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To:



Studio hit Interview: Date Junichi of more and more want to know !!

Enhance the attractiveness of Sony α 7 II 5 Jikute shake correction

Reported by [Junichi Date](#)
(2015/2/20 07:00)

A7 series Hakusu popularity as a mirror-less machine equipped with the image sensor of the full size. Its greatest topic of the latest model α 7 II's 5-axis body within the camera shake correction mechanism. How Did put in a small body was in, what kind of mechanism can I to work, I heard a story about a point such.
(Interviewer: Junichi Date, in the text titles omitted)



What is Sony α 7 II?

With the latest models of α 7 series of full-size image sensor loading, equipped with a body within the camera shake correction mechanism (5-axis) that becomes the E mount body first. Old lens when mounted by manual input of the focal length also it's characterized by can be performed three axes of camera shake correction. While following the basic specs α 7, fast hybrid AF is 30% faster by improving the algorithm, also improved motion tracking performance. Movie recording function also greatly enhanced that has been **a point of concern of Date Junichi specific α 7 II**

- Equipped with a full size first body within 5 Jikute shake correction mechanism. The first in E mount
 - The focal length of the lens in the Old manual input also enables 3-axis camera shake correction
- Fast hybrid AF is about 30% faster than the $\alpha 7$
- XAVC Equipped with video recording function of S and picture profiles, such as professional



Suzuki Daisuke Mr.
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Digital Imaging
Division product
planning department
product planning two
parts 2 Division
highest 4.5 stages in
5-axis camera shake
correction mechanism
demand there were
many from the
"customers, and I
could almost installed
without changing the
body size was "



Sumiya TakashiJiro
Mr.
Sony Corporation
Digital Imaging
Division digital
imaging application
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platform Part 3
Lesson 2
"5 Jikute shake
correction mechanism
is to identify the
direction of panning
automatically, make
the optimal correction



Egawa AkiraHiro Mr.
Sony Corporation
Digital Imaging
Division product
design department
design Part 1 Lesson
2
"to suppress the
power consumption
by reviewing the
electronic circuits and
control, was slightly
increase the even
number of shots while
having a camera
shake correction
mechanism"



Fujibayashi Shigeki Mr.



Hosokawa Takayuki Mr.

Sony Corporation Digital Imaging
Division core technology sector
core device section 1
Department
"to be to the electromagnetic
induction method that uses a
very powerful magnet and coil,
performs efficiently camera
shake correction with less power
consumption."

Sony Corporation Digital Imaging
Division digital imaging
application design department
platform Part 3 Lesson 3
"I increase the speed and
accuracy of the AF by reviewing
the control of the image plane
phase difference AF and contrast
AF

Move agile and powerful magnet 5-axis body within the camera shake correction

For development concept of -- α 7 II, I will ask you first.

Suzuki: alpha 7 that was released in November 2013 as the world's first full-size sensor mounted mirror-less camera, we had a good reputation in a very large number of customers. α 7 series, not only E-mount lens, by the combined use of mount adapter Translucent mirror equipped with "LA-EA4", is characterized by can be taken with A-mount lens high-speed phase difference AF.

However, the A mount α system, because it has a camera shake correction mechanism in the body side, not equipped with a camera shake correction mechanism in the lens. A variety of lens such as such A-mount lens from your customers, which had been received a voice that really shake worries. Therefore, in the α 7 II, also customers have a such a wide range of lens, so that customers can use more comfortable, we have to be equipped with a body within the camera shake correction.

However, lighter is a benefit of mirror-less camera is small. α 7 to be to equipped with a body within the camera shake correction, than body size becomes large, the charm of mirror-less camera will be impaired. while maintaining the feeling of size of α 7, and embedded body within the shake correction unit 5 axes, yet, it went developed with the goal of realizing a camera shake correction effect of the highest 4.5 stages.

Fujibayashi: This is the full-size image sensor and camera shake correction unit that is mounted on the α 7 II. Vibration reduction unit A mount, but employs a mechanism using a piezo since the time of Minolta moving along the two axes of the guide rails, this α 7 II moves the sensor with electromagnetic induction by the magnet and the coil I have adopted the method.



5-axis body within the camera shake correction unit consists of a powerful magnet

even in a state that does not shed electricity, so that can be maintained as much as possible the normal position the image sensor only by magnetic force, strengthen the magnet. Are made to fairly robust even frame to withstand the strong force

Since the size of moving the larger full-size sensor, a power unit on the right side and the lower side of the sensor becomes quite large, because the sensor must also be mounted to detect the vibration, initially it did not really fit the size of the $\alpha 7$. Therefore, at the same time and to devise the shape of the camera shake correction unit, Allegiance cooperation also a member you are designing a camera of the exterior or the substrate, it was variously change the arrangement of the internal parts in the $\alpha 7$ and $\alpha 7$ II.

For example, most in remarkable the arrangement side of the connector, $\alpha 7$ the USB and HDMI, a microphone, while the headphone terminal are arranged in tandem, $\alpha 7$ II is in two rows, are arranged at a distance before and after each By, it has become a form to avoid the power of the camera shake correction of the right side of the image sensor.

