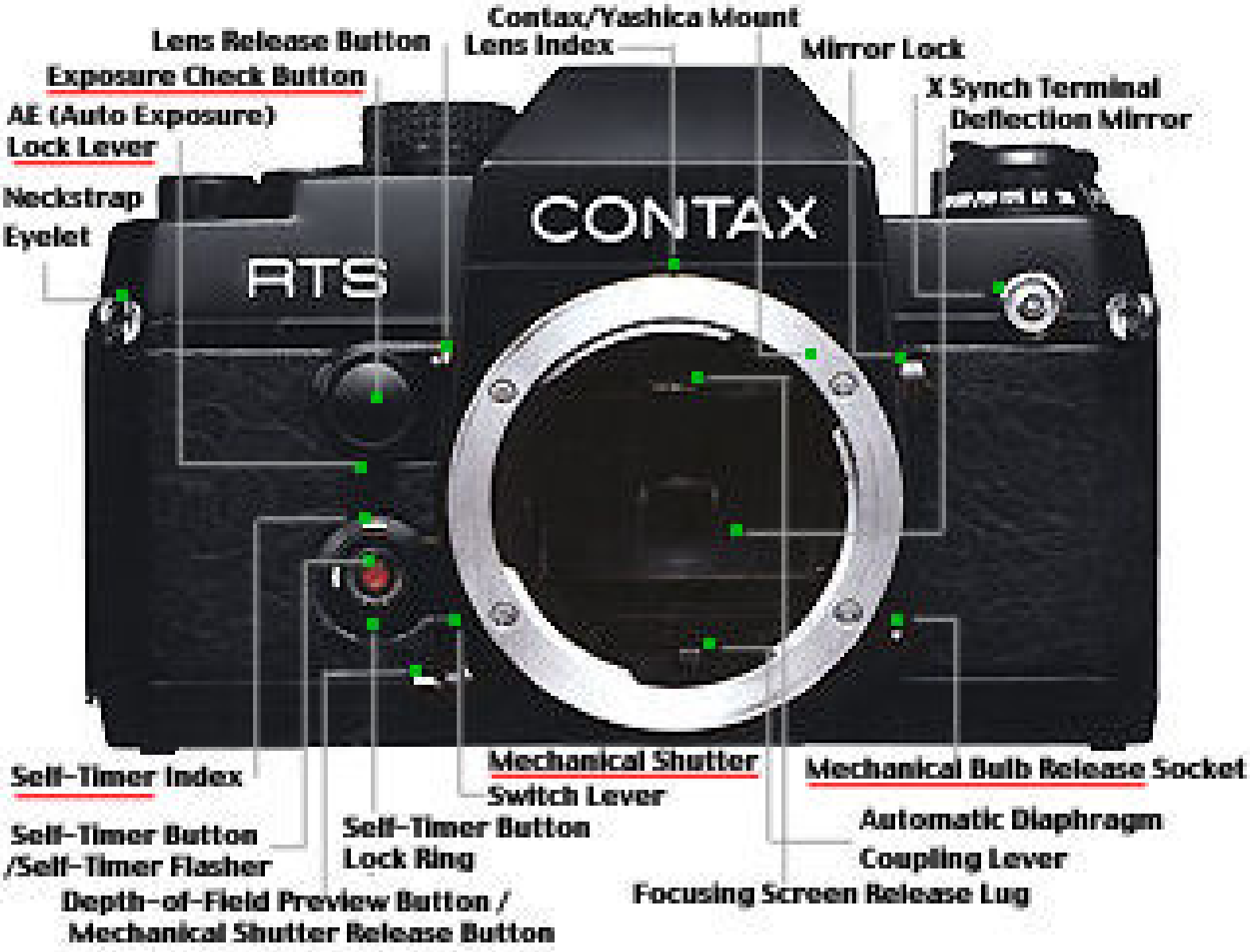
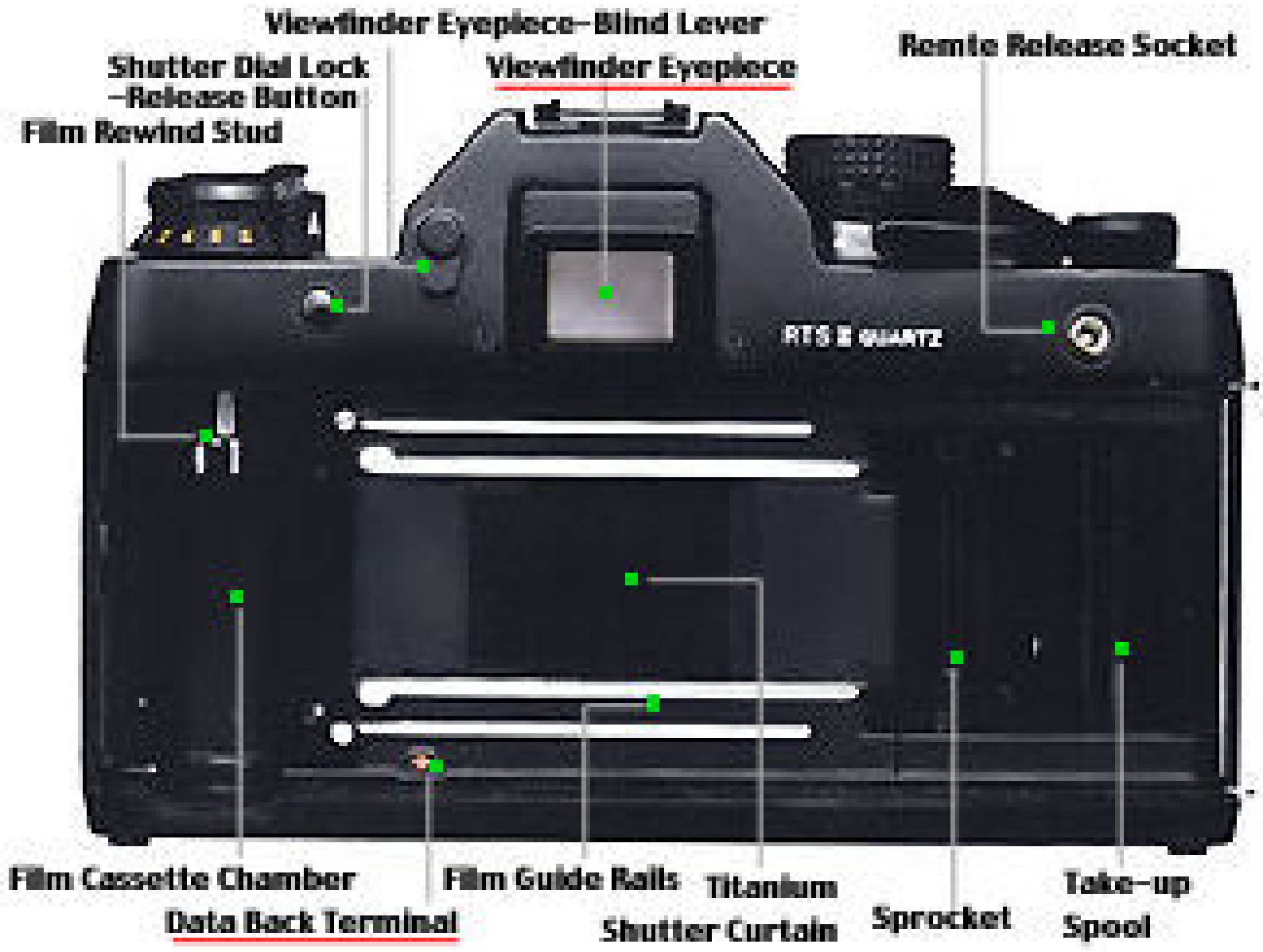

