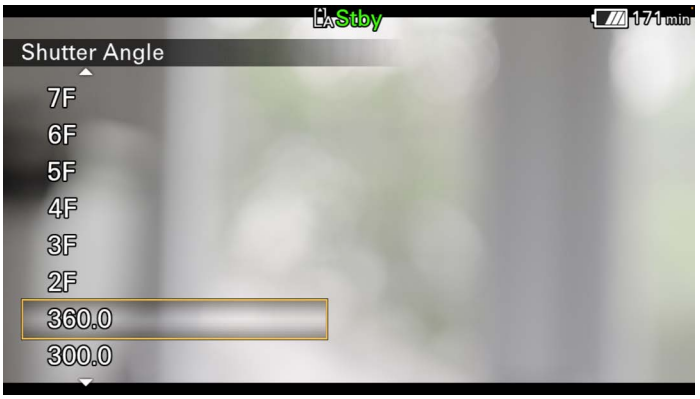


You can display the Variable Neutral Density values as Optical Density (ND.6, ND.9, etc.) or as Transmittance (1/4, 1/8, etc.)

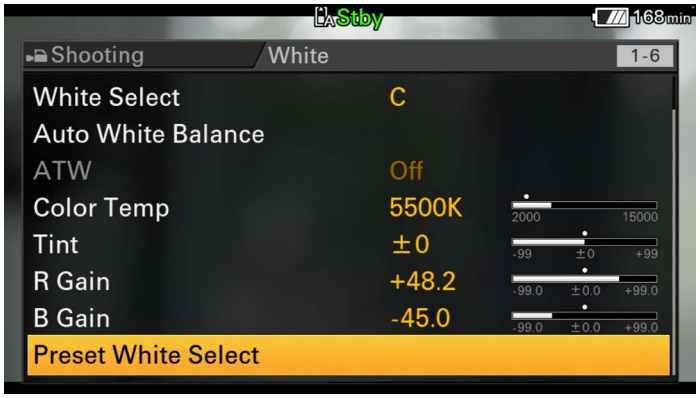


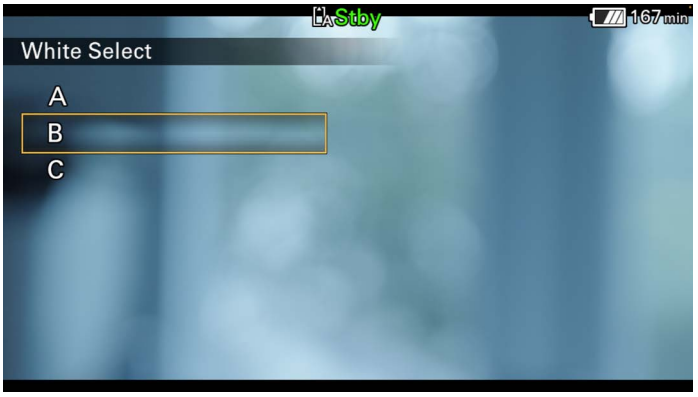
Shutter values can be displayed as shutter speed (1/60) or as shutter angle (180 degrees). I like shutter angle.





Shutter angles.



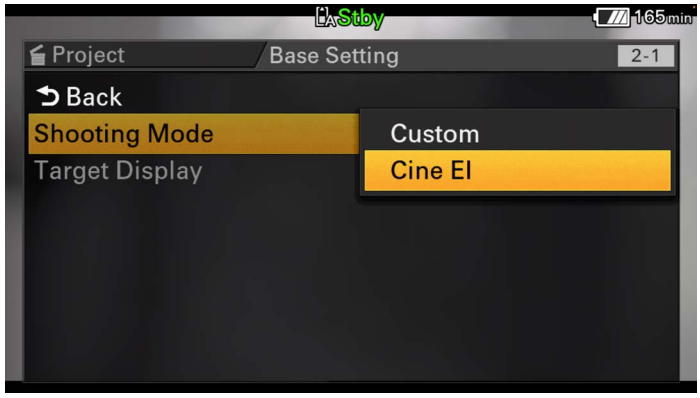


White Balance.