In addition, compared to $\alpha 7$, but those of $\alpha 7$ II has become a slightly higher position of the mount, this is also because there is a power of the camera shake correction unit to the image sensor bottom.

In addition, tilt movable LCD monitor also has more of $\alpha 7$ II has become thin, viewed from the side, the statement that was thin the liquid crystal monitor, we can

viewed from the side, the statement that was thin the liquid crystal monitor, we can ensure the mounting space, such as camera shake correction unit in the body. This LCD monitor also circuit part required thickness, put a notch in the arm to support the LCD monitor, we have devised as part of a thick fits well.

Push all the parts in a small space that was born by these fine stacking, almost without changing the sense of the size of $\alpha 7$, we were able to incorporate a camera shake correction unit within the body.



Modifications devised internal layout for body size maintenance

side of the terminal that was in tandem in $\alpha 7$ is, placed in the front and back so as to avoid the board in $\alpha 7$ II. LCD monitor also becomes thinner, I have successfully absorb the increase in the thickness of the body

- It is the power of the camera shake correction unit is fairly large. Still to move to agile full-size sensor, I'm a so much need a powerful magnet.

Fujibayashi: ? alpha 7 When you remove the lens from II try to move the camera, not the power supply is of whether this will able to understand your floating above the sensor even in the state of off that contains the such as a spring, magnetic force so that to float using well and can hold the center with very little assist, it has to be moved efficiently sensor in accordance with the shake.

By the way, the magnetic force generated from the magnet is very strong force, will not pull in a very large force an iron frame sandwiching the sensor before and after. In the first stage of the prototype camera shake correction unit, is not aware of the strength of the force, it is about the frame had been deformed. This enough to are using a strong magnet of magnetic force, you put out a large force even with a small current flowing through the coil if strong enough magnetic force is strong. The efficiently run at low power consumption, a strong magnet is necessary magnetic force, in order to avoid escape the magnetic force to the outside and are sandwiched by this only strength frame.

Egawa: than decreased the number of shots just because equipped with a camera shake correction mechanism in the body, I will receive a rebuked from customers. Starting with camera shake correction unit electrical circuit and control also review, it is possible to Colas devised to reduce the power consumption even a little, in total we were able to reduce the power consumption than $\alpha 7$. Still image number of shots when using the viewfinder is the same about 270 sheets and $\alpha 7$, but was able to increase while the LCD monitor when using from about 340 sheets about 350 sheets slightly.

Also, in order to achieve image stabilization effect of 4.5 stages and stuck even where to place a sensor for detecting a blur. Since very sensitive sensors, and not in that may be pushed to suitable space is available, and less prone to vibration when the shutter is released, electrical noise is small and where it can protect the sensor from external shocks must be. The best place to put the sensor is discussed in the entire development team, and ultimately to the back of the grip, angle blur, Shifutobure, we established three sensor for detecting a rotational camera shake.

- The worrisome in the adoption of the camera shake correction body, it is a countermeasure against heat generation during movie recording. Sensors freely move on the relationship, How can I think be limited conductors escape the heat, compared with conventional $\alpha 7$, movie shooting time or Will not be a disadvantage in the heat?

Fujibayashi: Since in camera shake compensation body to correct blur by moving the sensor, moving parts should be reduced as light as possible, the called is adopted can be thermally conductive material is limited. Given normally, those in the camera shake correction body will be at a disadvantage in the heat radiating surface. However, it has been promoted in carrying equipped with a body within

surface. However, it has been promoted in carrying equipped with a body within the camera shake correction to this $\alpha 7$ II, the development on the assumption that you can shoot to turn on the camera shake correction even when shooting movies.

Body within the camera shake correction of conventional A mount, but has adopted a resin to the power of the image sensor, using a high metal member $\alpha 7$ II in the heat of the conductivity, such as Nigaseru the heat of the image sensor I have to design. In addition, heat is generated even from the substrate, but as the heat of the substrate is not transmitted to the sensor, I have devised, such as a substrate of the layout.

Design technology to diffuse these heat, because we have been cultivated in the process of developing a $\alpha 7$ S of 4K video output support, and make full use of its technology to $\alpha 7$ II, to be adopted body within the camera shake correction, heat problem is I have measures to prevent out.

Maximize the camera shake correction in conjunction of the lens side and the body side