Contax/Yashica Mount
Lens Release Button
Lens Index
Mirror Lock
Exposure Check Button
X Synch Terminal
AE (Auto Exposure)
Deflection Mirror
Lock Lever
Neckstrap
Eyelet
CONTAX
RTS
Mechanical Shutter
Switch Lever
Mechanical Bulb Release Socket
Self-Timer Index
Automatic Diaphragm
Coupling Lever
Self-Timer Button
/Self-Timer Flasher
Self-Timer Button
Lock Ring
Focusing Screen Release Lug
Depth-of-Field Preview Button /
Mechanical Shutter Release Button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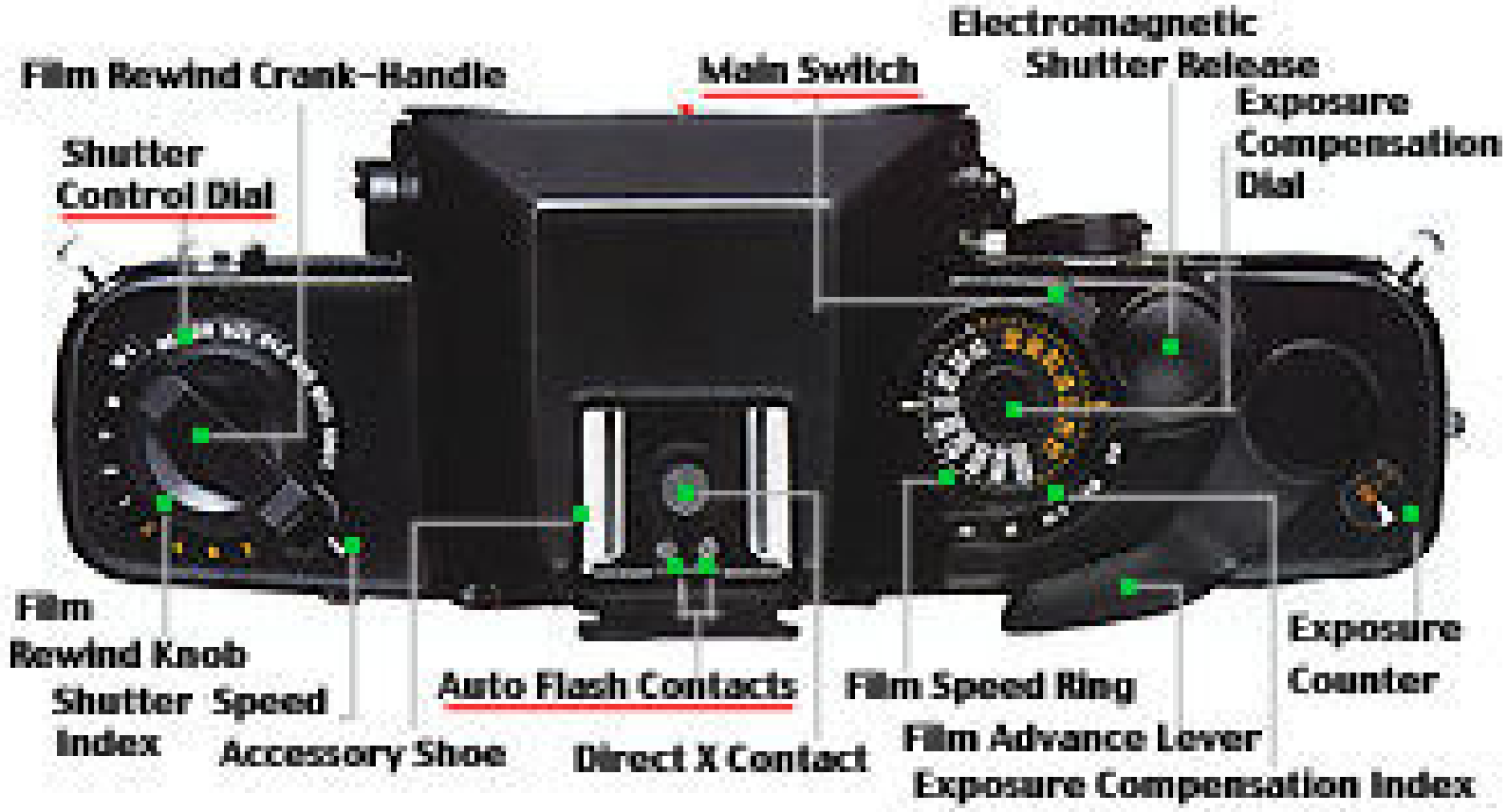
Shutter Dial Lock
–Release Button
Film Rewind Stud
Viewfinder Eyepiece
Remte Release Socket
RTS II QUARTZ
Film Cassette Chamber
Data Back Terminal
Film Guide Rails
Titanium
Shutter Curtain
Sprocket
Take-up
Spool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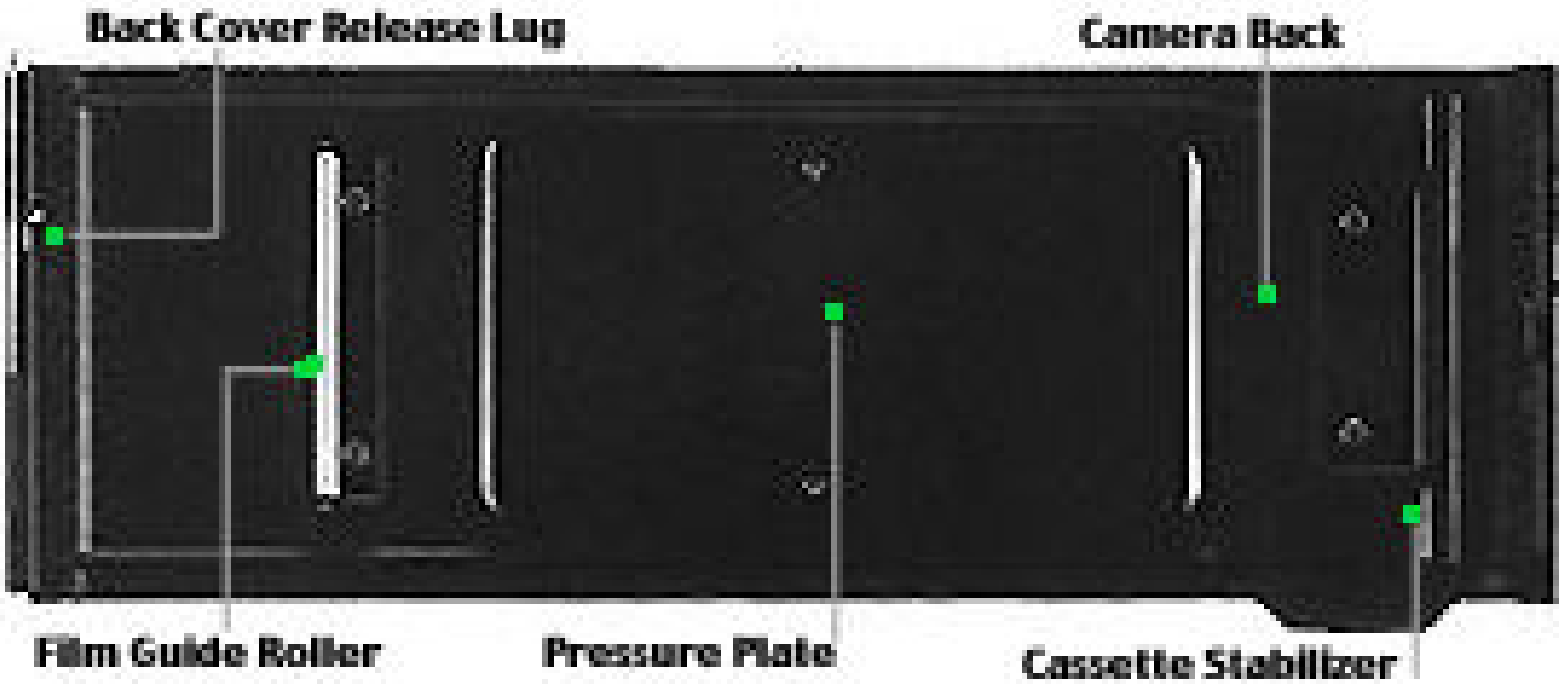
Main Switch
Electromagnetic Shutter Release
Exposure Compensation Dial
Shutter Control Dial
Film Rewind Knob
Shutter Speed Index
Accessory Shoe
Auto Flash Contacts
Direct X Contact
Film Speed Ring
Film Advance Lever
Exposure Compensation Index
Exposure Counter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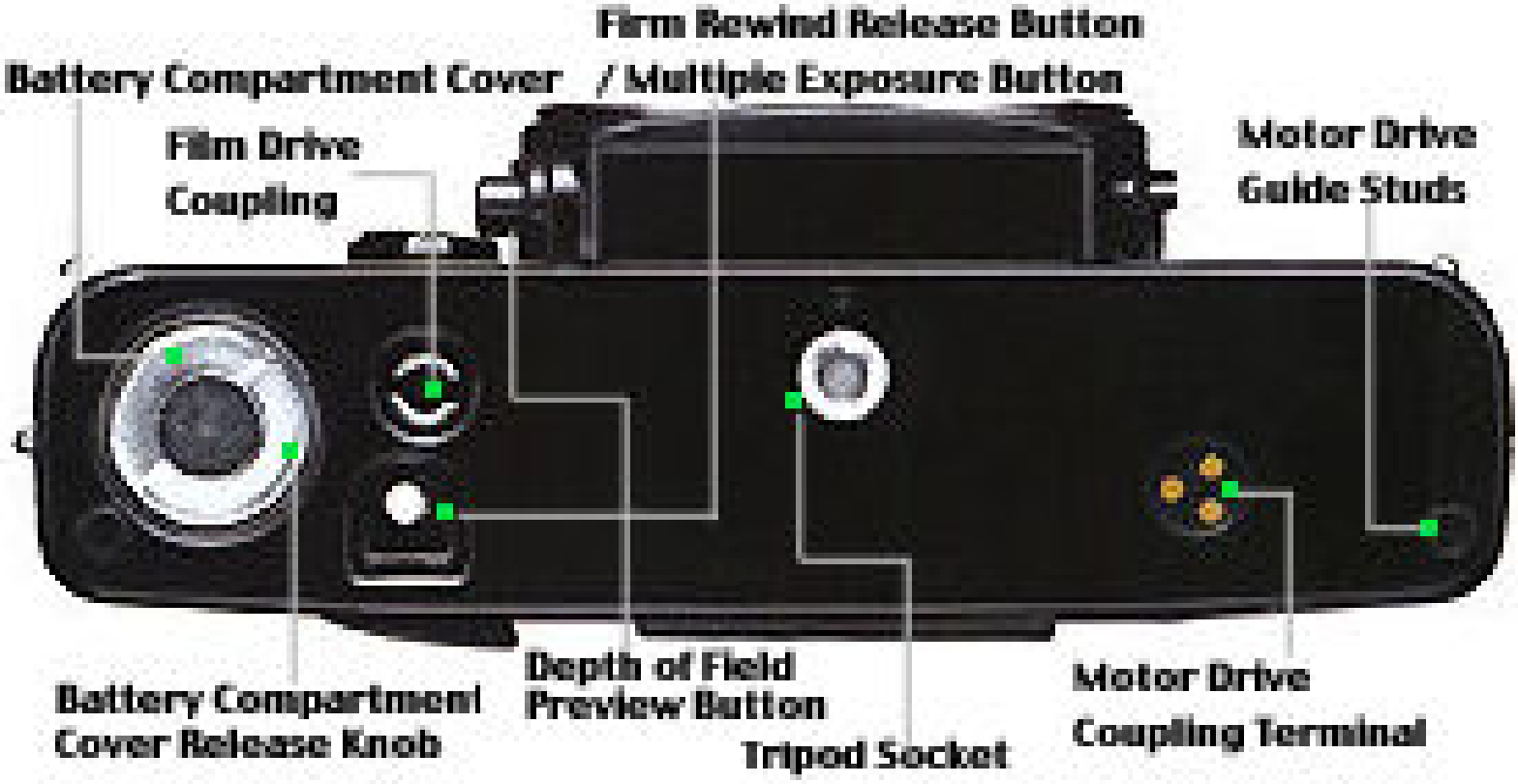
Camera Back
Film Guide Roller
Pressure Plate
Cassette Stabilizer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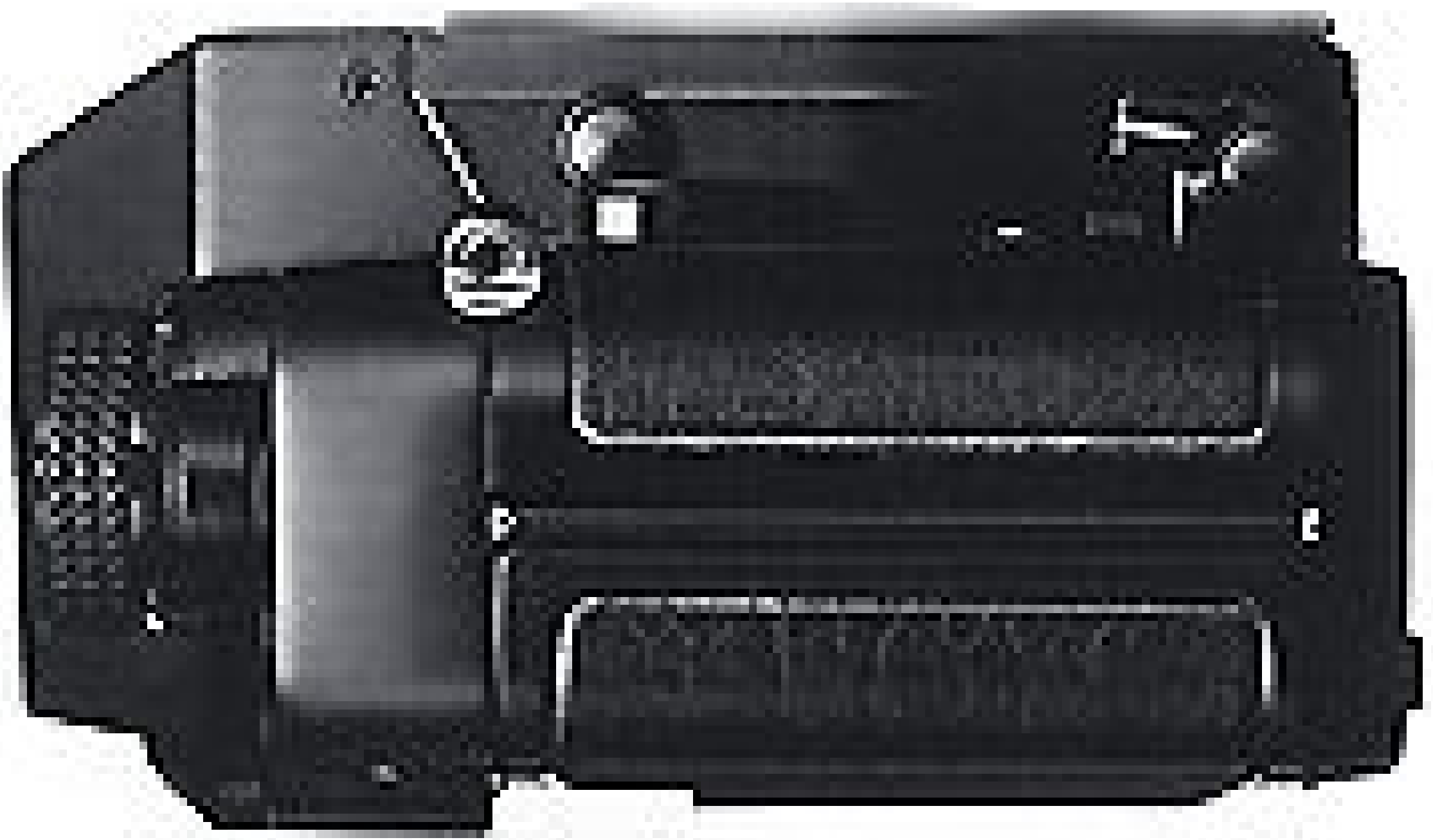
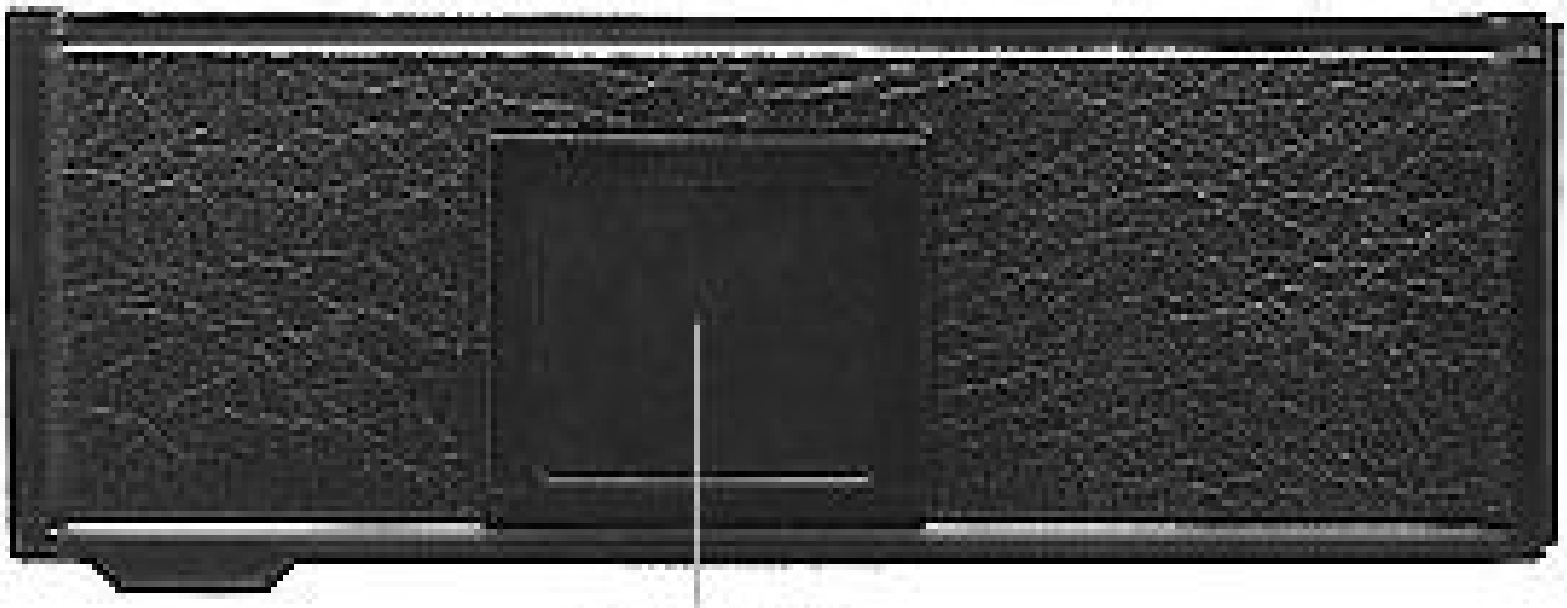
/ Multiple Exposure Button
Battery Compartment Cover
Film Drive
Coupling
Motor Drive
Guide Studs
Battery Compartment
Cover Release Knob
Depth of Field
Preview Button
Tripod Socket
Motor Drive
Coupling Terminal