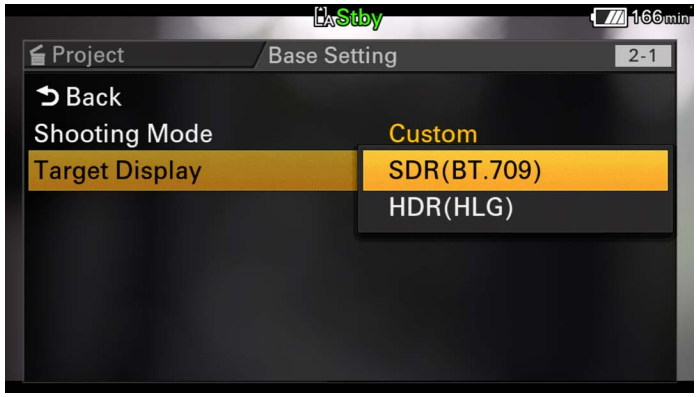
Deep Dive Menu

S&Q motion 1 fps - 30 fps in 8.6K. Enable with Setting: ON

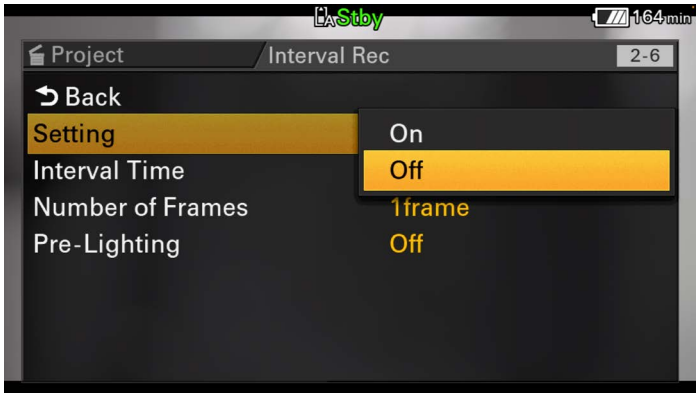
Turn LUT displayed on Monitor or EVF to On or Off.



Shooting mode: Custom is the gateway to available LUTs.



SDR or HDR Displays.



Turn Interval Recording (Timelapse) on or off

Set Timelapse parameters: here, 1frame exposed every second.

BURANO's LUTs

A few pages earlier, BURANO Product Planner Toshi Kanayama describes 4 new menu-selectable LUTs—called WARM, COOL, VINTAGE, and TEAL AND ORANGE. DP Tim Nagasawa tested them with the new Angénieux EZ-3 zoom lens.

BURANO Cool, Angénieux EZ3

BURANO Teal and Orange, Angénieux EZ3

BURANO Vintage, Angénieux EZ3

BURANO Warm, Angénieux EZ3

BURANO Cool, Angénieux EZ3

BURANO Teal and Orange, Angénieux EZ3

BURANO Vintage, Angénieux EZ3

BURANO Warm, Angénieux EZ3

BURANO LUTs

Tim Nagasawa continued testing the new BURANO LUTs on a wider prime lens: "The lens was a vintage 2012 CineAlta 25mm Prime."

It was also the film debut of Tanya Lyon's Border Aussie Charley, the NDA hound who heard more technical discussions about this camera than most people.

BURANO Cool
CineAlta 25mm Prime

BURANO Teal and Orange
CineAlta 25mm Prime

BURANO Warm
CineAlta 25mm Prime

BURANO Vintage
CineAlta 25mm Prime

Chris Schmid in Zambia

Chris Schmid zoomed in from his base in Morges, Switzerland. He described his short film A Day to Remember, *shot with BURANO:*

The main project was shot in Zambia in South Luangwa in Lower Zambezi National Park. *A Day to Remember* is a day in the life of a woman dreaming about wildlife. Zambia was an amazing place to shoot this film because you have a lot of ebony tree forests and it's very good to test the dynamic range of the sensor in the forest because you have a lot of different highlights and shadows.

For rigging the camera, I used a Bright Tangerine LeftField 3 baseplate. It was the same as the one for VENICE, thankfully. The optical center of the mount is the same for both VENICE and BURANO.

For lenses, the Canon CINE-SERVO 50-1000mm T5.0-8.9 PL was the main lens we used for wildlife scenes. All shots with the model were done with the DZOFilm Retro series.