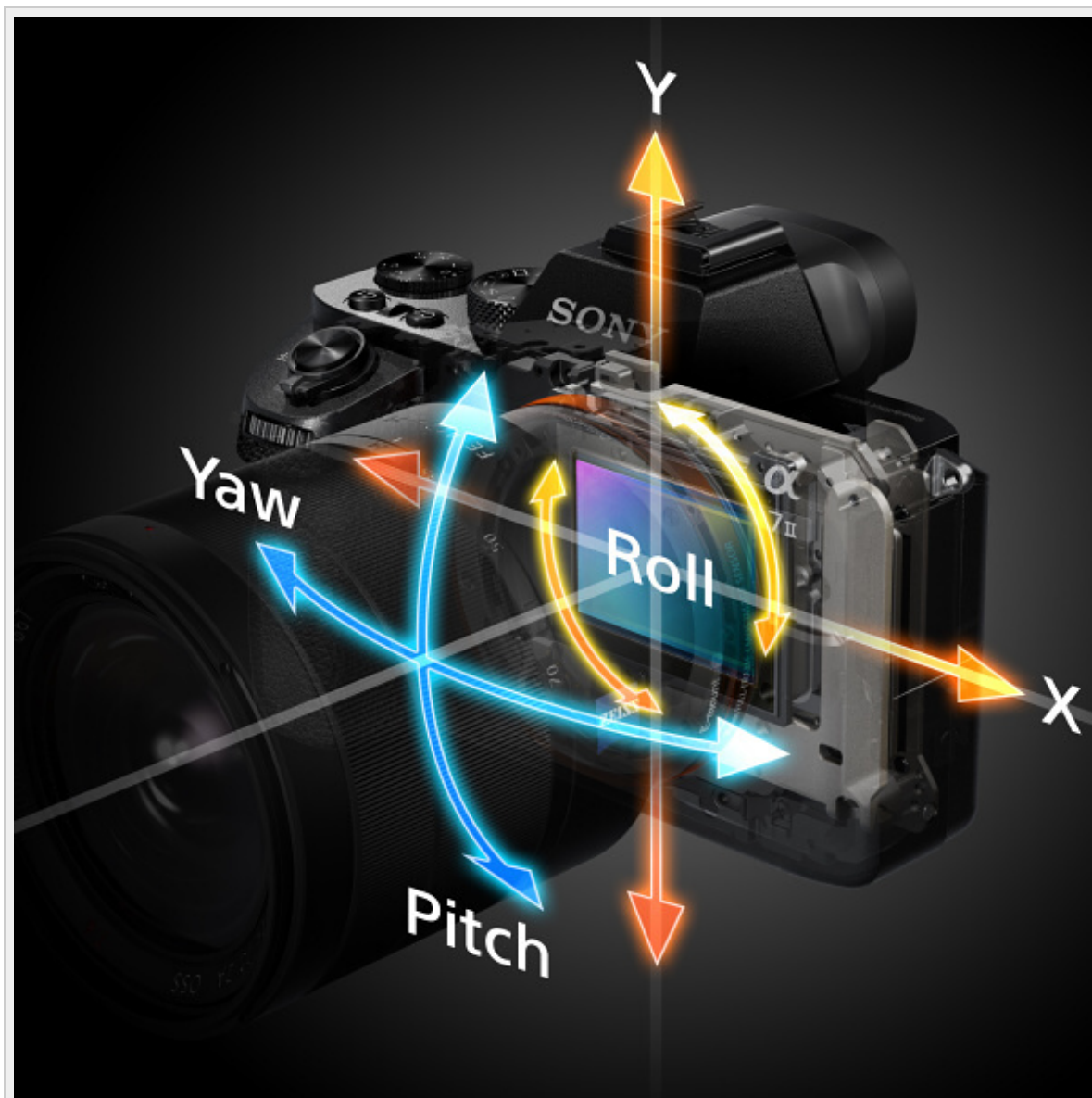
The -- $\alpha 7$ II, such as XAVC S and Rec control, picture profiles, to movie shooting function of $\alpha 7$ S inheritance have been included, but it is a body within the camera shake correction there is no meaning than was pulling his leg. Sufficient heat measures and was relieved to hear that has been subjected.

Meanwhile, FE equipped with OSS, when it is fitted with a lens E, or does not conflict with the body in the hand-shake correction?

Suzuki: lens shift method is characterized by can optimize the camera shake correction for each lens, but it does not mean that you can equipped with a camera shake correction mechanism in all of the lens. On the other hand, camera shake correction within the body, camera shake correction effect is obtained in all of the lens that can be attached, is characterized by rotational camera shake can also be corrected.

However, the amount that can move the image sensor is limited, also there is a limit to the amount of shake can be corrected. So, at the time (except for the part) E-mount lens of camera shake correction mechanism equipped with mounted, performs pitch and yaw of shake correction in the lens side, as that performed in the correction body side of the upper and lower left and right of Shifutobure rotation shake, I am taking advantage of the goodness of each method.

On the other hand, A-mount lenses with the exception of E-mount lens and some that are not equipped with a camera shake correction has been carried out for 5 Axis shake correction in the body side.



5 Axis body in shake correction mechanism corresponding to the correction of
the mechanism for floating the image sensor with a magnet, in addition to the angular shake (pitch, yaw) and Shifutobure (X, Y), also corresponds to the correction of the rotational deviation (roll). It's the first in a full-size sensor

- Pitch and yaw, who was corrected by the lens side is I think the higher correction effect?

Suzuki: I rather than effect that there is a high, since the lens in the camera shake correction is to optimize the blur correction on one by one lens, compensates for camera shake that can not be corrected by lens side while taking advantage of it in the body side, total in bring out the maximum performance, it has been

designed with the idea.