Memo Holder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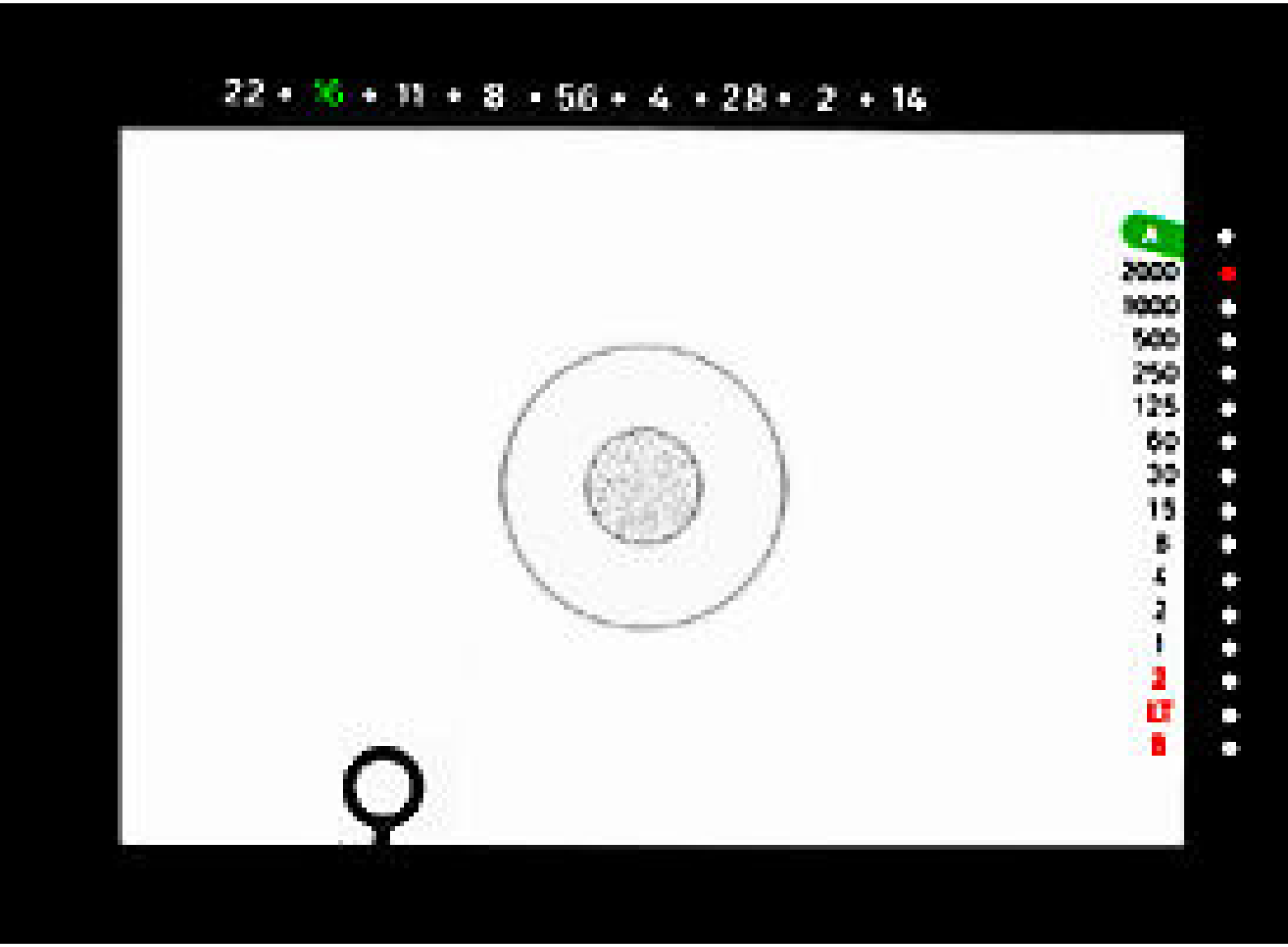
AF-ON
Nikon 5143219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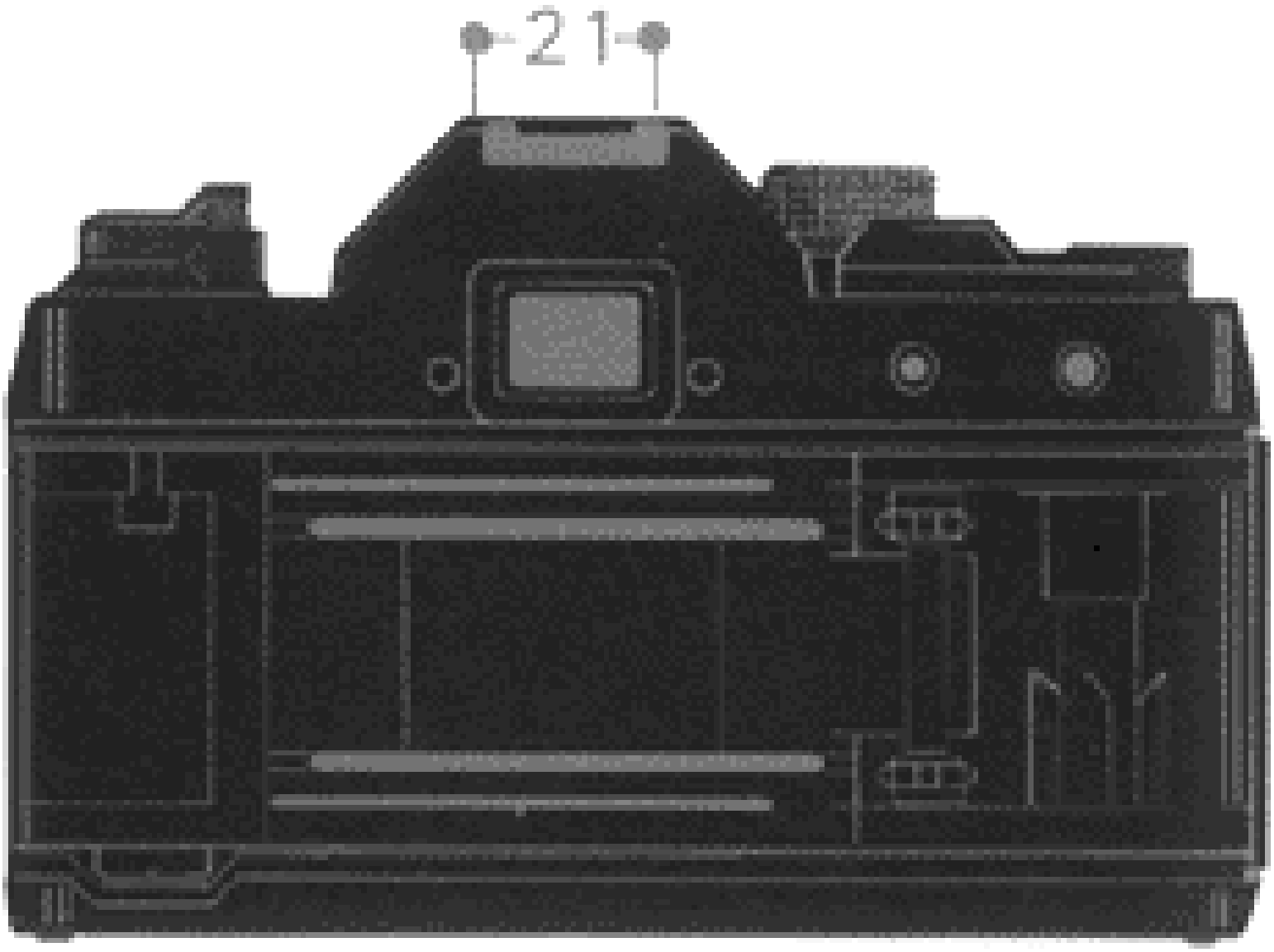
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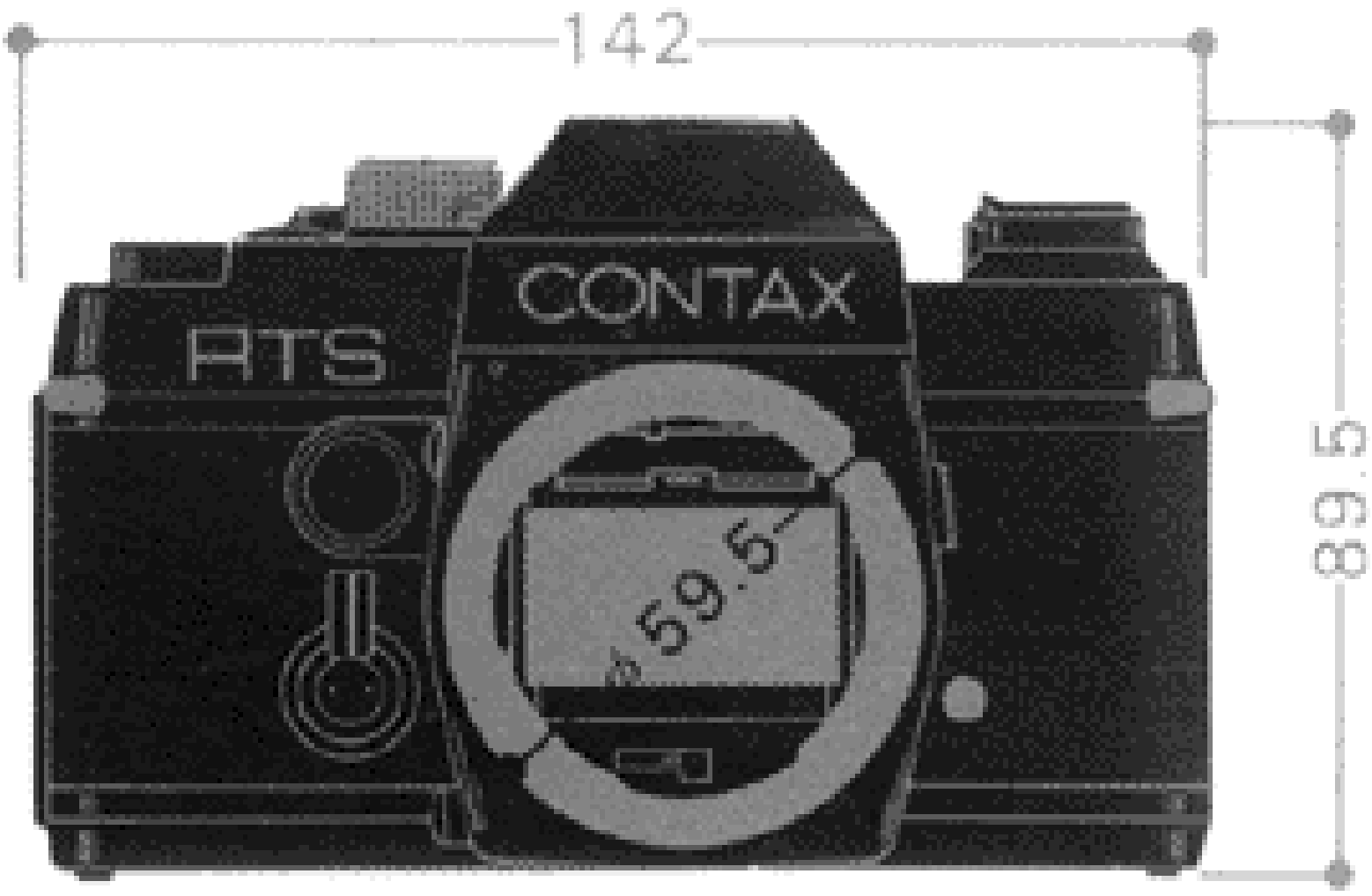
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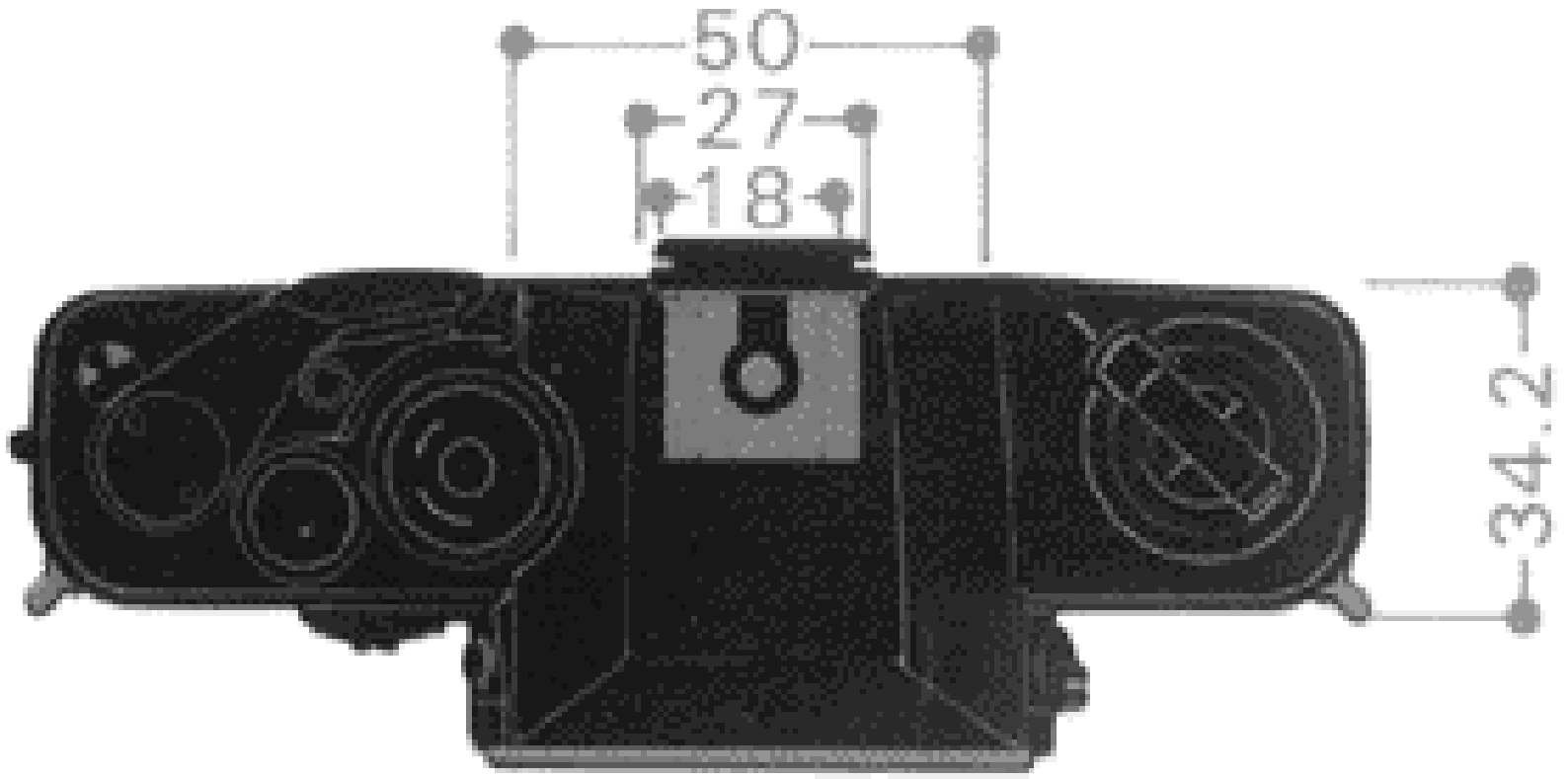
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CONTAX
RTS


Nikon
Nikon D1X


DAY
MONTH
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DATA BACK


DAY
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YEAR
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DAY
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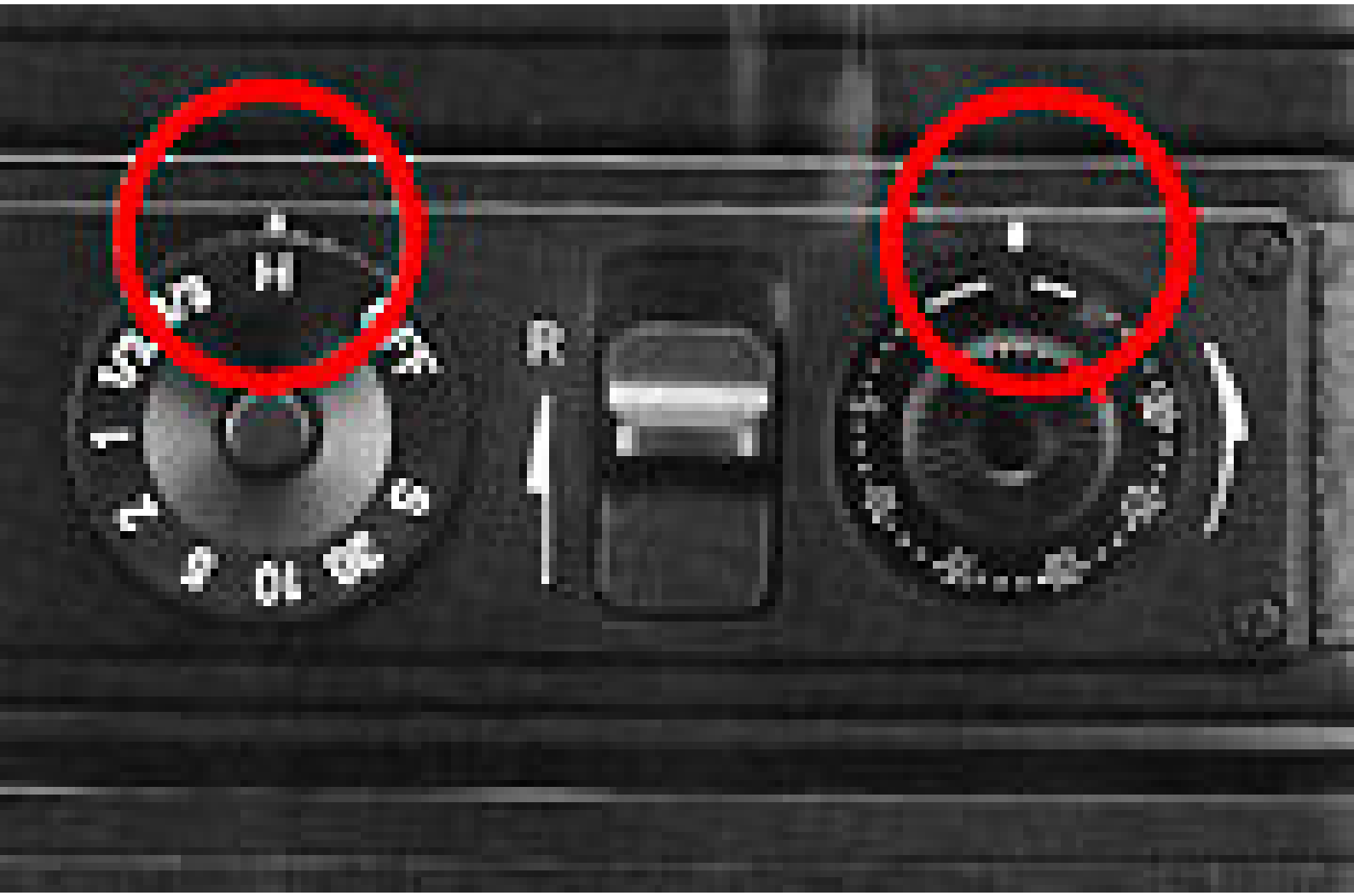
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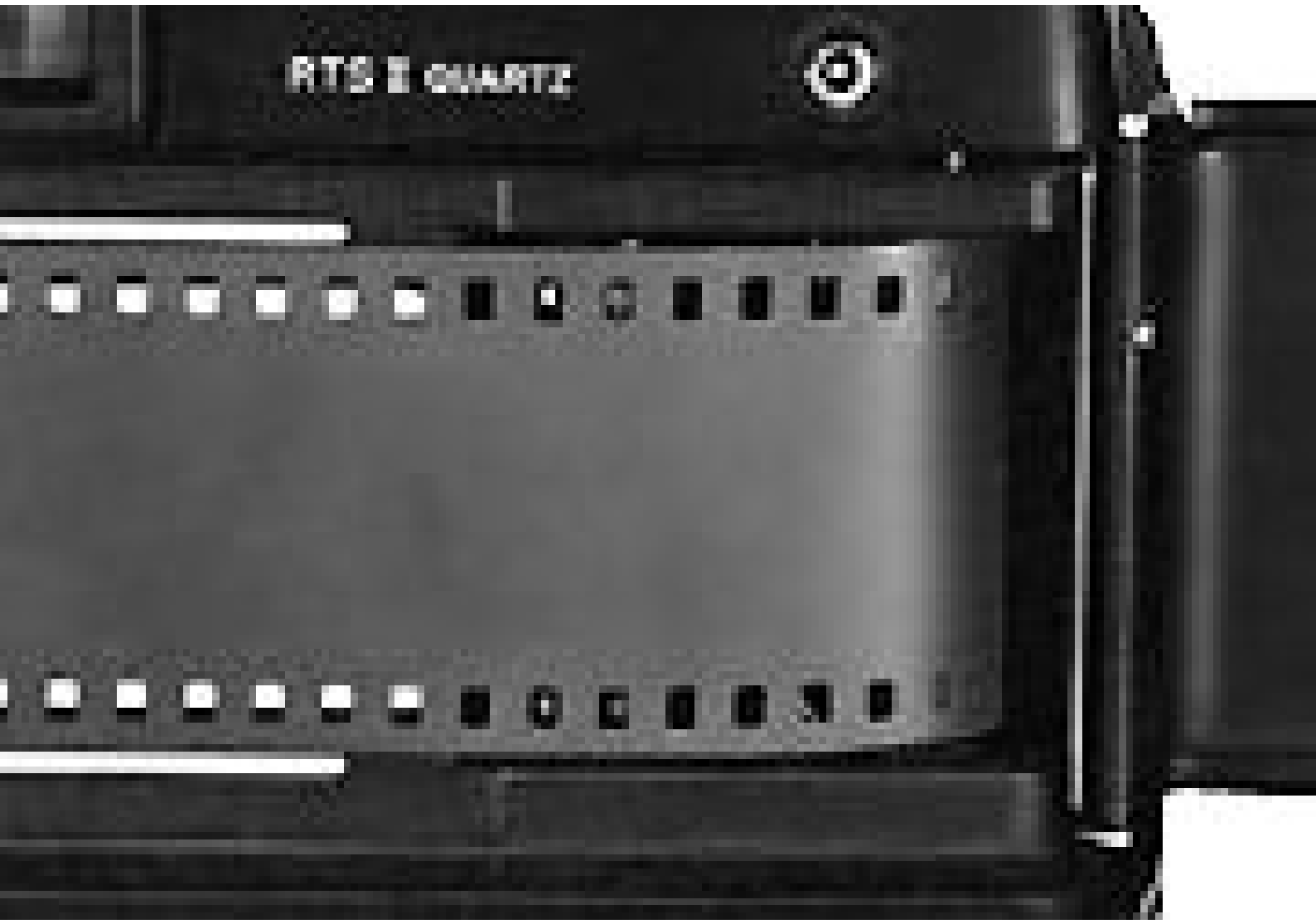
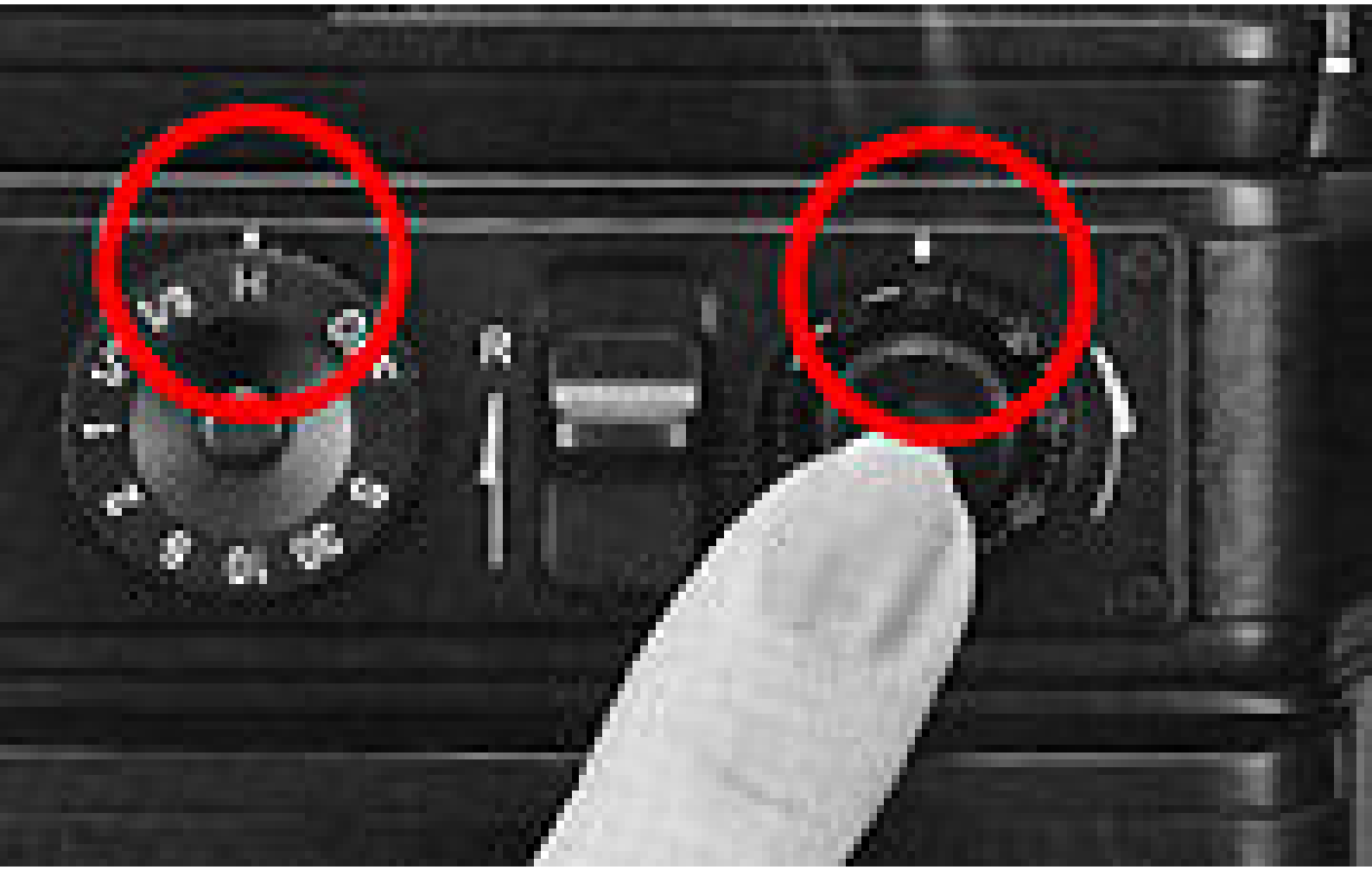