Most of the footage of wildlife was shot in 50 and 60P. With the BURANO, to go 50P or 60P, you can shoot in either Full Frame 6K cropped or Super35 5.8K. 6K cropped is almost Full Frame. By playing between both formats, I could use the Full Frame expander of the 50-1000 or use the lens in its original Super35 format.

For my tripod, I used a Sachtler flowtech 100. But, most of the wildlife sequences were shot with a rig that attaches to the car door.

Most of the time, I was using the BURANO's PL mount. But then I was curious to test the camera with a Ronin RS3 Pro, to see if the weight worked or not. I'm happy to say that it works. All the moves with the Ronin RS3 Pro were shot with a Sony E-mount FE 24-70 mm F2.8 GM Full Frame G Master Zoom Lens.

We tried the autofocus because I thought it would be interesting. And it worked. Actually, you have a sequence with zebras, and we move past a tree in front of the zebra, but the focus remains on the zebra, so you don't lose focus.

The image stabilization was helpful too, especially with the Ronin. It removes small vibrations and was very useful.

I use BURANO's handgrip for the handheld shots of the model. All those handheld shots used image stabilization and internal Variable ND, which is also very nice, because for the first time you can combine both of them. So you have a lightweight kit and you can shoot wide open and with stabilization.

In wildlife filmmaking, the smallest crew is the best. There were only three of us: one guide, Melanie, the model, who was also working on location and shooting BTS, and me. That's how it works. We try not to disturb the animals. You don't want to be six people in cars. And even when you're filming from the cars, you're often filming with a focal length of 1000mm.

I used the SmallHD Cine 7 for the viewing monitor I didn't use the viewfinder with the eyepiece loupe, because I actually don't use a viewfinder—I prefer a larger monitor like the Cine 7. Even in bright sunlight, the display from the Cine 7 is very bright. I just used the small monitor from Sony for the Ronin shots so I could tap on the screen to manage the focus. That was the only occasion.

For slow motion footage of wildlife, it's usually 50P or 60P. We shot some sequences at 120P, 4K cropped, especially of birds and antelope running. But many people try to do too much slow motion. If you're shooting at 120 fps in wildlife, you need something moving really fast. You don't want an elephant at 120 fps. It doesn't make any sense.

Another really good feature is the cache recording. For a wildlife filmmaker, it's an essential. If you don't have cache recording, it's a nightmare because too often, when you push record, it's too late. Especially if you're waiting for animals, it doesn't make sense to record, record, record, because at the end there would be hours of footage that you don't need.

When I imported the files in DaVinci Resolve, it was very easy to grade the Sony X-OCN files. I just have an M1 Max Mac Studio and you can play the timeline in 4K in real time. It even worked smoothly with HDR Rec.2020. Also, the file sizes are very manageable. It's easy to back up files in the evening.

Danny Schmidt in Jackson Hole

Danny Schmidt is a director, producer, and cinematographer of documentaries. He was an early user of BURANO and reports:

As a freelance DP doing National Geographic films, wildlife and nature, it is important to have my own equipment because I'm also a gearhead.

The BURANO it's whatever you're going to make of it. You could certainly build it out with a VM tripod mount and a shoulder pad and make it an ENG style camera on your shoulder for docs. But you could have it small and modular like the FX6. So much of the time when I'm shooting docs handheld, I don't have the camera on my shoulder. I'm definitely not in an NBA game configuration.

What I like about the BURANO is that I could build it out, put it on my shoulder, shrink it down to shoot in other handheld ways. And then, of course, for wildlife filming, it's super easy to build out and put it on a big tripod. That's really what I was doing

Danny Schmidt in Jackson Hole

in Jackson Hole, Wyoming. Grand Teton National Park is right there. There's wildlife everywhere. It begs to be shot on sticks with a long lens. That was really what we did the most with that camera when we were there.

BURANO is especially effective on an Easyrig because this is just naturally where it goes. That's my good buddy Rick Smith, in the photo above, with BURANO on an Easyrig and a MoVi Pro. He's a DP and we work together all the time. We've traveled the world together.