- By the way, What about if you have installed such as Old lens using a commercially available mount adapter?

Egawa: You can not until operation guarantee If you install a third-party lens, manually by entering the focal length, you can pitch and yaw, three-axis body within the camera shake correction of rotational camera shake.

Why, you say that it might be a camera shake correction in 5-axis, although the correction of Shifutobure requires information about the shooting distance, at the time of electronic contacts with no lens and mount adapter installed, because it can not get the distance information from the lens.

- It was equipped with a third-party lens mount adapter, manually when you enter the focal length, so also become one of the guideline was taken by Why What lens of the focal distance data in Exif data is not reflected,? and I want the focal length that means manual setting is reflected in the Exif but

Sumiya: to $\alpha 7$ II, was with the function of manual input of focal length, as camera shake correction to work effectively even in case equipped with ultra-wide converter and fisheye converter to E16mm F2.8, and I thought The is, was the first place of opportunity.

Only, focal distance entered here is the information to be used for the camera shake correction is considered different from the information of the lens itself, has become such a specification.

Suzuki: to PlayMemories Camera Apps there is a paid app "lens correction", peripheral illumination correction and magnification chromatic aberration correction, you can perform distortion correction, and reflect If you shoot using this app, the focal length that you manually input to Exif You can be.

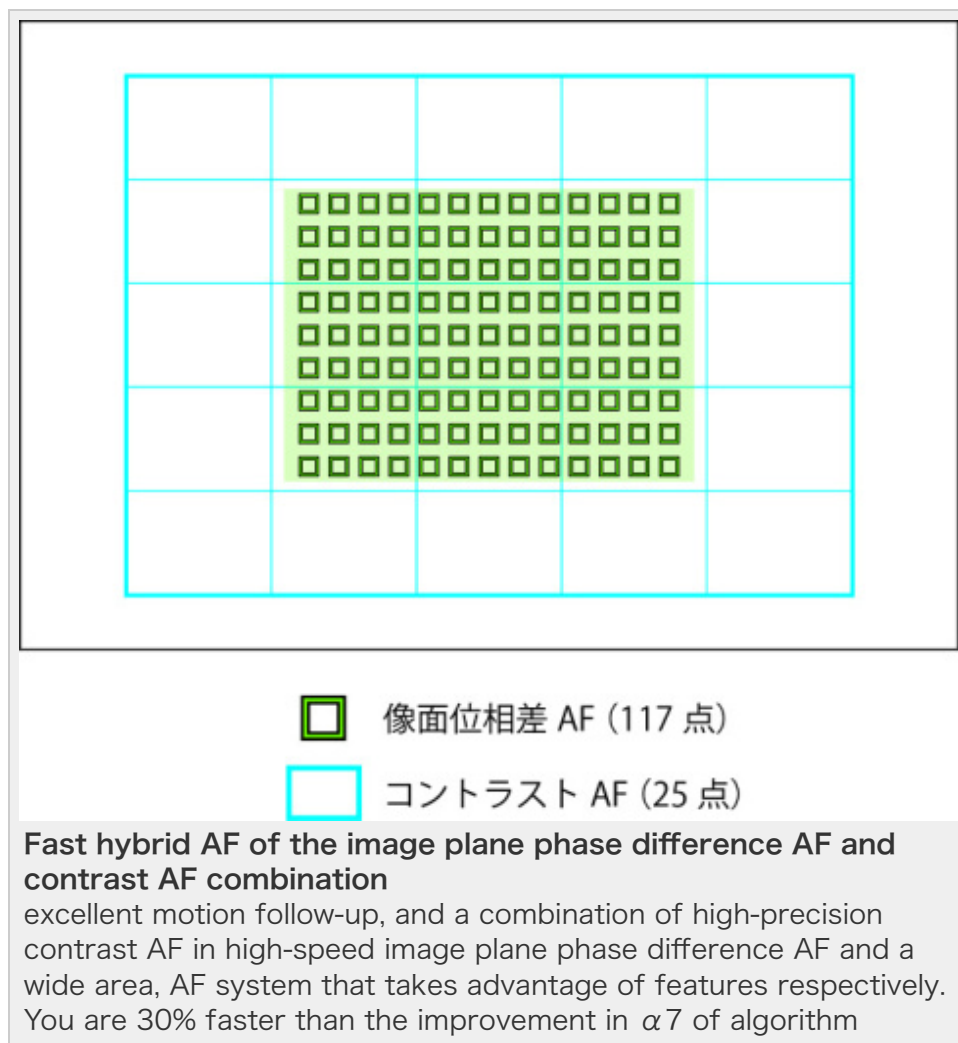
- But when you are shooting in the "lens correction" is, but it can not bracket shooting. By mounting the lens without at least electronic contacts, if you manually enter the focal length, so as to reflect the number in the Exif, and I would like to update as soon as possible firmware.

By the way, or $\alpha 7$ II body within the camera shake correction of, the panning and tripod shooting support?

Sumiya: For panning, as well as conventional models, avian been flushed direction identified automatically, we are optimized correction control according to each. Also, at the time of Tripod, even if the camera in the camera shake correction on it has been designed to make it difficult to malfunction, but it is recommended that you turn off the camera shake correction.

