

Jon Fauer ASC

www.fdtimes.com

July 2020

Special Report

FILM AND DIGITAL TIMES

Art, Technique and Technology in Motion Picture Production Worldwide

SIGMA fp





If the Cannes Film Festival had not been canceled this year, a beautiful film from Japan would have premiered there. *Sin-Sin*, directed by Yu Yamanaka, is the touching story of a young boy navigating a life made tough by grown-ups.

Read the interview with Yu Yamanaka that follows.

You would be right if Antoine Doinel comes to mind in *The 400 Blows* (*Les quatre cents coups*), François Truffaut's 1959 film that won Best Director at the Cannes Festival in 1959.

Truffaut was 27 years old at the time. *The 400 Blows* was a major coup for the French New Wave (*La nouvelle vague*). Little wonder. Previously, Truffaut had been a film critic at *Cahiers du Cinema*, espousing a new vocabulary for film students to memorize in the following years: *auteur*, the director as author and *le caméra stylo*, writing with the camera as if it were a pen.

Actually, a lot of this theory was just that: theory. There was, of course, an entire crew around the camera, behind the author and



SIGMA fp: le caméra stylo



Sigma fp camera. 2020

the pen. Henri Decaë was the brilliant cinematographer of *The 400 Blows*. He is remembered for his work in “liberating the camera from its fixed tripod.”

It has been said, at times ironically, that the new wave owed much to the fact that you could avoid pesky Parisian film permits by shooting without a tripod. Nevertheless, Decaë's Eclair Cameflex and Camé 300 cameras, that had nothing to lose but their tripods, were not exactly petite. Truffaut and Decaë would have weeped with joy had the SIGMA fp, no larger than a pack of Gauloises, arrived 60 years earlier.

The SIGMA fp camera is the embodiment of an entirely new and liberated camera, an auteur's *stylo*. SIGMA CEO Kazuto Yamaki called it “a deconstructed camera that allows for free and flexible styles that adapt to any genre. It is a camera for the next new wave.”

The SIGMA fp shoots beautiful stills and video—and also happens to be the world's smallest and lightest mirrorless camera with a Full Frame sensor. It is pocketable, nimble, versatile and, amazingly, shoots 12-bit 4K RAW to an external SSD drive. (Or 8-bit 4K RAW internally.)

The SIGMA fp launched less than a year ago. In that time, it has gained admiration and acceptance as the elegant, essential, tiny camera for productions large and small.



Eclair CM3 ca. 1961

Above: Truffaut and Decaë shot *The 400 Blows* with an Eclair Caméflex CM3 Standard similar to this one, ca. 1961—darling of the new wave and one of the first comfortable shoulder-resting cameras.

At right: Eclair Camé 300 ca. 1949. Decaë used a similar model on *The 400 Blows*. It was a studio silent reflex camera that designers André Coutant and Jacques Mathot based on the M.O.S. Caméflex.

Both of these Eclair cameras reside in the Collection de La Cinémathèque Française in Paris. Photos courtesy of Laurent Mannoni and Collection La Cinémathèque Française.



Photos by Stéphane Dabrowski.



SIGMA fp. *Actual size.*

At 112.6 × 69.9 × 45.3mm / 4.4" x 2.8" x 1.8"

and weighing 370g / 13.1 oz (without battery and SD card),

the SIGMA fp is the world's smallest and lightest full-frame mirrorless camera at this time. It has a back-illuminated 35.9 x 23.9 mm, full-frame, 24.6 megapixel Bayer sensor. The L-Mount has a flange focal depth of 20mm and is compatible with Leica SL and Panasonic S1 series mirrorless camera lenses.

SIGMA fp: film, photo



SIGMA fp

Dimensions: 112.6 × 69.9 × 45.3mm / 4.4" x 2.8" x 1.8"

Weight: 370g / 13.1 oz (without battery and SD card),

Sensor: back-illuminated 35.9 x 23.9 mm, full-frame, 24.6 megapixel Bayer sensor.

The L-Mount has a flange focal depth of 20 mm and an inside diameter of 51.6 mm. The L-Mount is the same type used on Leica SL, SL2, CL, TL and Panasonic S1 series mirrorless cameras. So you can work with an already substantial and increasingly large inventory of L-Mount lenses from SIGMA, Leica, Panasonic and others.



SIGMA MC-31

Attach a SIGMA MC-31 L-Mount to PL adapter.

The SIGMA fp now accepts almost any PL mount lens in the cine universe. PL mounts have a 52 mm flange focal depth and 54 mm inside diameter.



4K 12-bit RAW

SIGMA fp records 4K 12-bit RAW CinemaDNG to off-the-shelf SSD drives.

You do not need an external recorder or proprietary drives.

Connect a Solid State Drive to SIGMA fp's USB-C (USB 3.1) connector.



Samsung SSD T5 1 TB and 2 TB drives are recommended.

Shown here with a LanParte SSD-T5C clamp. It screws into the SIGMA fp's 1/4-20 threaded side socket and cradles the Samsung Solid State drive.



SIGMA fp with Samsung Solid State drive connected via USB-C cable to camera's USB-C / USB 3.1 port. The SSD is attached with a LanParte SSD-T5C clamp.