RTS II QUARTZ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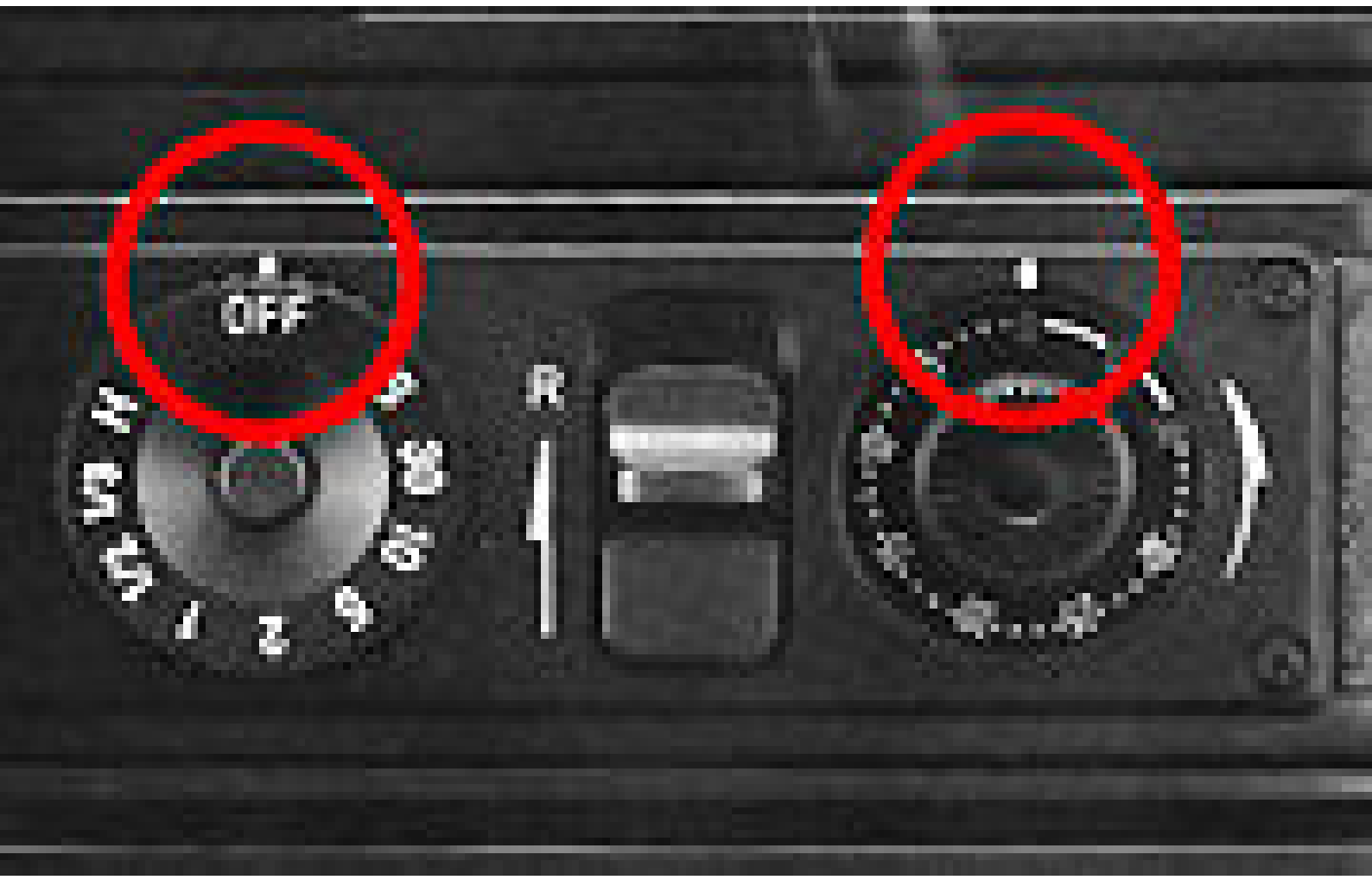
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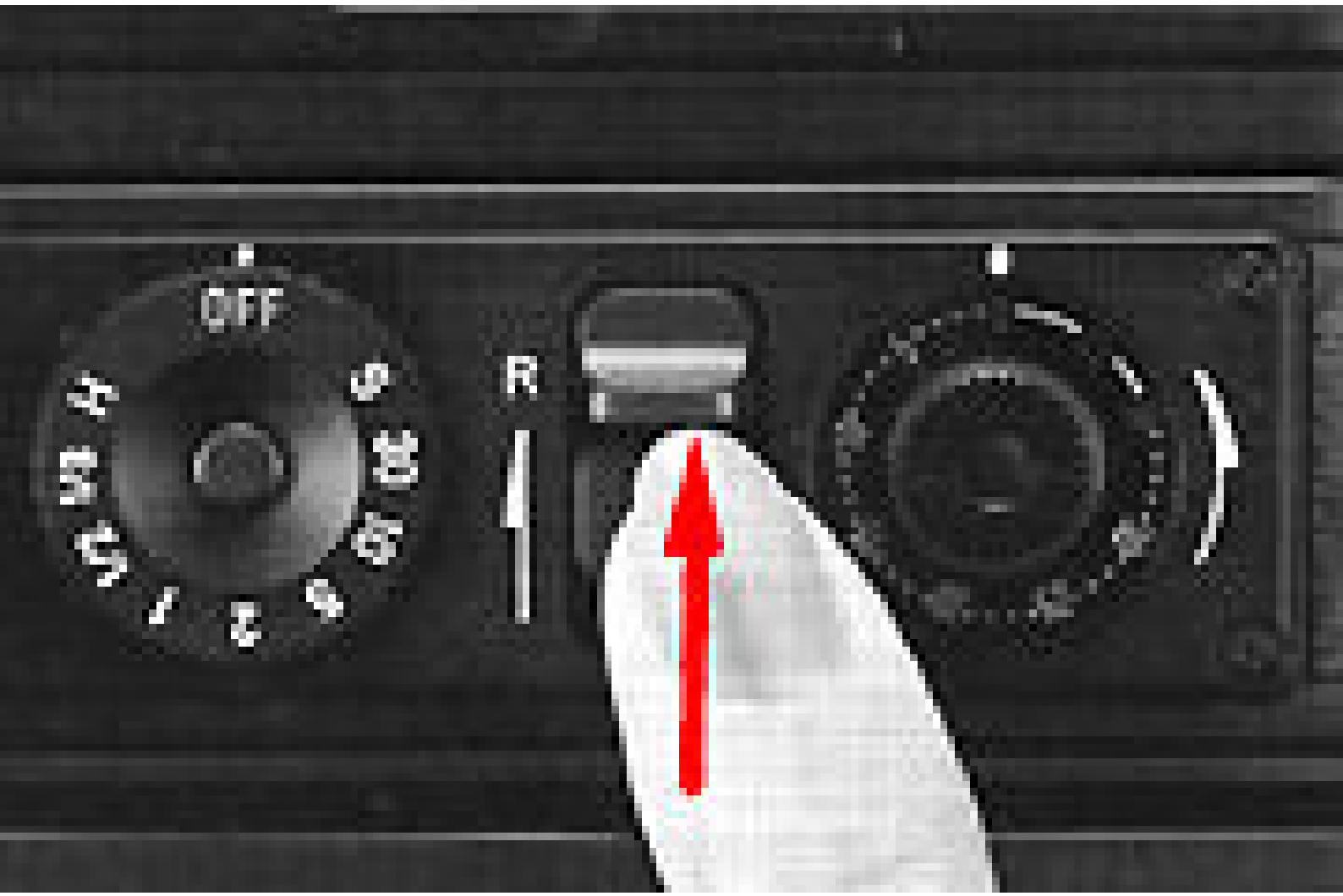
OFF
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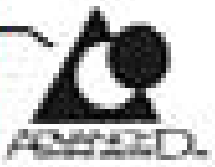
Locking Ring
Terminal on
Power Pack end
Terminal on
PMD end


Release
Cover

COOLPIX
990

D1- Series

IX240 format:
C type



135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CONTAX


CONTAX


CONTAX


Nikon


Nikon
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Status
Digital Camera Battery
Computer Controlled • Dual Output
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Canon


PENTAX


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OM-3 Ti


OLYMPUS


Nikon


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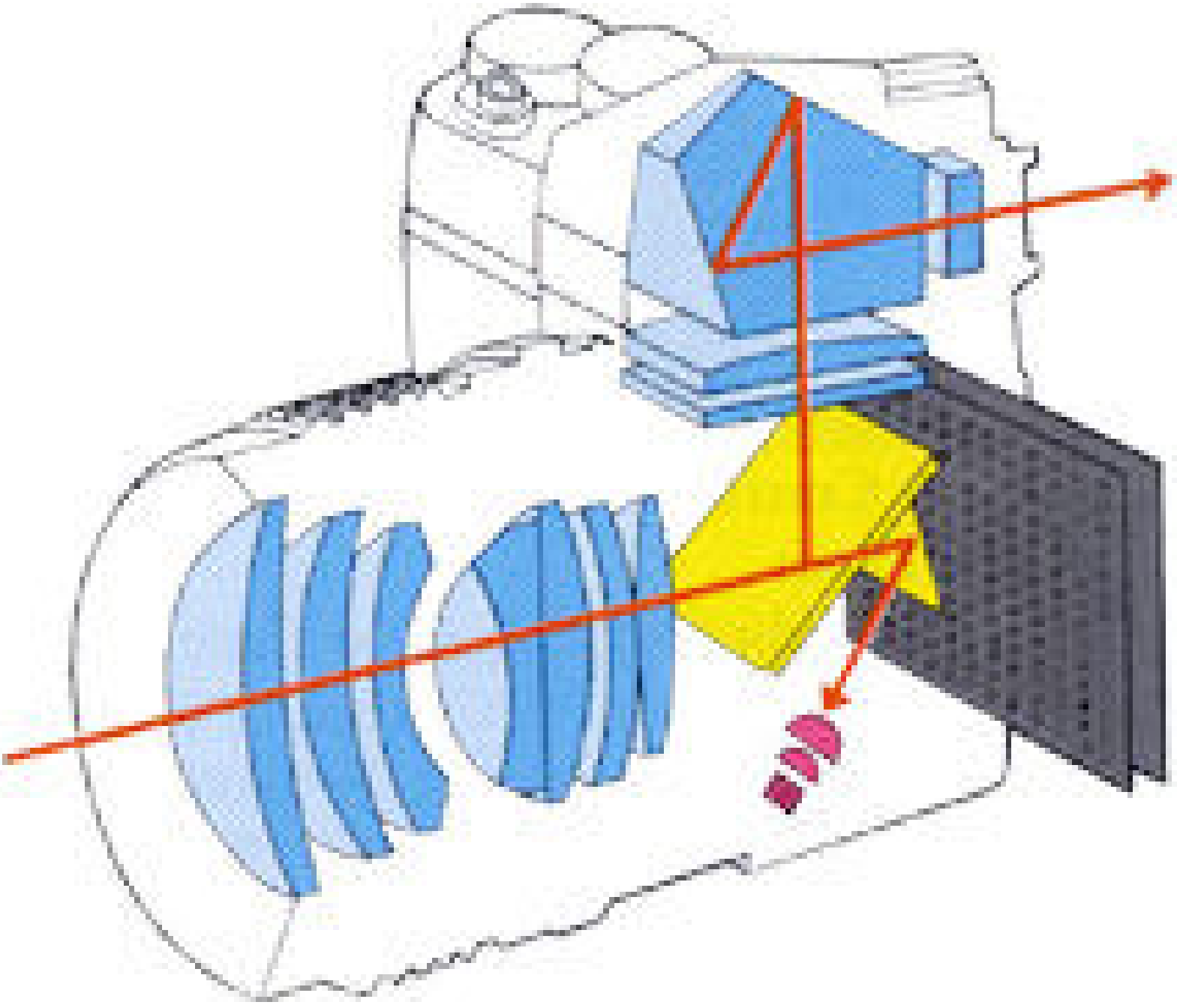