Accuracy up fast hybrid AF improvement of algorithm

- If you look at the catalogs, even $\alpha 7$ II also $\alpha 7$, and the but of contrast AF 25 points + image plane phase difference AF 117 points as "fast hybrid AF" spec seems not changed, has evolved in AF performance surface Will?



Hosokawa: AF-S, it has become faster than AF-C both $\alpha 7$. in to continue to develop a variety of models and from the launch of $\alpha 7$, we were able to obtain a very large number of findings.

And feeds back the findings to the development of $\alpha 7$ II, it is possible to improve the control algorithm, as compared with the $\alpha 7$, we were able to achieve significant performance improvement in AF. Sneaking from the point of view of

significant performance improvement in tracking from the point of view of capture of motion, has become well about 1.5 times hit rate of $\alpha 7$ If you shoot the same scene.

- The improvement of the control algorithm?

Hosokawa: alpha 7 so series is equipped with a full-size sensor, a typical sensor size is larger than the mirrorless cameras, compared with the same angle of the lens, towards the $\alpha 7$ series longer the focal length.

Since blurred larger the focal distance increases situations increases, because as compared to other mirrorless camera, and whether to drive the lens to how quickly focus the large blurred situation, and to shorten the focusing time of the AF-S but it is a critical point of.

Therefore, the way that moving the focusing lens in contrast AF, obtains a plurality of images, a change in their spatial frequency, and drives the predicted lens to how much lead to focus and moving the focus lens "space object detection I have adopted a technique called AF "from $\alpha 7$.

Focus to move as fast as possible the large blurred if if focus lens, How can make the focus drive that accurately stop by deceleration After approaching the in-focus point, to improve the $\alpha 7$ II in prediction accuracy, if at a faster speed It is now moved to the vicinity of the focal. In addition, the $\alpha 7$ and $\alpha 7$ II has the image plane phase difference AF is mounted, but the image plane phase difference AF will be able to quickly detect the distance to the subject.

Therefore, based on the distance measurement result obtained in the image plane phase difference AF, and moving quickly the focus lens to the near focus, and finally it is possible to put someone in contrast AF, but have to both speed and accuracy, this partial control of also aims to review, compared to $\alpha 7$, we were able to about 30% faster the speed of the AF-S.

Or moving object tracking performance during --AF-C shooting has improved?

Hosokawa: alpha 7 after launch, we have developed a model with a very large number of AF points such as $\alpha 6000$ and $\alpha 77$ II. And knowledge obtained at the stage of development of such models, based on the opinions and requests received from the user after the sale, here also we are working to improve about two points.

One is the "stability of selected focus area". Etc. In many of the players are crossing scene, the case that would arbitrarily AF points possessed an unintended player event can occur soccer. Therefore, the $\alpha 7$ II, when the distance measurement points possess, it is possible to adding information such as the position of the distance measuring point is the speed and selectivity of the subject, and that continues to bite in a more stable to be the targeted are subject I have improved the performance.

And one we are also aiming "improvement of focus accuracy". And reviewing the reliability of the data obtained while ranging, while also considered such a position had the previous object and (aimed by selecting a more accurate distance measuring point from among a number of distance measurement result subject against) I have to increase the focus accuracy.

By improving the two points of the previous stability and focusing accuracy, we were able to further improve the follow-up with respect to a moving subject.

-? Now of story, the focus area for AF-C shooting using the "wide" or I'm description of when you AF-C shooting in the "zone", "lock-on AF", the follow-up than $\alpha 7$ or Will is improving?

Hosokawa: striving to lock-on AF also be improved. Lock-on AF, it captures the subject in the selected area, and the fact that the shutter button is pressed halfway, and to recognize the subject of color and shape to the camera, to track the subject based on the information, automatically optimal focus area It is a function but that is selected.

Also focus area from "Wide" to "flexible spot S", but you are free to choose the size of the focus area, depending on the shooting scene, and lock the unfamiliar person to shoot moving object in the "wide" or "zone" It is recommended to carry out the on-AF.

Because, the shutter button If you are aware of the movement of the subject from before you pressed halfway on the camera side, technology that go to match the more aggressively focus for moving subject, entered from this $\alpha 7$ II We do therefore, so far, the object is aimed by squeezing small focus area as did take that it does not continue captured stably body also, as can by locking on AF in "wide" or "zone" now.

Mirror-less camera is not suitable in motion shooting, it seems there are many

people who are thought to, but we as a, I believe that there is no longer the difference of that single-lens and mirror-less camera. $\alpha 7$ and try to more aggressively taking the moving object in the "Fast intelligent AF" of II, I think if you can realize its performance.

Is above follow-up of the body than -- $\alpha 6000$?

Hosokawa: Well, there I is where judgment is difficult. $\alpha 6000$ is about 11 frames / sec, so $\alpha 7$ II is a difference of about 5 frames / sec and frame speed is more than doubled, in the sense that captured more of the moment is more of $\alpha 6000$ I can say that strong against motion photography .