With L-Mount 45mm F2.8 D G DN prime lens



Adjustment of 1.5mm hex stopper pin on SIGMA MC-31 PL mount to L-Mount adapter.



Most PL mount breech locks have a stopper to prevent overtightening. But sometimes the PL mount of a lens can be too thin and the lens wobbles because you can't tighten the mount past the stopper pin. The MC-31 has an adjustment to release the stopper pin so you can tighten the breech lock further. Of course, be careful you don't tighten to the point of not being able to loosen it again.

SIGMA fp as “A” Camera

SIGMA fp with MC-31 PL to L-Mount adapter, shown with SIGMA Classic Art Full Frame Prime (enhanced flares, vintage look).

These primes come in the following focal lengths, all with 95mm front diameters:

14mm T3.2	40mm T2.5
20mm T2.5	50mm T2.5
24mm T2.5	85mm T2.5
28mm T2.5	105mm T2.5
35mm T2.5	135mm T3.2



SIGMA fp as Director's Viewfinder (and PL mount Cine Camera)



FF High Speed Prime with PL mount.

MC-31 PL to L-Mount Adapter

SIGMA fp Full-Frame camera

LVF-11 LCD Viewfinder with diopter

SIGMA FF HS Primes come in the following focal lengths, all with 95mm front diameters:

14mm T2	35mm T1.5	105mm T1.5
20mm T1.5	40mm T1.5	135mm T2
24mm T1.5	50mm T1.5	
28mm T1.5	85mm T1.5	



Yu Yamanaka, Director.

Yu Yamanaka directed *Sin-Sin* using the SIGMA fp camera recording 12-bit RAW, SIGMA FF Classic Prime and FF High Speed Prime lenses.

He was born in Yamanashi Prefecture and founded the BLUE DOCUMENTARY Company in 2010. His work includes *Paper Garment* for an Issey Miyake Exhibition, *Tema Hima (The Art of Living in Tohoku)* for the Tema Hima Exhibition, the NHK taiga drama *Yae no Sakura (Creators Part)*, the Sony Aquarium short film *Teori wo Naru Tori*. www.bluedocumentary.com

Yu Yamanaka is also the filmmaker behind SIGMA's films brand image films *SIGMA Aizu, Japan* and, most recently, *blur*.

Jon Fauer: I watched *Sin-Sin* several times—at first through tears and later with wonder and admiration. Congratulations on a truly moving, beautiful film. It reminded me of Truffaut's *The 400 Blows (Les Quatre Cents Coups)*.

Yu Yamanaka: Thank you so much. I am very honored. *Les Quatre Cents Coups* is like a Bible for me and I had that film in mind when filming *Sin-Sin*. I even talked with my staff about whether to put the name of Truffaut and *Les Quatre Cents Coups* in the end credits. There are so many tricks in that movie and I wanted to figure them out.

It is interesting how you created a story so sad and so pretty at the same time. The cinematography is stunning and the images from the SIGMA fp camera are outstanding. Casting, directing and acting are also outstanding.

The fp camera is amazing. It is almost frightening. The images are strong in the dark areas without giving way to artifacts or noise. It feels like the information that entered onto the sensor is recorded as it is.

Director of Photography Hiromitsu Uehara said, "The camera was much smaller than I imagined." How did that help your style of shooting, in tight locations, maybe with a small crew?

The fp camera enabled us to work with small rigs and small specialized equipment. Where we would have used a Fisher Dolly on earlier productions with bigger cameras, now we have changed to the smallest Ronin-S.

As a result, the fp made a small crew possible. It contributed to reducing the whole cost.

Did the size of the camera affect the style of the film?

Yes, the size is the smallest of all other cinema cameras, and there is almost no distinguishable noise (artifacts, color noise), so the picture is very strong. I think the coexistence of the two—small size and superb image—is so amazing.

I feel disappointed that the fp camera is not yet so well-known to everyone. I want to say to everybody, "Hey! Come on. Give it a shot. You will be very pleasantly surprised."

What does *Sin-Sin* mean?

Sin-Sin is a Japanese word that explains quietness as if the sound has been sucked into somewhere else. It is also a word often used to describe the sound when snow falls. Actually, since there is no sound when snow falls, maybe I should say "quietness." For the English title, it could have been "shin" because that is the way it is pronounced, but I stayed with "sin" to add the meaning of guilt and crime.

Where did the idea come from? In the opening titles, you say "inspired by true events in 2007 and 2011."

Child abuse has long been a social issue in Japan and I had a



Yu Yamanaka. Photo: Kitchen Minoru.

strong awareness of this problem. The 2007 event was a small incident that most people would not remember. In Osaka, a father told his son to pretend to be homeless and made him beg for money from people walking on the street. After the father was arrested, he confessed, “My son did it on his own.” And the son said, “It’s not my dad’s fault.”

The response of the public to this incident was full of antipathy towards the father for making his child do such thing. However, I imagined that the father and son had a strong bond. They were poor and in need, but they had the feeling to help each other. I do not know the truth though.

Social security is also one of the things I am most interested in right now. In Japan, social security expenditures account for much of the national budget. In 2011, a social services worker and a doctor colluded in Hokkaido on a disability pension fraud scheme in which they asserted that some of their clients were deaf. There are many other fraud cases related to illegal welfare schemes and I think these will increase in the future in Japan.