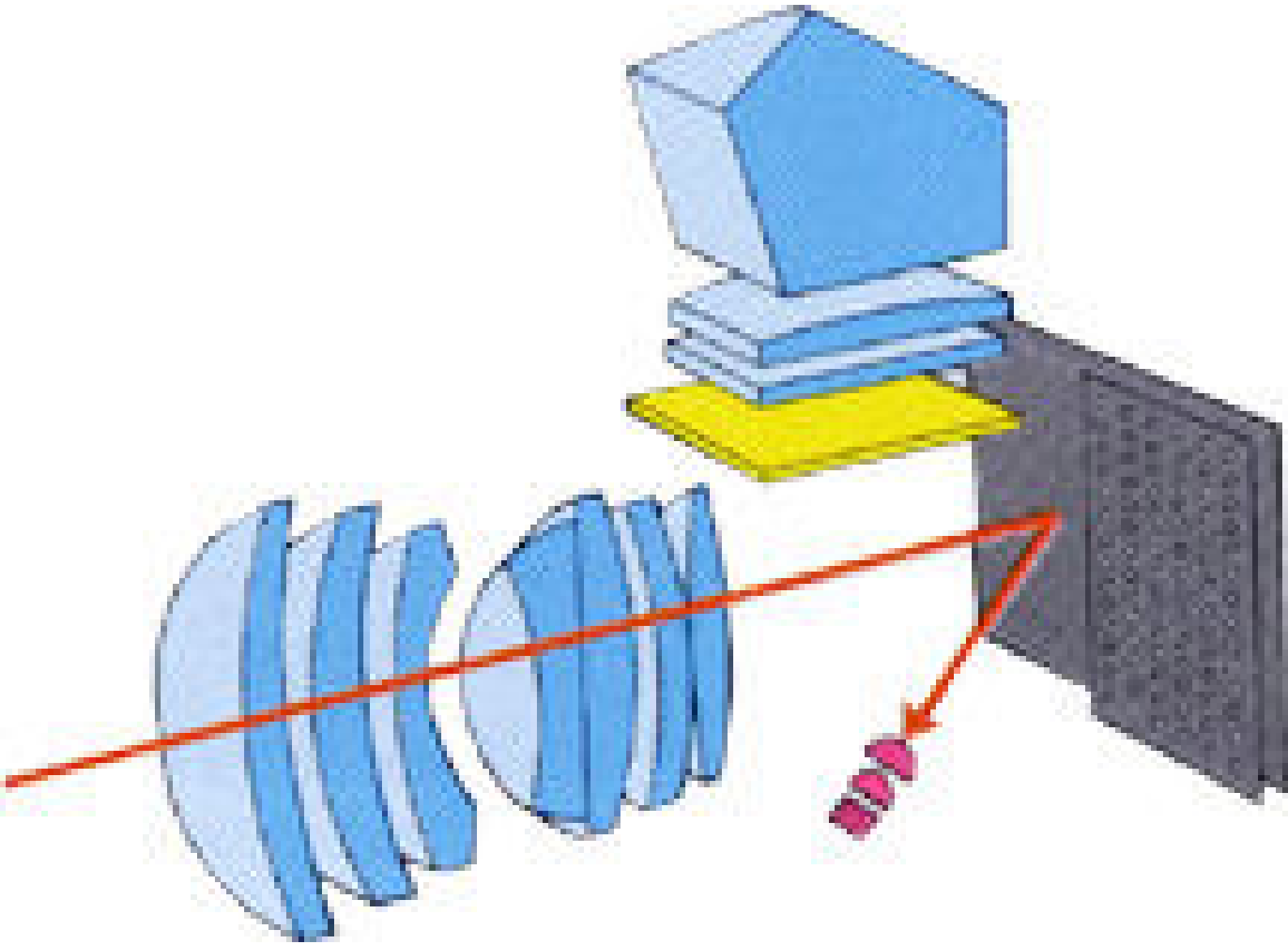


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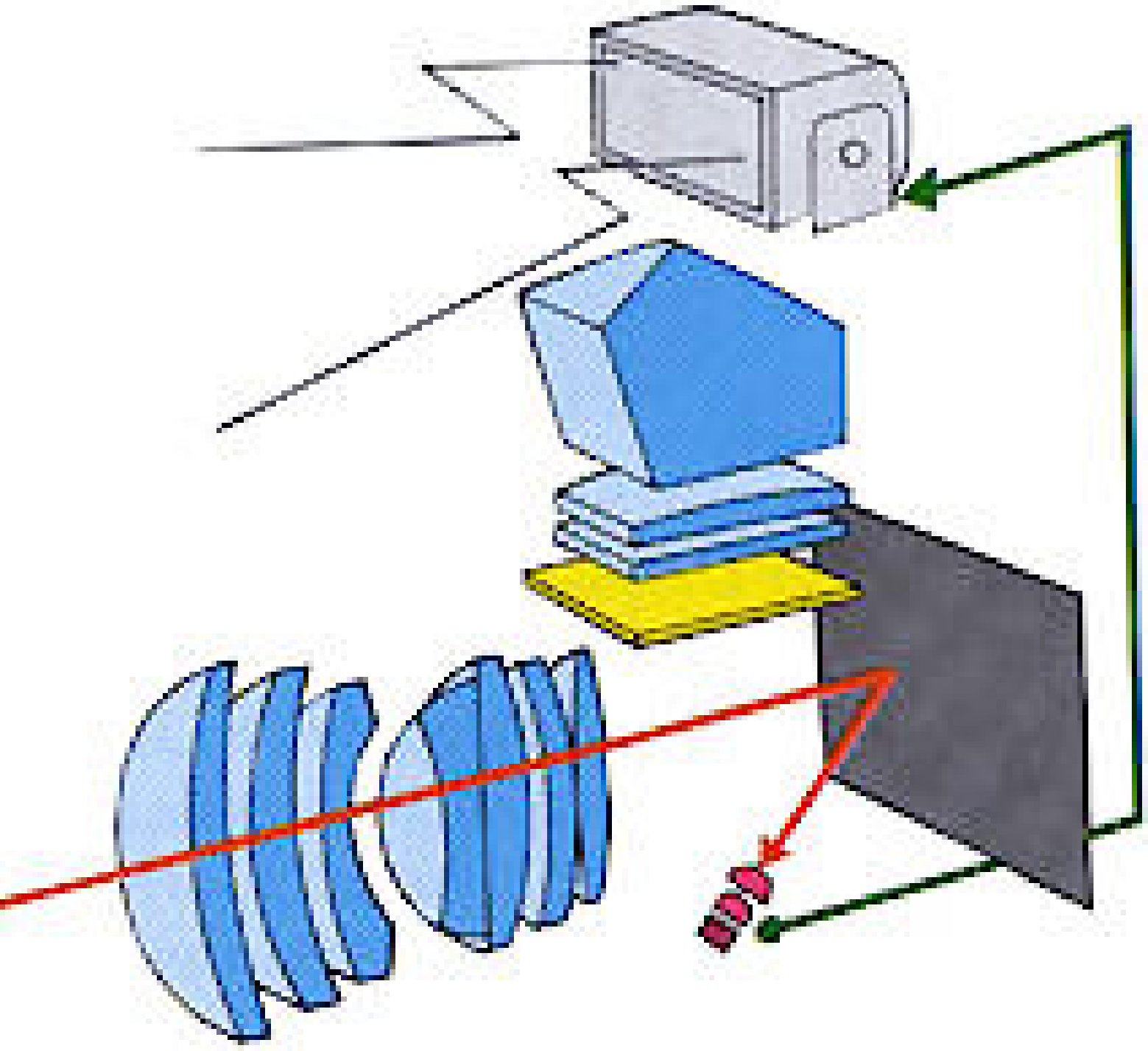


OLYMPUS


SHIMANO


OLYMPUS


OLYMPUS
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35mm 1:2.8 277078
MADE IN JAPAN


OLYMPUS
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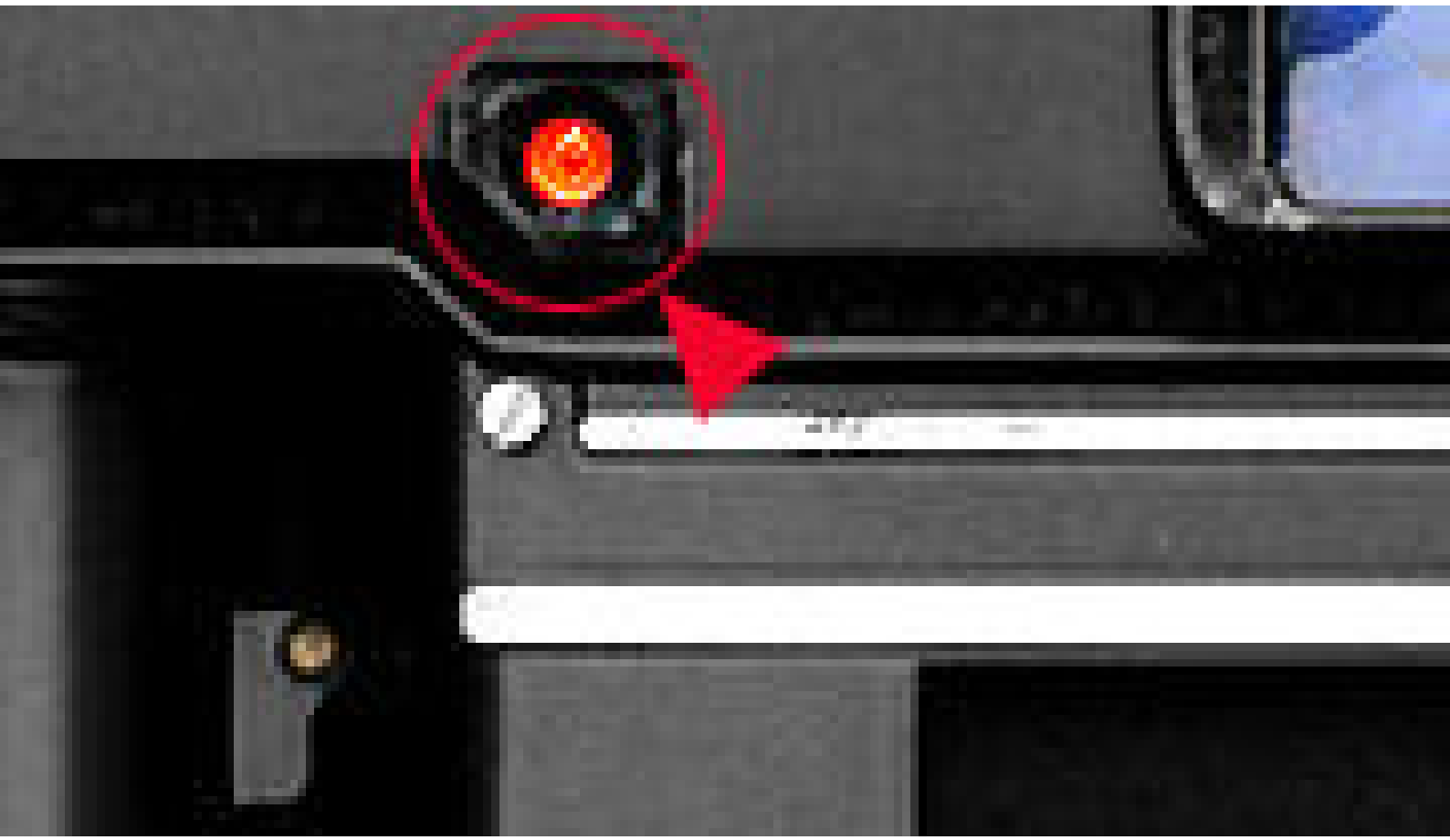
OM-2
CHECK
AUTO
MANUAL
OFF




OM-2N
CHECK • RESET
AUTO
MANUAL
OFF


Nikon
D1H

External design

Although the new camera incorporates five LSIs including an ultra modern microcomputer, a viewfinder LCD indicator optical pathway, an entirely new aperture-control mechanism, and other electronic functions, the body design conforms precisely to the appearance and dimensions of previous OM camera bodies. This is to permit full interchangeability with already available OM-System units such as motor drive and winder, flash, bulk film back, etc. The modern camera market is characterized by the appearance of new models that require the purchaser to buy new motor drive units, etc. and even a new collection of lenses. Olympus emphatically rejects this approach, and has guaranteed the integrity of the OM System through the appearance of each new OM camera model.

The pentaprism section is a vital element in determining the camera's "image." Because the accessory shoe is now fixed, the shape is somewhat different from that of the original OM-2 although the clearly angled "delta cut" remains. At the same time, an effort was made to coordinate the design with the new brand image leaders, the OM-4 and OM-3. Their influence is clearly seen in the lines, and the position of the brand and model identifications.

As far as the controls are concerned, the main consideration was to retain the much praised handling qualities and "feel" of the original OM-2. Anyone who has used the OM-2 will take naturally and effortlessly to the OM-2S PROGRAM. The detachable grip designed for the OM-4 can also be used on this camera. As befits a top-quality camera, the finish, like that of the OM-4, comprises a double layer of matte black paint over black chrome plating. The result is unusual durability in use.

Construction and viewfinder

The main body follows the construction of the OM-2, with two separate diecast aluminum structures forming a tough body skeleton. Both upper and lower body panels are also of metal construction, assuring along with the diecast body the ruggedness to withstand the roughest treatment.

The viewfinder display is shown in Fig. 1, while the optical pathway of the finder display is illustrated in Fig. 2. The display is located in the same position as in the OM-2, to the left of the viewfinder image outside the viewfield, in a vertical array. As in the OM-4, the display itself utilizes a large scale LCD to show the information in white on a blue background.

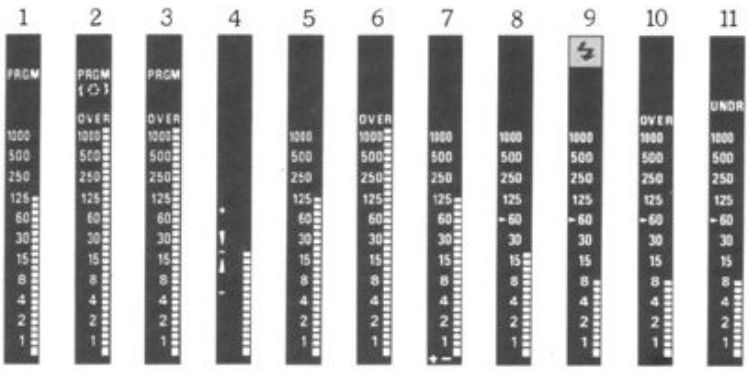


Fig. 1 Viewfinder Indications

1. During TTL Direct "OTF" Programmed AE mode
2. Flashing warning to indicate lens aperture is not closed down enough during Programmed AE mode
3. Flashing overexposure warning during Programmed AE mode
4. Manual/Spot Metering display
5. TTL Direct "OTF" Auto mode display
6. Flashing overexposure warning during Auto mode
7. Exposure Compensation indication
8. Flash indication
9. Full flash charge indication flashes to confirm correct flash exposure
10. Flashing indicator to inform flash shot was overexposed
11. Flashing indicator to inform flash shot was underexposed

In Programmed AE mode and Aperture-Priority AE mode the shutter speed is indicated. In Manual/Spot Metering mode, the degree of variance from the standard recommended exposure value is shown in 1/3 f-stop increments by an easy-to-read analog bar graph display.