Also, since more sampling interval is short will be captured quickly also changes in the speed of the object, who frame speed is fast is still I think also advantageous for AF.

However, the algorithm that is installed is more of $\alpha 7$ II than $\alpha 6000$ Since it has evolved, has become is better of $\alpha 7$ II in that is to focus more accurately on the subject that was aimed at.

- Certainly, dolphins jump and jet skiing in Enoshima, but fly tried to shoot, to very quickly focus even in things fit that moves, and was surprised to the height of the focus accuracy. frame speed than $\alpha 6000$ is slow, but certainly yield you feel high.

However, in the scene where there is a bright contrast, and with the proviso that, or become day low contrast and Kage~tsu, when you Dattari tea hair color is dark, suddenly or become poor yield of focus, you or lost focus. It picky of this scene is still regrettable more than single-lens reflex.

Hosokawa: still under low brightness or a low frequency subject performance, we have received as a problem to be solved. Since our company we have also made image sensor, the image sensor improvements and combined, whether can not improve the problem, we are always exploring.

- If you read the manual, but is in a state of being squeezed from F9 is the layers of ineffective is the image plane phase difference AF, the case of a single-lens reflex, the aperture is narrowed down is the only moment to shoot, otherwise ranging including also, it has become to open aperture. In terms of the distance measurement accuracy, and I think that's advantageous If you want to open the aperture except when shooting, but

Hosokawa: The reason why the image was captured by the image sensor can be displayed directly in the viewfinder and LCD monitor is the characteristics of the mirror-less camera. It is possible to be in the real aperture from before shooting (to narrow to have set the aperture value), you will be able to check the depth of field from before shooting.

Also, it is possible to advance to the actual stop, it is unnecessary to move the diaphragm blades at the moment of turning off the shutter, it is advantageous to shorten the release time lag. $\alpha 7$ and $\alpha 7$ II is in conjunction electronic front curtain shutter, but achieves a short release time lag which can not be considered a SLR of 20m seconds, numbers can be achieved because this also narrowed down until pre real aperture is.

Of course, the image plane phase difference AF When refine than F9 as you pointed out there are also disadvantages of becoming ineffective, because also the contrast AF operates in this state, thought and its disadvantages can sufficiently cover, the current state of the system adopted has.

- This time, $\alpha 7$ but I tried to a combination of FE 70-200mm F4 G OSS shooting motion to II, I is still telephoto is not enough to be a 200mm at full size. The FE lens development roadmap, it is as long as the lonely is not yet listed even telephoto zoom 70-300mm class.

Personally, FE 70-400mm F4-5.6 but G is OSS to want early (laughs), or Will keep the high speed of $\alpha 7$ II of AF in this much longer focal length?

Hosokawa: In principle, compared with the independent phase-difference AF sensor (conventional phase-difference AF), it is a challenge that width that can be ranging prefer the image plane phase difference AF is narrowed. However, such space object detection AF of contrast AF, because there is also a technology to compensate for the weakness of the image plane phase difference AF, how much of AF or performance can be obtained with ultra-telephoto zoom, that study will not go.

- In that sense, to the super-telephoto shooting at $\alpha 7$ series, I is not no choice but to mount the A-mount lens with a combination mount adapter.

$\alpha 7$ II was announced, to hear also the work is camera shake correction in the A-mount lens, this 70-400mm F4-5.6 G SSMII How can was overjoyed that the airplane can take in, If you think you become calm, Fast hybrid AF high speed of

use is AF of wide area by the, but it only FE / E lens. Using the LA-EA4 takes effect AF, but the AF point has only 15 points, yet the focus area is concentrated in the center of the screen is the very narrow of dissatisfaction.

On the other hand, if you use the LA-EA3 of plain no Translucent mirror, you adjust the focus with a high degree of accuracy in the peripheral screen with contrast AF, AF speed is very slow, it does not take is very moving subject. OLYMPUS OM-D E-M1 is, at the time of Four Thirds lens is attached has achieved practical AF speed in the image plane phase difference AF.

As with this, at the time of A-mount lens mounted in LA-EA3, utilizes the space object detection AF of the image plane phase difference AF and contrast AF, even, if not up to the fast hybrid AF average, AF enough fast intelligent AF or will that can not be achieved the speed?



Hosokawa: As the LA-EA4, by using a translucent mirror technology, conventional phase difference method for guiding light to the AF sensor, so seen quite clearly the direction that is out of focus even in a state where the blurred greatly, and is characterized by is to focus smoothly even in super-telephoto lens.

On the other hand, the breadth of focus area is advantageous of the image plane phase difference AF. And if we mastering a such a two technologies in what way, and we are thinking about whether or not there is most benefits to our customers.

The A-mount lens, 70-400mm F4-5.6 G SSM II and including, 300mm F2.8 because G SSM II and 500mm F4 G SSM such as very high-performance lens is large the

... and second, the size, such as very high performance lens is large, and body the performance of these lens of E mount in and we are looking for ways to capitalize enough.