Where were the locations?

The locations were in Choshi, in Chiba prefecture.

The actors were excellent. Can you tell us more about them?

I agree. I really think we had great actors gathered for this film. Daiji Asakawa, in the role of Kenta (the boy), did a great job. He immediately fulfilled our requests and made the part his own. In the crying scene, he said, “I have little experience and I am not confident.” But as we started, he was very good at it. He is very smart.

Kyounosuke Nishino, in the role of Ryohei (the father) is a comedian. However, he was stoic in his acting and performed wonder-

fully. In general, it can be even more difficult to act a humorous character than a cool character, but he did a great job.

Please tell us about the lenses.

Most scenes were done with SIGMA FF High Speeds. I feel the HS FF lenses are very clear, straight, serious. So it gives the film a sense of reality in minute detail. There are no unnecessary effects.

I like them so much. They are my first choice every time in every case.

The flashbacks of the mother used the SIGMA Classics.

The SIGMA Classics, aimed at a window, provided an ethereal quality. What other scenes could you imagine using these lenses for in the future?

The SIGMA Classic lens is truly amazing. I would like to use it for anything—documentaries, music videos, commercials, etc. It will make every scene dramatic.

What happens when you are not pointing these lenses at a window or strong source?

Even with weak light, a little flare occurs, creating a soft expression. However the subject can be captured very sharply. This is an effect never obtained with a filter.

I assume the interiors were wide open? How did your Camera Assistant keep sharp focus so well, even with the Ronin-S shots as the camera moves in for an ECU?

We mostly shot at T2.0. Our Focus Puller used a wireless remote focus control and he was working with great spirit and accuracy.

There are some production photos of the SIGMA fp camera with SIGMA L-mount still lenses. Were these for additional photography?

The L-mount lenses were used for still photography, not for the movie.

You also used the SIGMA fp as a Director’s Finder?

I did a little bit and it was very easy to use because of the compact size.

Where did you rent the extra grip and lighting equipment?

From a rental shop called i-7. It is a company of Uehara, the Cinematographer.

Please discuss grading and finishing the film from 12-bit CinemaDNG.

Colorist Haruka Okutsu graded in the post production studio “i-7” with DaVinci Resolve. She said the data was very easy to handle and held up very well for touching up.

The entire crew was very pleasantly surprised by how beautiful the images of the fp were. It was like straight, clean, pure, fresh grapefruit juice, not concentrated and reduced juice.

I’m curious about the backstory. Why did the father want to “go straight” and give up a life of crime?

It is very hard to live as a Yakuza in Japan today. Since very strict laws on Yakuza have been enacted, their lives have become very tough.

Also, if your father is a Yakuza, your family will be shunned and



you will not be able to establish relationships within the community. Ryohei decided to quit the Yakuza, thinking of Kenta.

Were the Yakuza in the film real people or actors?

No! (LOL). I would never want to owe anything to a Yakuza.

Why was the fish-seller's daughter friendly to the father and son (giving them fish) and wanting to take care of the boy in the end?

In the Japanese countryside, it is customary to give gifts to one another in a neighborhood. You share what is left over at home. It is a very good culture.

In the case of Azusa (the fish-seller's daughter), she has a good feeling about Ryohei and she knows about Kenta, so she has a strong desire to help.

What commercials or documentaries of yours used SIGMA HS Primes?

I shot a TV commercial for Tokio Marine Nichido, an insurance company. The location was Khao Samroi Yot National Park in Thailand. Since the shooting was done with a DJI Ronin gimbal stabilizer on the top of a mountain, a lens with high resolution and mobility was required.

The Japanese crew, the Thai crew and I, as Director, unanimously decided to go with SIGMA HS Primes. (Except the shot with the monkeys. This was done on a still telephoto zoom.) The results showed that these were good choices.

The lens depicted a young Japanese actress as very fresh and beautiful. I remember that the result had a very good reputation at the post-production studio. It is online:

Commercial: youtu.be/Q2BrK24MrFo

BTS video: youtu.be/Tfpz_c0o6HQ

Please tell us a little more about yourself. How did you get started in film?

I first became interested in movies while studying physics at uni-

versity. Movies provided a simple joy that was different from other forms of artistic expression. I was hooked. My world revolved around watching movies and working at a video rental shop every day. I devoured about 5 movies a day.

After graduation, I began studying at the school of a film company while gaining hands-on experience working in V-Cinema (Japanese direct-to-video). I subsequently went freelance as a film director at the age of 28.

I have always held an interest in documentaries. Maybe it was from watching too many movies, but I gradually became tired of fiction, enjoying something that was based on a true story instead. Take gangster movies for example; the rawness between one based on fiction and non-fiction are different. Just take the gangsters wiping up spilled coffee. Just that makes something more grounded in reality.

Where do you derive inspiration?

Anything. Anywhere. In the car, in my garden.

Japan has shifted from winter to spring to summer and there is a lot I learn from the four seasons of Japan and nature.

I try not to stay in the studio too much but rather go out and spend time with my family, go for a trip, spend time and live a life as an ordinary person which tells me a lot.

There is also a lot to learn from America's films and literature too.