The viewfinder display can be read easily even in dim light thanks to a translucent white window set in the front of the upper body panel, through which light from the outside is channeled by a light guide to illuminate the LCD. The LCD is located in a position that is optically equivalent in distance to the viewfinder screen. The LCD image illuminated by the light guide is further directed to the viewfinder magnifier lens via a small prism attached to the lower part of the incident surface of the pentaprism. The merit of this type of construction is that the optical pathway of the finder display can be located along the side of the pentaprism section, thus allowing the size of the pentaprism section itself to be reduced to the smallest possible dimensions.

The reason the light window was located on the front of the camera facing the subject is that this assures it will not fall into shadow from the photographer's headgear, etc. It is also in a position that is not likely to be blocked by the photographer's fingers.

The built-in illumination lamp is attached to the upper part of the first reflecting surface of the light guide, and functions to illuminate the finder display when there is not sufficient outside light. It features an automatic 10-second switch-off to conserve battery power.

The viewfinder magnifier lens is of 2-element-in-2-group construction and produces a 0.86X magnification viewfinder image with a 50mm F1.8 lens at infinity.

The finder viewfield ratio is 97% of the actual taking area both vertically and horizontally, the ideal ratio for professional use.

Focusing screens are changed in exactly the same way as with the OM-2, and a total of 14 different interchangeable screens are available in the OM System.

The shutter is based on a unit type newly

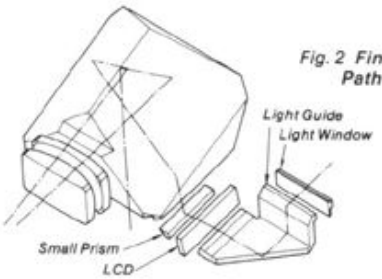


Fig. 2 Finder Light Path Diagram

developed for the OM-4. It features a cloth curtain, with horizontal travel, and electromagnetic control that allows a top speed of 1/1000 second. In fact, the influence of the new OM-4 shutter design can be seen in several areas. There are many improvements in the travel, drive and control mechanisms, and still greater stability and accuracy at high shutter speeds. Further refinement and strengthening of the brake mechanism assures even smaller shock and noise values. High-speed revolving parts are equipped with ball bearings and special lubricating fluid for superior durability and low-temperature performance. And, naturally, the leading shutter curtain features a random pattern light reflecting surface as with the previous OM-2, which is used during TTL Direct "OTF" Light Measuring modes.

The new camera has a shutter lock mechanism that functions as an automatic warning that batteries are depleted. The mirror remains locked in the up position, while the leading shutter curtain is locked closed. To unlock it, the shutter speed ring should be turned to the red 1/60-second position or "B". These two shutter speeds are mechanical, so they can be used even when the batteries are exhausted.

Exposure measuring methods

1. TTL Direct "OTF" Light Measuring (center-weighted average metering):

In Programmed AE and Aperture-Priority AE modes, the camera uses the TTL Direct

The Simple Handling of High Technology! The New OM-2 Comes with All the Extras of Spot Metering and Program Function

by Yoshihisa Maitani

When the OM-2 was announced in 1975 it was the world's very first camera to feature TTL Direct "Off-the-Film" ("OTF") Light Measuring, making it possible for the camera to control every element of photography up to and including the intensity of the flash emission. Now, ten years later, TTL Direct "OTF" Light Measuring has been adopted industry-wide as the metering system of choice for top-of-the-line single-lens reflex cameras.

The newly introduced OM-2S PROGRAM is solidly based on all the achievements of the original OM-2 and the many improvements it has undergone over its ten-year history. In addition it introduces a Manual/Spot Metering system, plus another world first: TTL Direct "OTF" Light Measuring in the Programmed AE mode.

Spot Metering is more than ever an essential feature for truly creative photography. The Spot Metering function was highly acclaimed in the Olympus OM-4, where it was first introduced. In the new OM-2, Spot Metering has been adopted specifically for the Manual mode, at last giving true meaning to the Manual mode capability. In recent years, manual operation has served more as a sales point than a really useful feature, and it has suffered virtually complete neglect in actual photographic situations.

The Program function in the new camera was specially developed by Olympus to take advantage of TTL Direct "OTF" Light Measuring. It's a world first. And, astonishingly, it features full interchangeability with regular OM System Zuiko lenses and other system units. There are no modifications, and there is no need to replace previously owned OM System units. It's a remarkable example of the Olympus commitment to the OM System—and loyalty to its customers.

In the Aperture-Priority AE mode, the OM-2S PROGRAM performs just like the previous OM-2, with a superb command over the gamut of photographic subjects.

All this goes to demonstrate that the new OM-2S PROGRAM is a camera that will appeal to a wide segment of the photographic public, from professionals impressed by its performance and versatility to the average amateur who loves its exceptional ease of use.

Being based on the OM-2, the new camera naturally features the same tough, durable construction. The shutter mechanism and related parts are of high strength tempered steel. The bearing section utilizes ball bearing trains for the smoothness and robustness to stand up to super fast motor drive operation. The upper and lower body panels which protect the camera from the outside and from knocks and scratches in use are, of course, of metal construction. Nowadays when competing program cameras nearly all adopt plastic upper and lower panels, the OM-2S PROGRAM marks the introduction of a new genre of camera on the market. It has the convenience of programmed exposure capability. But along with that it offers the performance of spot metering and the toughness to stand up to rough professional handling.

OM-2S PROGRAM

Many professional photographers are reluctant to experiment with new performance features. In a sense they are very conservative. Way back when through-the-lens exposure meters were first introduced, they shunned these new-fangled devices and insisted on using their own awkward independent exposure meters. And when auto exposure systems were first introduced, they shied away from them in just the same way.

However, with the passage of time professionals, too, have begun to take advantage of these features, until today they have become just as indispensable for professionals as for common photo enthusiasts.

The idea of the Programmed AE mode was exactly the same. Professionals didn't want to hear about it. Today, though, several years after the program format was first introduced to SLRs, they have at last come around to admitting that there are certain circumstances where it is legitimate and even useful to shoot in the Programmed AE mode.

When we look around at the program cameras that have been available until now, we see that they are predominantly of plastic construction and really not suitable for the kinds of strain imposed on a camera by professional use. That is what led to the idea that it was time to produce a program camera able to stand up to professional punishment. To make this concept a reality, Olympus took the OM-2—a camera widely used and liked in professional circles—as a base, then added program capability. Going one step further, Spot Metering capability was added, too. That, in a nutshell, is the basic design concept of the OM-2S PROGRAM, a camera that retains the advantages of TTL Direct "OTF" Light Measuring, and supplements them with program and Spot Metering functions.

"OTF" Light Measuring method introduced with the original OM-2. Instead of metering the light immediately before the exposure in the conventional way, this method measures the light during the exposure, as the light actually reaches the film. Consequently it is incomparably more accurate.

During both of these operational modes, the same exposure system guarantees exceptionally accurate and versatile flash photography, with any of the OM System T Series flash units.

The light sensor is located in the base of the mirror box. It is used both for TTL Direct "OTF" Light Measuring for the actual exposure, and to provide light value indications for the finder display. Since the sensor is inside the mirror box, accuracy is unaffected by the possibility of stray light entering through the camera eyepiece. Another advantage: even with clear field type interchangeable focusing screens, both the viewfinder indication and the actual exposure are completely accurate.

2. Spot Metering:

In the Manual mode, the OM-2S PROGRAM switches to a Spot Metering system based on that devised for the OM-4. The light value is measured for only the central part of the finder image (corresponding roughly to the area covered by the microprism section of the standard focusing screen, or about 2% of the total picture area). This provides the photographer with an exceptional degree of creative control over the exposure—and feeling—of the final composition. It is most useful for backlit subjects, studio photos using special lighting effects, compositions with sharp contrasts in brightness and other tricky lighting situations. The photographer is free to choose precisely which area of the composition should receive the optimum exposure setting.

The OM-2S PROGRAM automatically selects Spot Metering when switched to Manual. Operation is extremely easy. Simply center the camera on the part of the composition you wish to expose for (for example, the face of a portrait subject), select the appropriate aperture and shutter speed to center the bar graph at the correct exposure value, and you have set the desired spot reading. Now you are free to compose the picture as you like, and release the shutter. The finished picture will accurately reflect the effect you had in mind when you planned the shot.

In recent years, with the increased convenience and sophistication of auto exposure cameras, the Manual mode has become something of a relic, a feature to keep the purists happy, but one that is in fact very seldom used. The special Spot Metering function in Manual mode of the OM-2S PROGRAM gives this mode meaning and usefulness again.

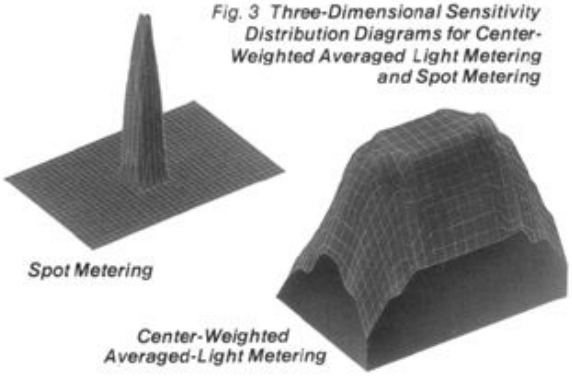
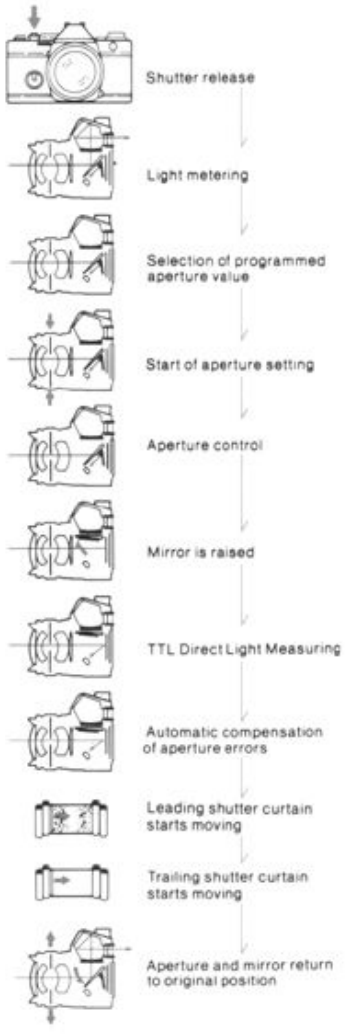


Fig. 3 Three-Dimensional Sensitivity Distribution Diagrams for Center-Weighted Averaged Light Metering and Spot Metering

Fig. 4 TTL Direct "OTF" Program Operation Sequence



Programmed aperture setting

1. "OTF" Programmed AE:

The OM-2S PROGRAM incorporates the world's very first TTL Direct "OTF" Light Measuring Programmed AE system. TTL Direct "OTF" Light Measuring, unlike previous shutter control systems based on an exposure memory device, measures the light that actually reaches the film at the instant of exposure. Consequently it is able to compensate even for changes in brightness after the shutter is released.

Based on the light measuring system of the OM-4 (located inside the camera in the mirror box section) the innovative Olympus aperture control system in the OM-2S PROGRAM utilizes a new type of aperture governor and an extremely responsive aperture control magnet. The new system has the enormous advantage of making it possible to use regular, unmodified OM-System Zuiko lenses in the Programmed AE mode. The only settings needed for TTL Direct "OTF" Programmed AE operation are switching the camera mode selector to PROGRAM and closing the lens aperture down to the minimum available value.

2. "OTF" Program function:

The program chart shows the shutter speed-aperture coupling pattern using the 50mm F1.8 lens as the standard. Starting from slow shutter speeds, the lens is set at wide-open aperture until the shutter speed reaches 1/60 second, with only the shutter speed changing as brightness conditions vary. At shutter speeds faster than 1/60 second, the

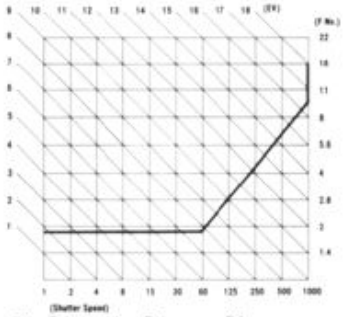


Fig. 5 Regular Program Diagram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program coordinates changes in shutter speed and aperture at a 6/5 inclination as shown on the graph. A major consideration of the program design was to keep shutter speeds as high as possible for general use in order to minimize camera shake. For still more intensely lit subjects the aperture is progressively stopped down to provide increased depth of field.

3. Variable "OTF" Program:

The adaptation of TTL Direct "OTF" Light Measuring allows the photographer to tailor the program to his own specific requirements, by intentionally setting specific aperture values on the lens. In effect, this means the photographer has an unlimited choice of program settings, and the ability to predetermine depth of field while retaining the convenience of program operation.

Fig. 6 shows the program pattern obtained when the lens aperture is intentionally set to F5.6 in order to assure the desired depth of field. And, as the exposure accuracy is quite unaffected by the selected aperture setting, any number of program patterns can be set, as you can see in the same figure.

Although the lens aperture should be set to the minimum for normal program operation, sometimes surprise shots catch the photographer with a different lens setting. Most program cameras respond by giving a wrong exposure and ruining the picture. But the OM-2S PROGRAM will, as we have seen above, still give correct exposures. The only proviso is that the shutter speed for the subject must be within the 1/1000-second maximum speed available. If the subject is too bright, the overexposure situation is indicated in the viewfinder by this symbol (▯▯) and the word "OVER" flashing on and off on the LCD display. There is also a PCV audio warning to make doubly sure no pictures are accidentally lost if the lens aperture ring is inadvertently turned while taking the camera out of the case, etc.

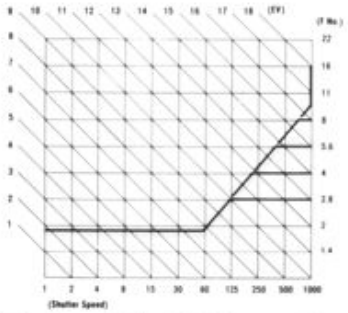


Fig. 6 Continuously Variable Program Diagram

4. "OTF" Program Flash function

"OTF" Program Flash is possible when any of the OM System T Series flash units is used. The flash unit will fire automatically whenever it is switched on and the shutter speed is 1/60 second or slower. In this situation, the camera's program automatically shifts three aperture settings to the special Flash Program. The flash emission at this predetermined aperture is then regulated by the camera's TTL Direct "OTF" Light Measuring system to assure a perfect exposure. As with the OM-4, the results of the flash exposure— whether the picture was correctly, over- or underexposed—are shown immediately afterwards on the viewfinder display.