- Deny the mount adapter equipped with Translucent Mirror Technology does not, but still 15-point AF sensor of LA-EA4, you think shortage in use in α of full size. Naimononedari are well aware, but, do not say if there is a LA-EA6 (provisional) that Ogo~tsu 79-point AF sensor of $\alpha 77$ II, and How can I think

Hosokawa: To realize a wide AF area, you will also increase the size of the AF module.

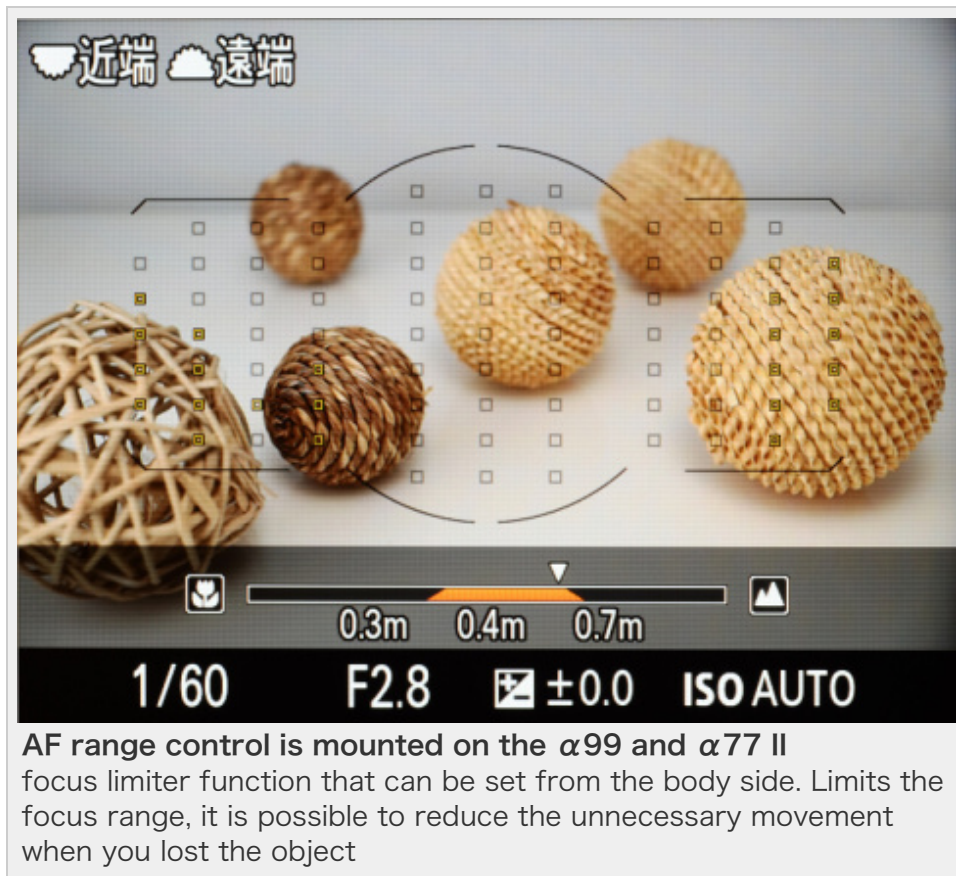
And to it is whether or not to be stored in large to be acceptable as a mount adapter is a problem, the first place or whether, or the good method to use, such as the image plane phase difference AF good conventional phase-difference AF system with Translucent Mirror Technology? This is where I want to believe that to organize whether there is what benefits to customers as the direction of the technology.

-- $\alpha 7$ and II fast hybrid AF, which is mounted in the body, if it is possible to make good cooperation conventional phase difference AF mount adapter, and to capitalize more A-mount lens assets, and Hagayuku it will think.

Even if the camera shake correction mechanism, Nante lens within the system and the body within the system can coexist, $\alpha 7$ until II comes out to mean was thought to impossible, I'm sure in the near future, and E the performance of A-mount lens met with surprising method It is expected that the day you capitalize the mount body visit.

Although story changes a little, the function of which is mounted on the $\alpha 77$ II and $\alpha 99$ "AF range control" (focus limiter that can be set from the body side), but I want also adopted to Come $\alpha 7$ series, technically Is it possible with E-mount lenses?

If AF range control feature is installed, even faster recover when you have lost the subject at the time of telephoto shots, I think that even cases that take the body comfortable increase in mirror-less camera.



Hosokawa: Turn the focus ring by the body of the E-mount to MF, appears distance index on the lower side of the Live View screen. What is in focus at any distance, it is possible to obtain the distance information from the lens, if successfully control the lens based on it, the realization of AF range control is not as technically impossible. After, I is or needs of customers is much.

α7 and α7R mount even strength without problem

- Other than the camera shake correction mechanism and fast hybrid AF, please tell me the part that has evolved in the α7 and α7 II.

Egawa: Although the image sensor is the same also image processing engine α7, internal signal processing and the like are optimized for α7 II. There is almost no difference in the image quality of low sensitivity, but review the tuning of high sensitivity noise reduction, we are working to brush up of high-sensitivity image quality.