There's something different about the autofocus on the BURANO. It is very smart and so fast. It was tracking elk as they moved in the beautiful landscape. They were not huge in the frame, and the autofocus would find them and just stay with them. I was reticent to adopt autofocus at first. Now, I love it, especially when I'm trying to track a moving subject. I love it in an interview setting when I want the camera to just be locked perfectly on an eyeball. There are times when I like to turn it off and just have that natural feel of a camera operator finding focus in a documentary, finding it and missing it.

To tell it where to focus, on the built-in monitor/viewfinder, I would just tap the screen, it would lock, and then it's smart enough to know that's the thing it wants me to follow as it moves around.

The camera's IBIS was very interesting. I was able to work with that a lot. When you go into the menu of the BURANO, you can customize the lens stabilization. And so, with a PL lens, I could go in there and tell the camera that I'm shooting at 600mm. The camera then gets customized to be stable at that point, and not over-react.

I think BURANO is going to be a really cool opportunity for people who couldn't see themselves owning a VENICE or a VENICE 2 but would like to get into that space of camera quality, codec and sensor quality of the VENICE family at a price point that's more reasonable. It is a camera that I could actually envision owning. You don't want to own a camera that's not making money. So, I think this camera will be very much in demand for high-end documentaries. I think a lot of high-end docs will be shooting with BURANO, not just because of cost, but also because of its lighter weight, ergonomics and go-anywhere concept.

I think BURANO will be a good camera for owner-operators, especially in the wildlife and sports space.

Stefan Duscio with BURANO in Melbourne

Stefan Duscio was one of the "test pilots" of Sony's new BURANO cine camera. His credits include Shantaram, The Dry, The Invisible Man, and many more features and commercials, music videos, shorts. He is based in Melbourne, Australia. Stefan said:

BURANO is two-thirds the size of a VENICE 2, and much lighter, with the same sense of quality. I thought, you're going to have difficulty stopping a film crew from wanting to use this on high-end sets. So I got my hands on a BURANO about three weeks ago.

Simon Williams, my First AC, took it to Southern Cross Cameras, a rental house in Sydney, and we figured out how to power the camera and accessories, how to rig it properly, how to run focus motors, etc. Out of the box, it wasn't set up to deal with all the accessories we normally use. Simon added a D-tap Splitter off the back of the camera to power his wireless lens controls, my monitor, video transmitter, focus measuring device and all the things that we normally hang on a camera. Remember, when other small cameras first came out in a similar way, we had all those head scratching issues as well and then third party manufacturers like Wooden Camera and others developed D-Boxes and additional units to put on the side of the camera to help with all those power issues. This just feels like similar scenario.

For our BURANO shoot, we were able to keep it pretty lean and small. We wanted to honor the intention of that camera. I had my own SHAPE handles. For low-angle shots, I used the Sony top handle. We used Canon K-35 primes, PL mount, and they looked really beautiful on that sensor. They covered Full Frame. We were in X-OCN LT 8.6K, framing for2:1 aspect ratio. We devised a loose narrative around a couple who had just committed a robbery and were hiding away in a motel.

To be continued: these BURANO user stories and more in an FDTimes Special BURANO Report.

Unjoo Moon directed *Original,* a Sony BURANO launch film. Its exuberant, high-energy K-Pop style dance "battle" has an original score by Tushar Apte. Dion Beebe, ACS, ASC was the cinematographer.

Their interview will appear in the next episode of the FDTimes BURANO Special Report. Meanwhile, Gordon Dooley's BTS production stills illustrate how they used BURANO handheld, on a gimbal and crane—seamlessly intercutting VENICE 2 footage from a dolly and Scorpio V remote head.

Unjoo Moon, director, at right, with actress Shuang Hu, who has 4 million followers on Tiktok (@theoneshu).