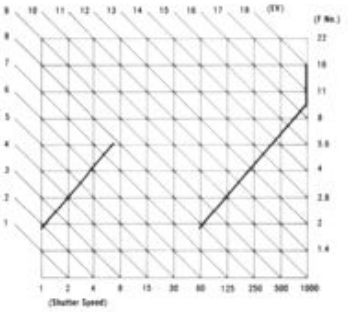


Fig. 7 Program Diagram with Use of T Series Flash Unit

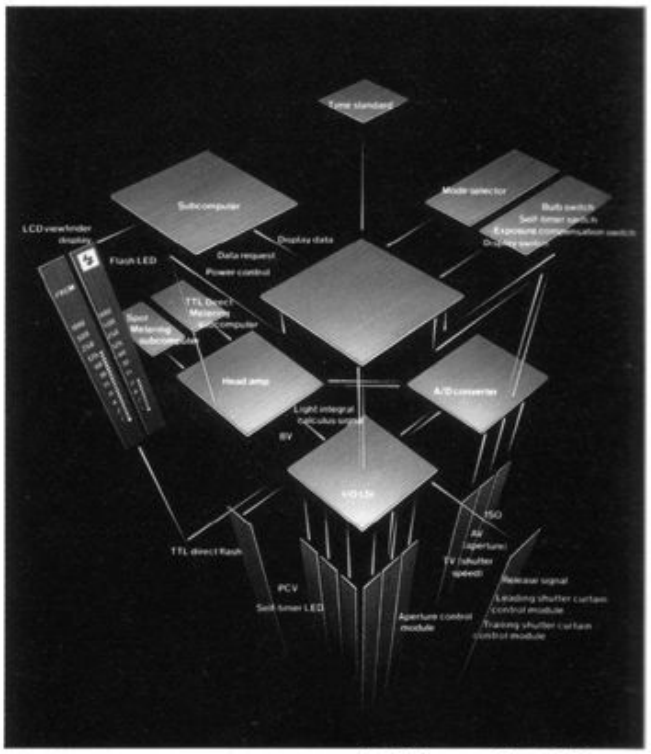


Fig. 8 Exposure Control Diagram

The meaning of a true system camera

The important thing about a true system camera is that it can shoot virtually anything. And that goes all the way from astrophotography of stars and planets, to photomicroscopy of minute organisms. Obviously, though, that kind of versatility calls for more than just a basic camera body. To achieve precisely the kind of performance you need, you have to assemble together a number of different, modular system units. The possibilities are staggering. But so is the investment. It is practically impossible to buy an entire photo system at one time. The way to build your own system is to start off with a small number of units, and add new ones when they are needed. That's just plain common sense.

Unfortunately, many photo systems do not allow you to build up a system gradually over the years. Just when you have built up an impressive investment in equipment, the camera model and the entire system change. You can't use your old system with one of the new cameras. You can't use new system units with your previous equipment.

Olympus was determined not to get that kind of a reputation. One of the central design concepts of the OM System was to maintain complete compatibility among system units, regardless of the time they were purchased and of the appearance of new OM camera models. This concept has been faithfully adhered to, with the result that the OM System is not only the most comprehensive available, but affords virtually 100% interchangeability among all camera models and system units. Therein lies the true meaning of a system camera.

It therefore goes without saying that the new OM-2S PROGRAM can use all OM System Zuiko lenses without modification. In the same way motor drive and winder units, bulk film backs, etc. are also compatible.

Summary

As you can see, the OM-2S PROGRAM has taken on a completely new and exciting role. From the convenience of program photography to the unbeatable exposure accuracy of Spot Metering for full creative control, the new OM-2S PROGRAM covers a truly remarkable range of photo skills and techniques. At the same time it serves as a perfect introduction to the comprehensive OM System. This new camera is both an opportunity and a challenge, allowing you to put more into photography and get more out of it than ever before. VA

The Expressive Power of the Olympus OM-2S PROGRAM Camera

By Masaharu Sato

The Olympus OM-2S PROGRAM camera came on the market with the most sophisticated light-measuring system and the most advanced shooting modes I had ever seen. From the outside, it does not look much different from the OM-2N, but inside I'd say it's completely new. As the name suggests — "S" is for Spot Metering and "PROGRAM" is for programmed automatic exposure mode — the new camera has added an incredible array of the world's first features including Programmed AE and Program Flash modes in combination with a TTL Direct "off-the-film" (OTF) Light Measuring system.

In addition to offering the same superb specifications as the OM-2N it has the Manual/Spot Metering capability. It also features a multi-mode LCD information panel in the viewfinder, which indicates vital exposure data in high visibility white lettering against a blue background. Here is my report on the feel and performance of this fabulous new camera in actual use.

The amazing OM-2S PROGRAM outperforms its capable predecessor, the OM-2N

The new Olympus OM-2S PROGRAM is encased in a black body. Unlike the OM-2N's glossy body, the matte finish of this new model gives it the more sophisticated, reliable and intelligent look only top-quality models can possess.

Because its body is the exact same size as the OM-2N, it fits perfectly in my hands, and gives me the same control facility I am accustomed to with my OM-2N. This consideration of Olympus should not be overlooked, along with the way all OM-2N accessories are fully compatible. One of the unchanged features that pleases me most is the exposure compensation dial, since it's always been my belief that the OM-2N's is the easiest to use and most ergonomically designed of all existing exposure compensation dials.

Even though it resembles the OM-2N, the OM-2S PROGRAM is still a new camera, and I expected to find some external changes and improvements. The new self-timer, now electronically controlled, gives the camera a more sophisticated look. The film rewind clutch lever has been replaced by a film rewind button for easier operation, and it has been moved from the upper right position on the front to the top, right next to the exposure compensation/ISO film speed dial.

Another change I noticed is that the accessory flash hot-shoe is now fixed, making it impossible for the photographer to forget or lose his hot-shoe adaptor. Furthermore, a 1/60-second mechanical shutter has been added beside the bulb (B) mode. This should prove helpful in emergency situations when the batteries die and no spares are readily available.

When you aim the camera at a subject and press the shutter release button halfway, vital exposure information including the shooting mode in use appears on the LCD panel in white on blue to the left of the viewfinder. When shooting under poor lighting conditions, the photographer can push the viewfinder illumination button to illuminate the LCD display in the viewfinder. I found this feature very convenient and useful, especially at night.

A bar graph on the LCD display, one increment of which corresponds to 1/3 EV, moves up and down to indicate the shutter speed in the automatic exposure modes. In the Manual/Spot Metering mode, both the bar graph and a zero-method mark appear on the LCD display for easy, quick reference of exposure data. In addition, an electronic beep tone warns the photographer of possible overexposure before the fact, a feature much appreciated by all photographers.

Incidentally, the OM-2S PROGRAM accepts the optional Camera Grip 1. I recommend its use when a winder or a motor drive is not attached since it provides a firmer grip on the camera during shooting.

The Programmed AE mode provides versatility in every situation

With the Olympus OM-2S PROGRAM, the shooting mode can be switched very easily, as with the OM-2N, by a single twist of the mode selector lever. When on the move, simply switch the mode selector lever to the Programmed AE mode and set the aperture to the minimum setting, and you are ready to shoot anytime in the versatile Programmed AE mode, which provides the best combination of aperture setting and shutter speed. If you unexpectedly come across an interesting subject, you can react to the situation swiftly — all you have to do is frame, focus and press the shutter release button. When testing the OM-2S PROGRAM for this report,

Photo 1

This snapshot was taken in the TTL Direct "OTF" Programmed AE mode, which permits the photographer to react swiftly to any unexpected opportunity.

Photo 2

A good example of one tremendous capability of the Programmed AE mode. In this picture, the aperture is set at F4 for a shallow depth of field in order to throw the background out of focus, much like the effect produced by the Aperture-Priority AE mode.

Photo 3

With the aperture set at larger than F2.8, the Programmed AE mode is capable of photographing a fast-moving subject very sharply.

I always travelled with the camera set in the Programmed AE mode, and found it very useful for snapshot photography. Photo 1 is an example snapshot using the Programmed AE mode.

The Programmed AE mode operates not only at the minimum aperture setting but also at any other settings. So even if the aperture ring has been accidentally turned from the minimum setting, a perfect exposure is always maintained. At the same time, by intentionally adjusting the aperture ring to a desired setting, you can make more creative photographs than at the minimum aperture setting. Photo 2 is a good example of such a situation. Using the Programmed AE mode and adjusting the aperture to a larger setting for a shallower depth-of-field, I intentionally made the background slightly out of focus. By opening up the aperture close to the maximum setting you can take advantage of high-shutter-speed Programmed AE shooting to capture fast-moving subjects, as I have in Photo 3. All in all, I found the OM-2S PROGRAM's Programmed AE mode works extremely well in a wide range of photographing situations.

Manual/Spot Metering solves all difficult exposure situations

Of all shooting modes the new OM-2S PROGRAM offers, the Manual mode with Spot Metering attracted my attention most. With my OM-2N, most of my shooting was in the Automatic Exposure mode. I found the Manual mode was very limited. But now that an advanced Spot Metering system is employed in combination with the Manual mode, the Manual mode becomes much more important. I think photographers should take full advantage of this remarkable feature, but first let me explain here how it works and what advantages it offers.

The exposure meter built into most cameras is designed to calculate the exposure value by measuring light reflecting off a standard 18% gray board. But actual subjects often have light reflection ratios above or below the standard 18% gray: a picture area may be dominated by a high-reflection white tone or by a low-reflection dark tone. Moreover, the ratio between dark and bright areas within a single picture frame may differ depending on lighting conditions. There may be a situation where a glittering object is in the frame.

When shooting such subjects with a camera equipped with a conventional center-weighted averaged-light exposure meter, the resulting pictures are often over- or underexposed. To avoid incorrect exposure, the photographer must compensate the exposure manually for any unusual light conditions. Such a procedure requires a great deal of talent and experience.

Photo 4

When the background is bright, as in this example, the subject is usually underexposed using conventional metering systems. But using the OM-2S PROGRAM's Manual/Spot Metering mode, I spot-metered the subject's face. As a result, the picture was perfectly exposed.

But with the Olympus Spot Metering system, the photographer can concentrate the light measurement on the desired spot or area of a picture frame, preventing the lighting conditions in other areas of the frame from affecting the results. Naturally, correct exposures are measured with ease.

Manual/Spot Metering with the OM-2S PROGRAM is very simple: the photographer places the round microprism area at the center of the viewfinder on a specific spot the photographer wishes to measure. This circle occupies about 2% of the whole picture area and corresponds almost exactly to the area to be spot-metered.

Photos 4 through 11 were taken with this Manual/Spot Metering system. Compared to pictures taken with the center-weight averaged-light TTL Direct "OTF" Metering system in the automatic exposure mode, the advantages of the Spot Metering system should be obvious. This remarkable Spot Metering system of the OM-2S PROGRAM reflected my creative intentions perfectly in these photographs.

Photo 5

A dark background normally results in an overexposed subject, like faded details of the face. By spot-metering the face, I could adjust the overall tone of the picture and achieve the desired result.

Photo 6

I included in the frame an image of the sun reflected off a show window. Such a composition normally results in underexposure due to the strong sunlight, but thanks to Manual/Spot Metering, the right exposure was obtained by spot-metering the shoulder of the mannequin.

Photo 7

In this composition, the photograph will be slightly underexposed due to the effect of the white snow covering on Mt. Fuji if normal metering is used. But by spot-metering the boundary between the sky and the snow, I succeeded in photographing a bright, beautiful landscape.

Photo 8

It is often difficult to determine a correct exposure for a rising or setting sun, but Spot Metering makes it easy. In this photograph, spot-metering on a bright spot near the sun expressed the situation beautifully.

Photo 9

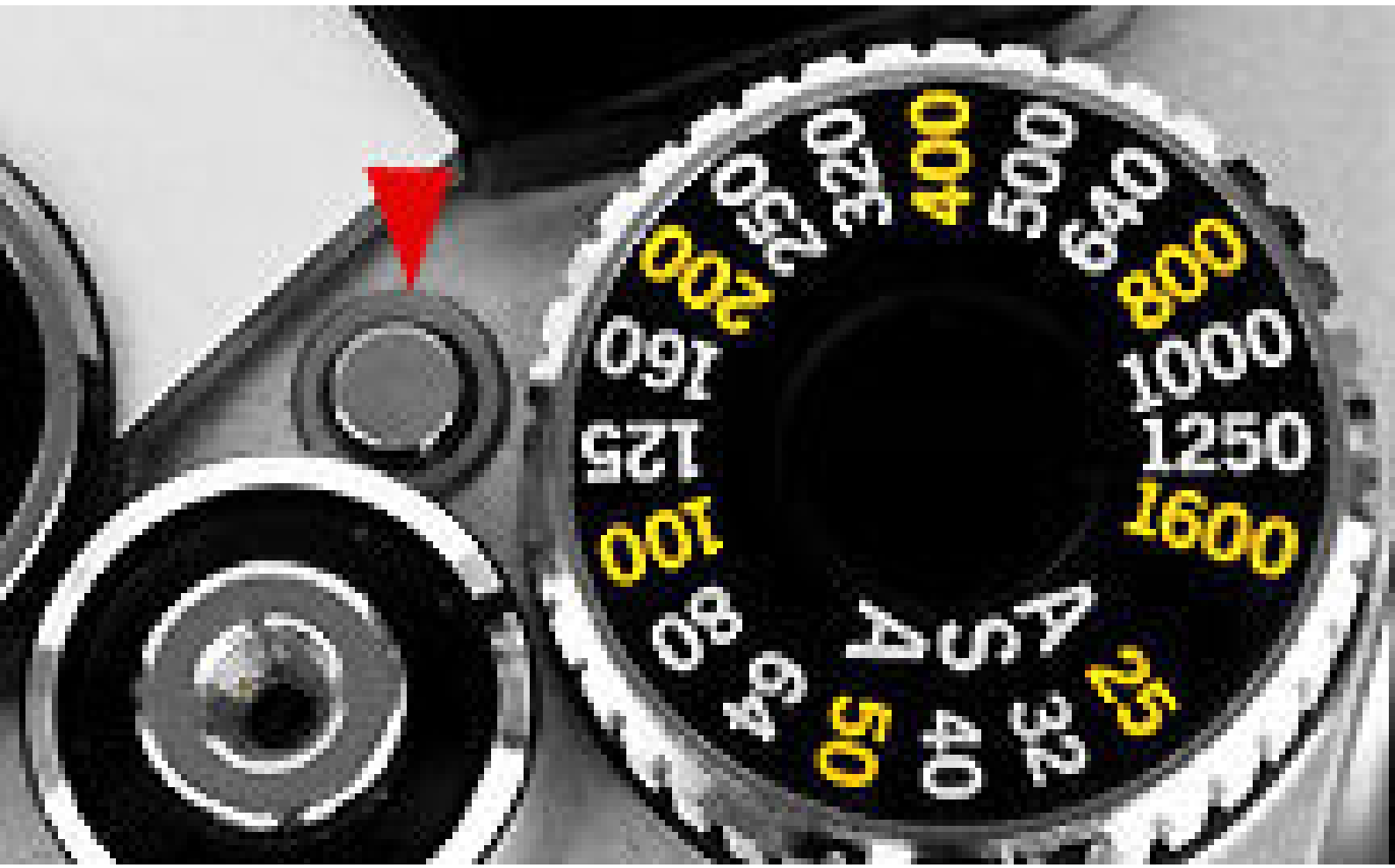
A composition like this normally results in a slightly more overexposed photograph than intended because of the effect of the silhouette. Spot-metering on the bright water surface made the photograph come out just the way I wanted.

Photo 10

Spot-metering the spikes of back-lit eulalia plants made this impressive photograph possible.