Although is the difference in appearance, change the design around grips and the shutter button, more easy to grip even when fitted with large lenses, it was also easier pressing the shutter button. In addition, custom button of the shutter button side is increasing one.

and became a little bother to try using -- $\alpha 7$ II is, it is the key assignment of the back of the control wheel. $\alpha 7$ / $\alpha 7R$ / $\alpha 7S$ whereas right button is assigned to the WB, has become $\alpha 7$ II in ISO. That said can change the function assignment of buttons in a custom key setting, or in the same $\alpha 7$ series, different from the assignment the initial settings of the main function buttons, Will had a special intention something?

Egawa: it will turn the wrong control wheel, that it had received a voice of our customers that there is that it would change the ISO is not intended, is a big reason. $\alpha 7$ II is has been added custom button on the top surface, assign the white balance to C1 button, also frequently used in the empty right button to assign a high ISO sensitivity, we worked to improve the operability.

- I see. But, it is possible to eliminate the function notation of the right button of anyway if control wheel, as well as the down button, I you need without confusion to customize better state that nothing is printed.

Come to think of it, $\alpha 7$ and $\alpha 7R$ is, engineering plastic has been used in the inner claw mount, but it has changed to a metal member in $\alpha 7S$ and $\alpha 7$ II. If strength to than? No problem I think no problem with conventional $\alpha 7,7R$, Why was changed to metal member?

Egawa: alpha 7, because the mount strength of $\alpha 7R$ is sufficient, please use it with confidence. For $\alpha 7S$, it is possible to shoot 4K video by connecting an external recorder, whereby the lenses, such as by mounting the rig to assist cinema lens and a focus, when compared to typical photographic lens large and heavy lenses is assumed to be mounted.

Also, $\alpha 7$ II also by mounting the body in the stabilization, including A-mount lens than the conventional, such as super-telephoto lens or weight lens for video, light that various lens is mounted, $\alpha 7S$ and $\alpha 7$ In II, and has adopted the metal member to an inner claw mount.

By the way, bend and press strongly the mount surface in $\alpha 7$ and $\alpha 7R$, and it is now a hot topic in such as the Internet, $\alpha 7$ series, mount and image sensor is attached to the structure of magnesium, exterior cover the structure It is organized as covered with. In addition, you may want subducting by pressing a portion of the mount with a strong force, but since parallel mounting surface and the image sensor surface is firmly kept in a structure, you do not have to worry about, such as migraine blur.

It should be noted, orange ring around the mount is not related to the mount strength in the decoration parts. However, pushing the mount surface at an extremely strong force will ask that you will be avoided will also be the cause of failure.

- Recently, $\alpha 7$, I will come out also commercial parts to strengthen the mount of $\alpha 7R$.

Fujibayashi: We are shipping by very precisely adjusted, so there is a possibility that sufficient accuracy is not maintained. Mount will strongly recommend that you become your intact. Once again, because the mount of $\alpha 7$ and $\alpha 7R$ you have enough strength and durability, please use it with confidence.

- Today Thank you very much.

- Beyond the coverage - Hats off to flexible camera shake correction mechanism that many users Azukareru to benefit

2 Tsugaaru of A-mount and E mount to Sony α . Flange back to short E mount body, although it features can be fitted with A-mount lens with a combination mount adapter, A mount performing the body side, E mount camera shake correction in the lens side specification. With the A-mount lens with $\alpha 7$ series of full-size, since become a situation where not effective at all is camera shake correction, it was thought to want equipped with a at least to the A-mount lens telephoto system lens within the camera shake correction . No way to E mount body, it is because the come equipped with a body within the camera shake correction did not even imagine. However, that never was realized. in $\alpha 7 II$, he is a body within the camera shake correction will be the first mounted in the E mount. I think this is the thing breakthrough. The whether it is wondered was does not conflict with the lens in the camera shake correction, when the camera shake correction is mounted on the lens side, only the angle blur is corrected by the lens side, the Shifutobure a rotational camera shake can not be corrected by the lens side body and of correcting the side. Indeed, by correcting at the same time in the blur of the same direction lens side and the body side, although Miracle and Nante enhance the correction effect has not been able to achieve, but still one of the same manufacturer in the mount, camera shake correction and lens in hand within the body I think a great decision was adopted both of shake correction. Moreover, if correspond to the manual input of the focal length, it is but the body in camera shake correction work in three axes even when wearing the lenses and Old. It is a feature in the Pentax and Olympus already achieved, but was honestly surprised that has been equipped with a function that was refused the A mount the α stubbornly. So far I feel that

Sony and has been a little something different to. Remaining challenges's fast hybrid AF enabled when using A-mount lens. It's my selfish desire, but it is expected that this challenge is also the near future, is definitely clear.

a7 II

<http://www.sony.jp/ichigan/products/ILCE-7M2/>

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(Date Junichi): 1962 born in Hiroshima. Chiba University Faculty of Engineering image Engineering graduate. While working as a photographer in such photo magazine, is also active as a writer and taking advantage of the expertise. Strongly in digital camera from the early days, become lighter industry more than photographers.