I am especially influenced by Charles Bukowski and Paul Auster.

These are two people with completely different personalities, but both of their work goes back and forth between reality and fiction and their storytelling grabs the hearts of people.

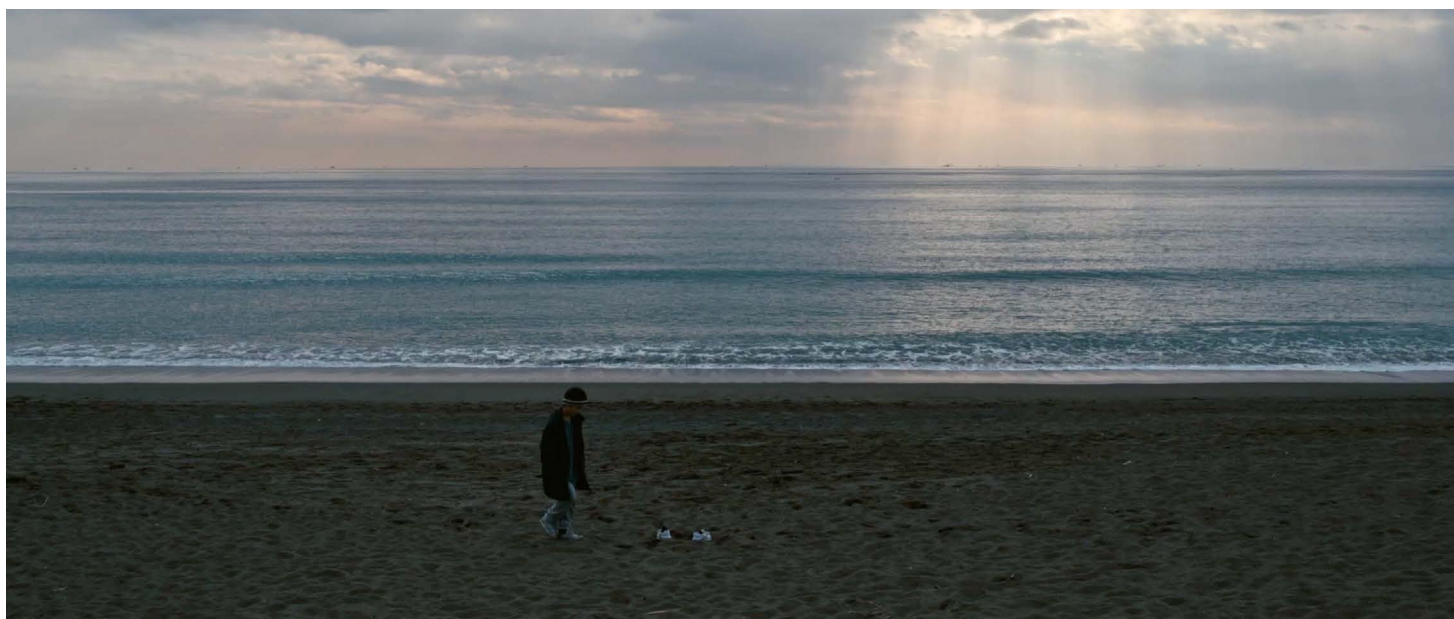
Stream *Sin-Sin* online:

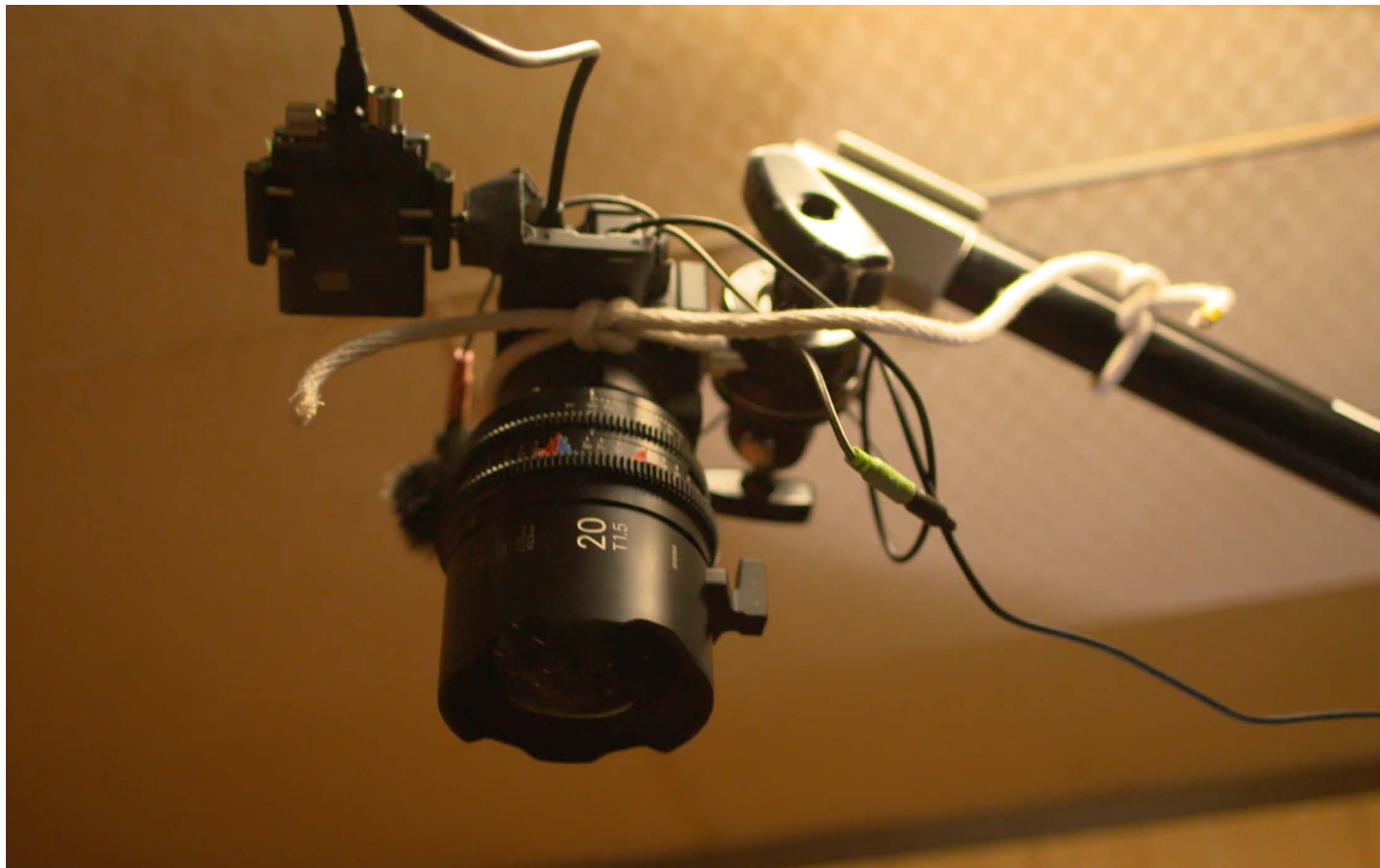
<https://www.sigma-global.com/en/about/sin-sin/>