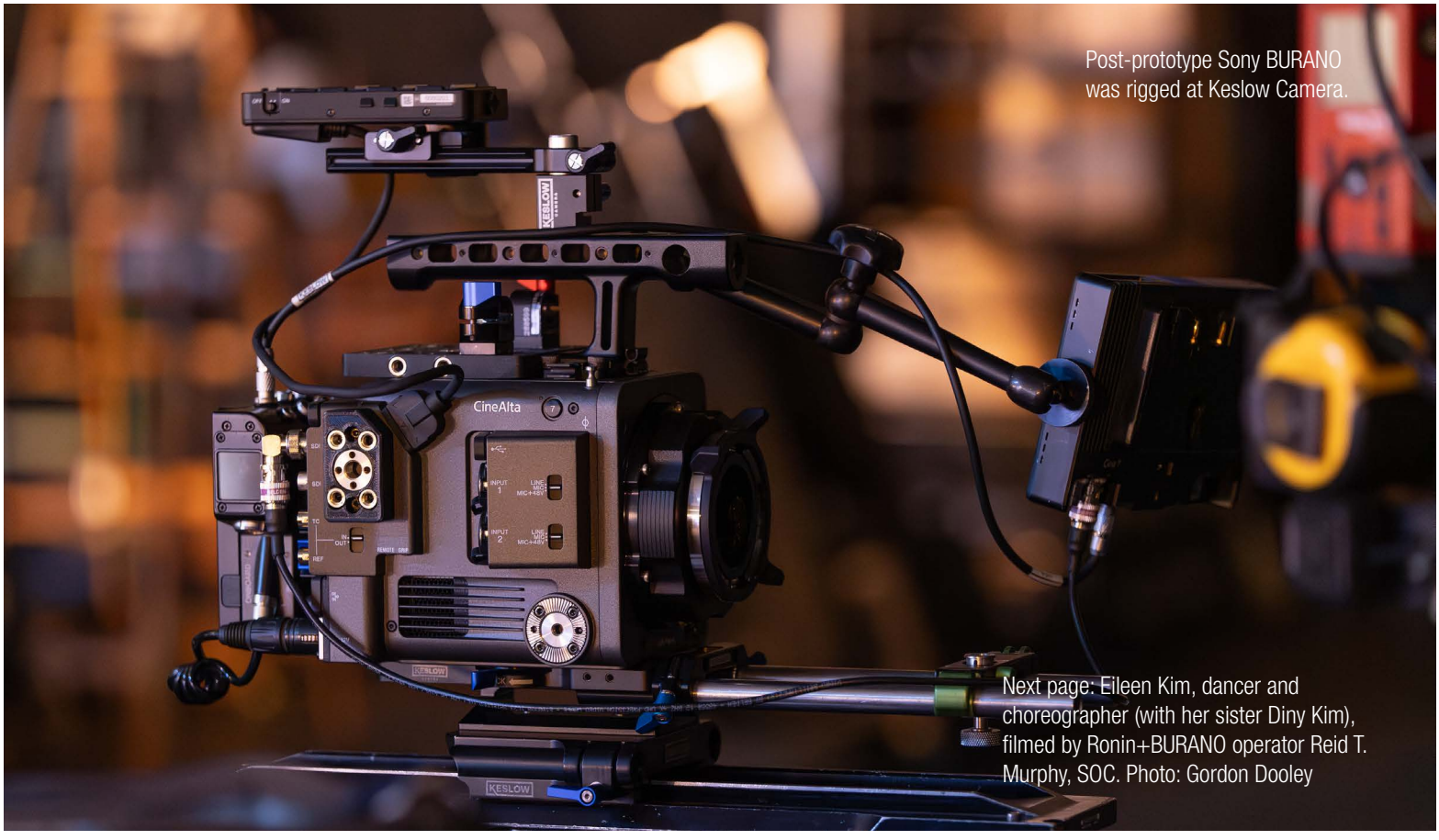
Dion Beebe, ACS, ASC handheld with BURANO filming dancer Grant Kaita.

Photos: Gordon Dooley.

Axil Moon Beebe with BURANO handheld
Photos: Gordon Dooley

Jenna Beltran filmed handheld by Dion Beebe, ACS, ASC with BURANO, SmallHD Cine 7 as viewfinder and Preston LR2W.

Photos: Gordon Dooley



Post-prototype Sony BURANO was rigged at Keslow Camera.

Next page: Eileen Kim, dancer and choreographer (with her sister Diny Kim), filmed by Ronin+BURANO operator Reid T. Murphy, SOC. Photo: Gordon Dooley

Special Report by Jon Fauer, Film and Digital Times

fdtimes.com