Additional details about Yu Yamanaka:

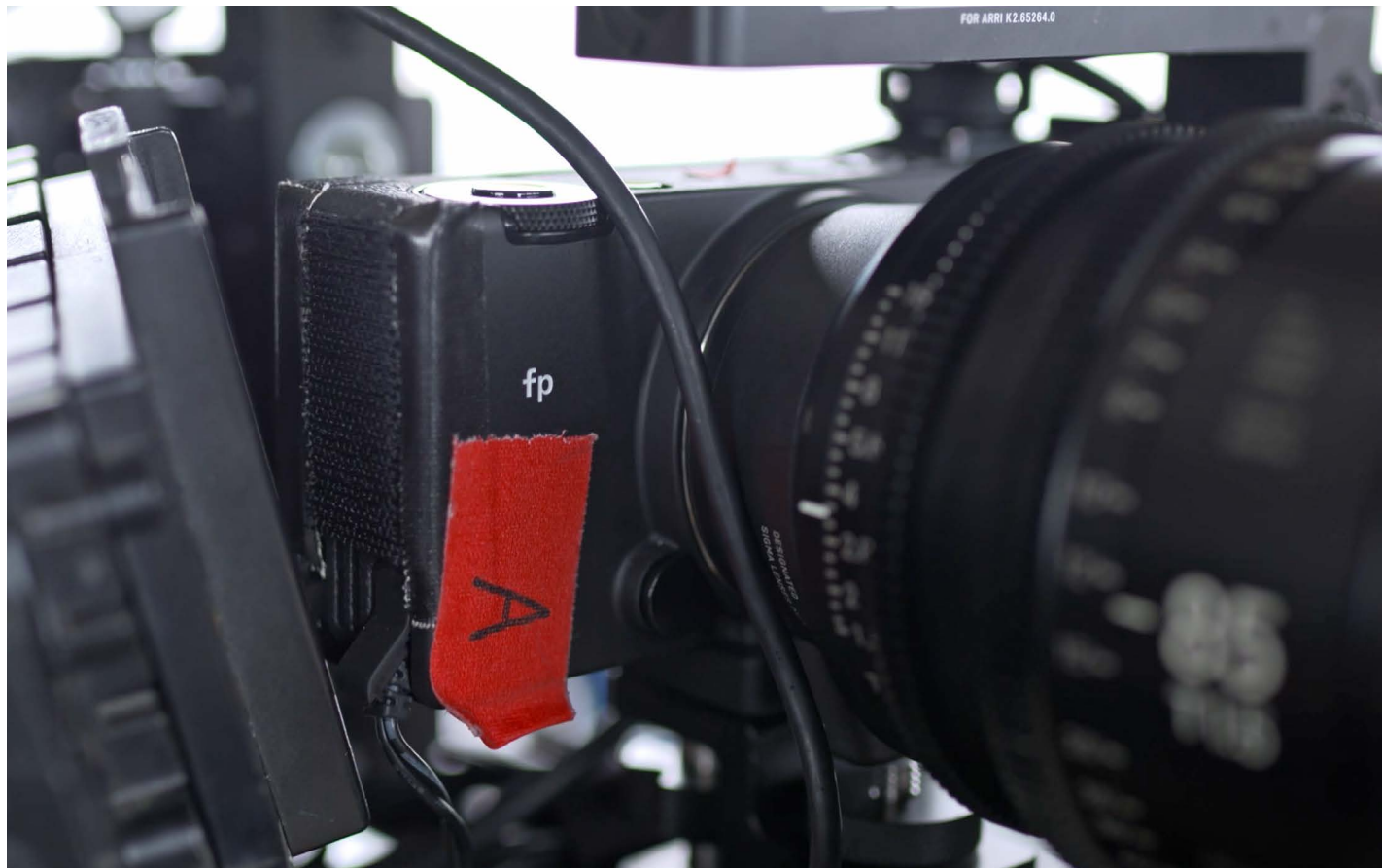
sigma-sein.com/en/seekers/yuyamanaka/

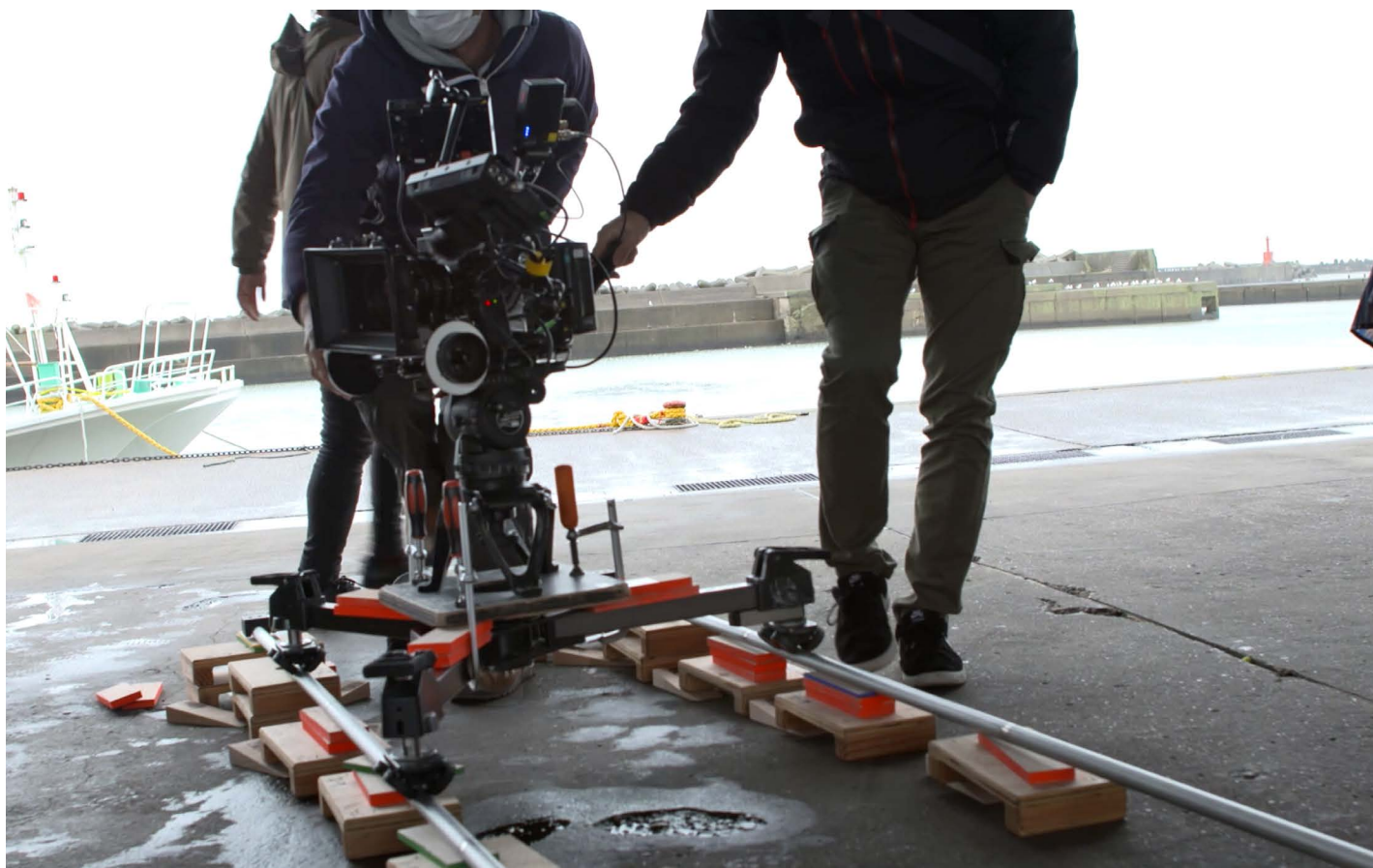












SIGMA fp in Directors Finder Mode



SIGMA fp 2.00 Update



On Thursday, June 25, 2020, SIGMA announced a major firmware update for the fp camera.

The official press release begins, “Since its launch in October 2019, users have been able to explore their individual ways of imaging expression. The positive reactions received from users enjoying both still and cine digital imaging perfectly reflects the core concept of the SIGMA fp—Seamless and Scalable.”

I would add that the fp name derives from “fortissimo-pianissimo,” although you could also remember fp as “film-photography” or “full-frame/pocketable.”

The announcement continues, “This major firmware update of the SIGMA fp is released with the aim of meeting our customers’ needs in order to enhance convenience and provide further possibilities of creativity. This firmware update includes functions that had been planned but were not available at the fp’s launch, and are in addition to the updates announced in March 2020.”

SIGMA will continue to develop additional updates for the fp.

Summary of SIGMA fp V2.00 Update

- **DCI 4K 12-bit / HDMI RAW output.**
- **RAW recording via HDMI** with Atomos Ninja V monitor-recorder. (Free AtomOS firmware update for Ninja V is required).
- **Blackmagic RAW** recording via HDMI with Blackmagic Video Assist 12G models. (Requires firmware update of Video Assist 12G models using Video Assist Update 3.3.)
- **HDR** in video shooting.
- Still and video shooting in Director’s Viewfinder mode.
- Support for Cinemagraph creation and playback.

(Cinemagraph is a short, boomerang style video loop created in Cine mode, like the moving pictures in *The Daily Prophet* read by Harry Potter.)

- CinemaDNG playback.
- Still capture during live view and video shooting in Cine mode.
- Still image capture from video files (CinemaDNG, MOV) shot with the SIGMA fp.
- Camera control is compatible with the ZHIYUN Weebill S gimbal. Firmware update of the Weebill S is required.

See ZHIYUN’s firmware release information about functions supported. Since not all functions will be supported in this firmware update, both SIGMA and ZHIYUN will continue working on this to make more functions compatible in future firmware updates.

- Camera control support in USB mode.

The SDK (Software Development Kit) for controlling the camera is scheduled to be available by early July.

- Instruction message appears when attempting to use grayed-out items in the SHOOT menu

Enhanced or modified functions

- Dual Base ISO (ISO 100 and 3200)
- Improved AF (Autofocus) performance
- Improved accuracy with evaluative exposure metering.
- Improved image quality.
- CinemaDNG 25 and 29.97 fps (UHD 12-bit) shooting.
- CinemaDNG 100 fps (FHD 12-bit) shooting.

SIGMA fp 2.00 Update



- CinemaDNG 100 fps and 119.88 fps (FHD 8-bit and 10-bit) shooting.
- “OFF” option available in Color mode.
- Exposure adjustment available in QS (Quick Set).
- Tone control setting “Auto (Mild / Strong)” available during movie shooting.
- USB Video Class (UVC) setting adjustments while the fp is connected to USB.
- Time code generation.
- Compatible with BWF format.
- Supporting file size changes at 7:6 aspect ratio.
- Supporting changes of shutter sound effect.

Bug corrections

- The phenomenon of occasional flickering in dark areas of video scenes has been corrected.
- Bugs in USB Video Class (UVC) setting when connected to USB or during movie shooting have been corrected.
- Improved recording stability with recording media.
- Other minor bugs have been corrected.

DNG RAW Still Files

To develop RAW still photo data (DNG files) from the SIGMA fp with firmware Ver. 2.00, using SIGMA Photo Pro 6.7.4 software is required.

Download the free update to SIGMA Photo Pro 6.7.4 when applying the fp ver.2.0 firmware update.

Resources

- **To download SIGMA fp firmware:**
<https://www.sigma-global.com/en/download/cameras/firmware/>
- **Videos about SIGMA fp firmware Ver 2.0 and the new, updated CINE features:**
[youtube.com/user/sigmaglobalvision](https://www.youtube.com/user/sigmaglobalvision)
- **For more information about SIGMA fp:**
<https://www.sigma-global.com/en/cameras/fp-series/>
- **SIGMA fp instruction manuals and menu maps:**
<https://www.sigma-global.com/en/download/cameras/brochures-manuals/#fp>

Apple ProRes RAW for SIGMA fp on Atomos Ninja V



Just in time for publication, Atomos and SIGMA announced Apple ProRes RAW recording over HDMI with the fp mirrorless camera and Atomos Ninja V HDR monitor-recorder.

The SIGMA fp connected via HDMI to an Atomos Ninja V will record ProRes RAW at up to 24 fps in DCI 4K or up to 30 fps in UHD 4K.

Dan Chung of Atomos says, “It will also be the world’s first mirrorless hybrid photo-style camera to record RAW via HDMI in 1920x1080 HD at 120 fps. The SIGMA fp also becomes the smallest camera combination to record ProRes RAW, opening up a wide range of shooting options.

The small and light package of fp and Ninja V lets you shoot with RAW almost anywhere: on a drone, gimbal, stabilizer rig, body cam, mini remote head — or even on a tripod. Imagine the POV shots or stunts that could be conjured up with something this tiny. It opens up an entire realm of new possibilities because reduction in camera package weight and size translates to lighter and more adaptive grip and mounting possibilities.

The SIGMA fp and Atomos Ninja V package together become an excellent “A” camera system as well. Dan points out, “With a cage and other accessories, the fp can also be built out into a fully rigged cinema-style camera with the option to use a wide range of L-mount lenses natively, or PL mount, EF mount and many other lenses with the use of adapters.”

The 5" 1000-nit display of the Ninja V lets you view the SIGMA fp RAW signal in HDR with a choice of HLG and PQ (HDR10). The monitor’s touchscreen gives access to tools like 1-1 magnification, peaking, waveform, vectorscope and false color. The Ninja V can

also record 422 ProRes and DNx video up to 4K 30 fps as well as HD up to 120 fps from the 8-bit HDMI output of the SIGMA fp. ProRes RAW or standard video files are recorded to AtomX SSD mini SATA drives in the Ninja V.

Atomos CEO Jeromy Young said, “With SIGMA joining the Atomos RAW-over-HDMI family, we now have an exciting option for filmmakers to shoot Apple ProRes RAW with a tiny full-frame camera that also excels at 120 fps high frame rate shooting. This camera brings SIGMA’s unique approach to the photo industry into video and we are happy to be innovating together with them to enable the fp to shoot in this the most versatile RAW codec. The Atomos Ninja V, SIGMA fp and ProRes RAW open up a whole range of creative opportunities.”

SIGMA is the latest major company to announce support for Apple ProRes RAW over HDMI.

ProRes RAW is like the digital equivalent of a motion picture film camera original negative combined with the efficiency of the long-familiar ProRes codec. ProRes RAW provides great latitude when adjusting the look of images and stretching the limits of brightness and shadow detail. SIGMA fp+Atomos Ninja V support both ProRes RAW and ProRes RAW HQ (less-compressed). File sizes are manageable, transfer are faster, media management and archiving are simpler. ProRes RAW is supported in Final Cut Pro X, Adobe Premiere and other apps.

ProRes RAW recording on Atomos Ninja V requires the free SIGMA V2.00 firmware update for the fp available today, and the free AtomOS update for Ninja V which will be available in Summer 2020.

Apple ProRes RAW for SIGMA fp on Atomos Ninja V



SIGMA 100-400 mm F5-6.3 Zoom

SIGMA has introduced a new ultra-light, ultra-compact, and ultra-telephoto zoom lens. The 100-400 mm F5-6.3 DG DN OS zoom comes in L-Mount for SIGMA, Leica and Panasonic cameras (20 mm FFD) or E-mount for Sony (18 mm FFD).

It is the long lens you'll want as a constant photographic companion. It's tiny, light-weight, fits easily in a backpack or camera bag, and can go anywhere.

This new 100-400 will offer interesting possibilities not only on hybrid cameras like SIGMA's fp or Sony's alpha series, but also on cine cameras like VENICE and FX9.

I also dream of L-Mounts on more cine cameras sometime soon from members of the L-Mount Triumvirate Alliance.

This is SIGMA's fifth DG DN lens (Full Frame, for mirrorless cameras). The rest of the SIGMA DG DN family, so far, includes:

45mm F2.8 DG DN | Contemporary
35mm F1.2 DG DN | Art
14-24mm F2.8 DG DN | Art
24-70mm F2.8 DG DN | Art

SIGMA mentioned that the DG DN lenses have been designed specifically for cameras with a short flange focal distance (FFD), resulting in a salubrious combination of optical performance and compactness that could not have been possible in lenses for single-lens reflex cameras. With stepping motors optimized for both phase detection AF and contrast AF, the SIGMA 100-400mm F5-6.3 DG DN OS | Contemporary zoom delivers smooth and accurate focus in both still and video modes.



- 22 elements in 16 groups, with 1 FLD and 4 SLDs
- Full Frame angle of view: 24.4°-6.2°
- Number of diaphragm blades: 9 (rounded diaphragm). Front Filter size: 67 mm Ø
- Maximum aperture: F5-6.3. Minimum aperture: F22-29
- Minimum focusing distance: 112 (Wide) -160 (Tele) cm / 44.1(Wide) - 63.0 (Tele) in.
- Maximum magnification ratio: 1:4.1 (at 400mm)
- Maximum diameter x length: 86mm Ø × 197.2mm / 3.4 Ø × 7.8 in.
- Weight: 1,135 g / 40.0 oz. (Front lens cap PT-31 included)
- Dust- and splash-proof, high precision brass bayonet mount: L-Mount for SIGMA, Leica, Panasonic or E-mount for Sony
- Compatible with lens-based optical correction (on cameras that support this. The fp does.)
- Compatible with high-speed autofocus. Optical Image stabilization (OS). AFL button
- Focus limiter, Zoom lock switch (locks the zoom ring at the widest end, preventing it from rotating and causing the lens barrel to extend under its own weight during transportation).
- Compatible with new SIGMA 1.4x and 2x Extenders TC-1411 / TC-2011 (for L-Mount only). Functions as a 140-560 mm AF F7-9 with SIGMA 1.4x Extender, and as a 200-800mm F10-12.6 AF ultra-telephoto lens with the SIGMA 2x Extender.
- Made in Aizu, Japan



SIGMA 100-400 mm F5-6.3 Zoom



SIGMA

<https://www.sigma-global.com/>

<https://www.sigmaphoto.com/>



FILM AND DIGITAL TIMES

SIGMA fp Special Report

© 2020 Film and Digital Times, Inc.

by Jon Fauer

www.fdtimes.com

Front cover: Seiji Shibuya, sub director and photographer with a SIGMA fp camera on the film *Sin-Sin*. He is usually a professional photographer working in Modern Art. Director Yu Yamanaka wanted him to advise on the direction of the film and to take still photos for visual references. Hence the new crew title "sub director and photographer" created by Director Yamanaka.