Photo 11

This was taken by spot-metering the car, which is the main subject of the picture. Look how accurately the colorful subject was captured.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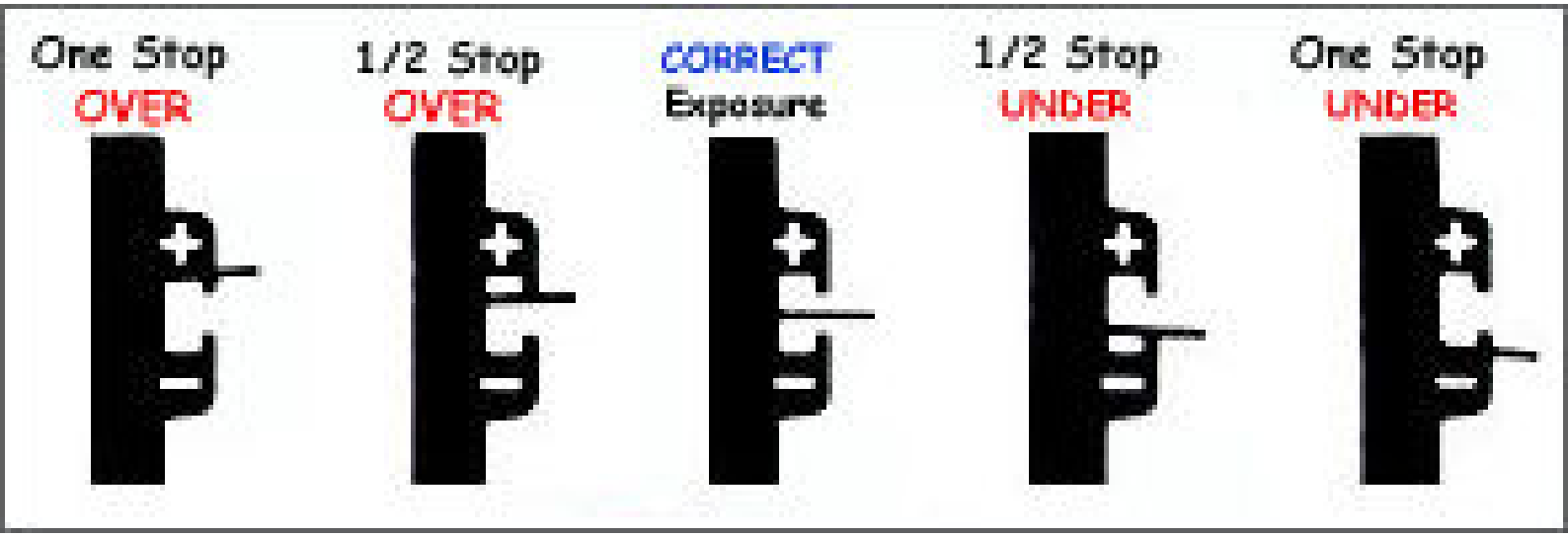
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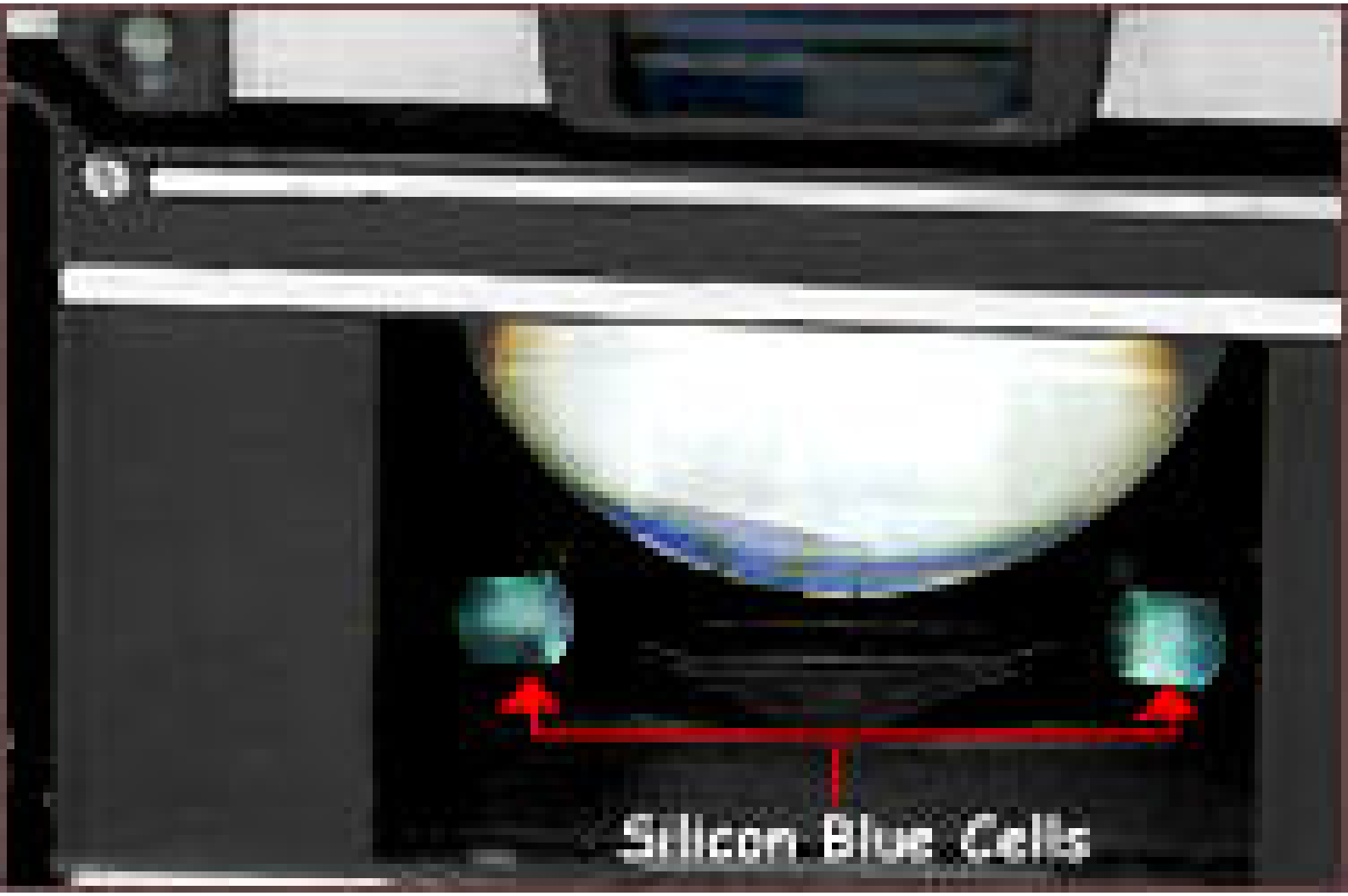

Silicon Blue Cells

The most critical decision the photographer faces when using Spot Metering is where in the subject to measure. The easiest way is to choose an area in the subject which is as close to the standard 18% gray tone as possible and spot-meter it. However, the resulting picture often turns out overexposed, or lighter, than the photographer expects due to the influence of other factors. In such cases, the photographer should measure a spot which is slightly lighter than standard gray to underexpose the picture. Conversely, to make the picture lighter, he can spot-meter a slightly darker spot of the subject. By mastering such Spot Metering adjustment techniques, the photographer can increase his creative control over his work.

In my hands-on experiments, I have found the Manual/Spot Metering system to be especially useful in such unusual photographing situations as portrait and still-life photography with back or diagonal lighting, or against white or dark backgrounds. Moreover, since the system can accurately spot-meter a distant subject through a telephoto lens, I recommend its use in landscape and stage photography using a telephoto lens.

The Automatic Exposure mode is best when the light is right

Like the Olympus OM-2N, the OM-2S PROGRAM offers an Aperture-Priority TTL Direct "OTF" Automatic Exposure mode at the Auto setting and I recommend that you take advantage of it in situations where averaged-light metering gives adequate results because it allows the photographer to concentrate solely on composition. I used this mode for Photo 12 since the overall lighting of the scene was well within the average metering range. And when the depth-of-field is important, the Aperture-Priority AE mode is the best choice, as seen in photo 13 and 14.

The "OTF" Program Flash mode yields superb results

In combination with a T Series dedicated flash unit, the OM-2S PROGRAM offers the photographer the exciting capabilities of the "OTF" Program Flash mode at the Program setting. Photo 15 was taken in this mode. Of course, the lighting was poor and the LCD viewfinder display indicated a shutter speed slower than 1/60 second, so I decided to try out this fantastic capability of the new camera. The sunset sky in the background turned out exactly the way I wanted, adding a dramatic effect to the picture. This "OTF" Program Flash mode assists the photographer in avoiding underexposure caused by closing down the aperture too small (F11, for instance) and almost always gives satisfactory results. Of course, the OM-2S PROGRAM possesses a conventional Aperture-Priority "OTF" Auto Flash mode, as did the OM-2N. Photo 16 was taken in this mode.

Photo 12

This indoor photograph was taken with natural light coming through the windows. Because the lighting was even throughout the picture area, I used the TTL Direct "OTF" Aperture-Priority AE mode with the aperture set at F5.6.

Photo 13

I used the Aperture-Priority AE mode with the aperture set at F2 to create the out-of-focus effect in the background.

Photo 14

In order to increase the depth of field to capture all elements in sharp focus, I set the aperture at F16 using the Aperture-Priority AE mode.

Photo 15

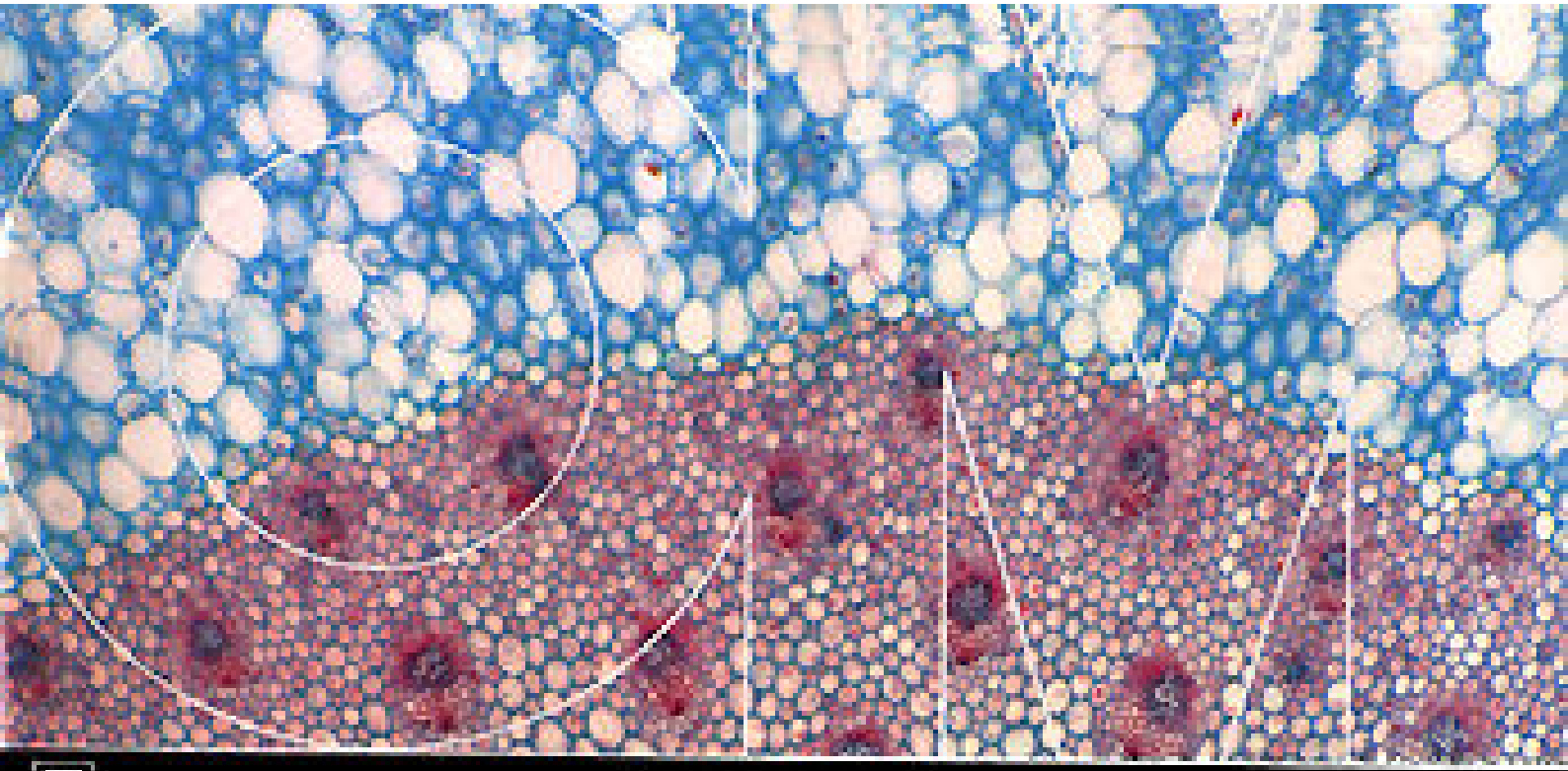
This festival scene at dusk was taken with the "OTF" Program Flash mode and expresses well the festive mood.

Photo 16

This snapshot portrait was taken using the "OTF" Aperture-Priority Auto Flash mode with the aperture set at F11 so that the subject was in sharp focus.

The versatile OM-2S PROGRAM gives more creative control and satisfaction

My honest conclusion after exhaustive testing is that the OM-2S PROGRAM camera offers unparalleled expressive power and a range of advanced features far superior to its predecessor, the OM-2N. I will certainly take it with me wherever I go — and it will be a constant companion in my camera bag. I should add that Olympus precision and quality are evident in every detail of the camera. VA



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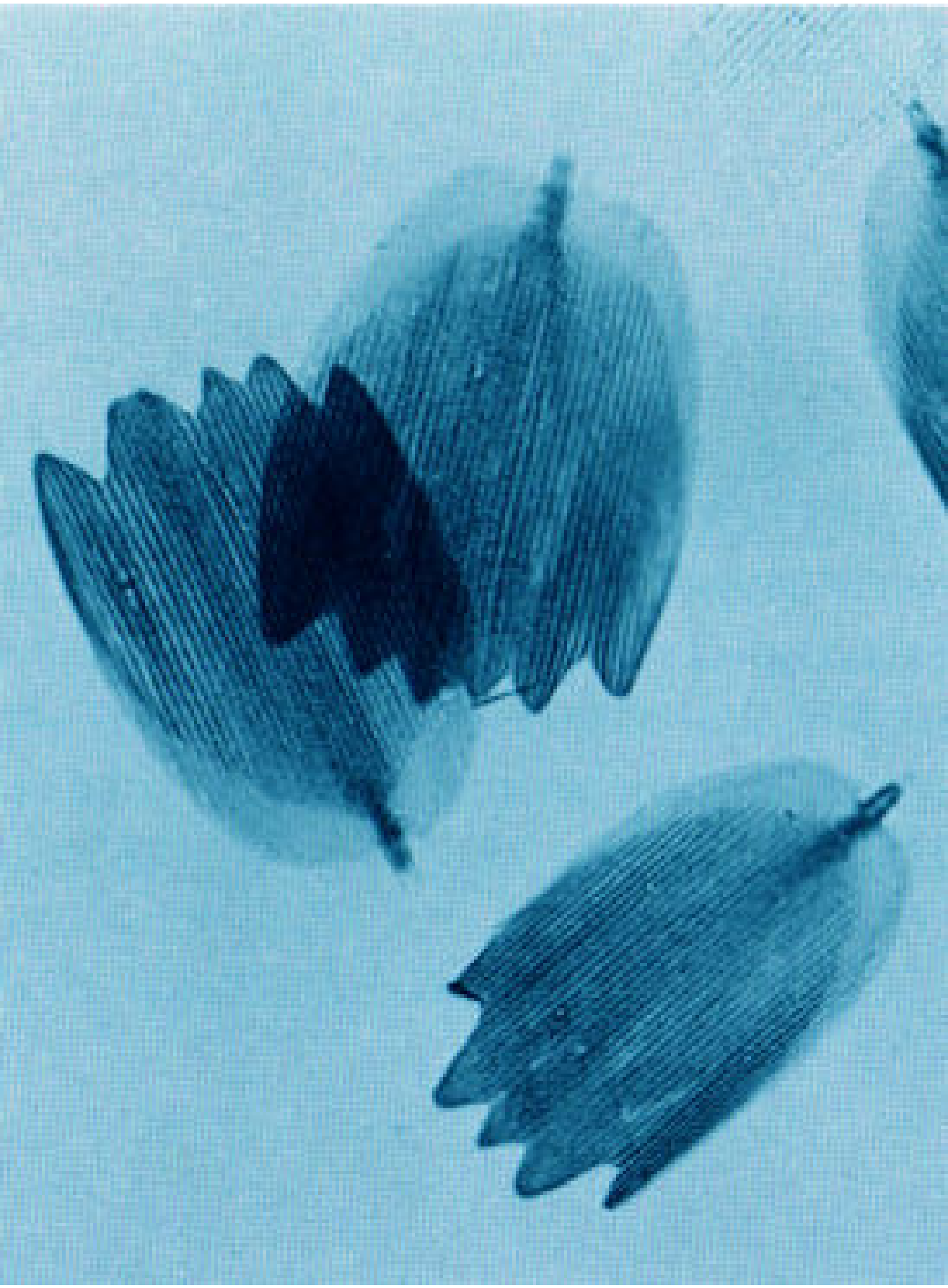

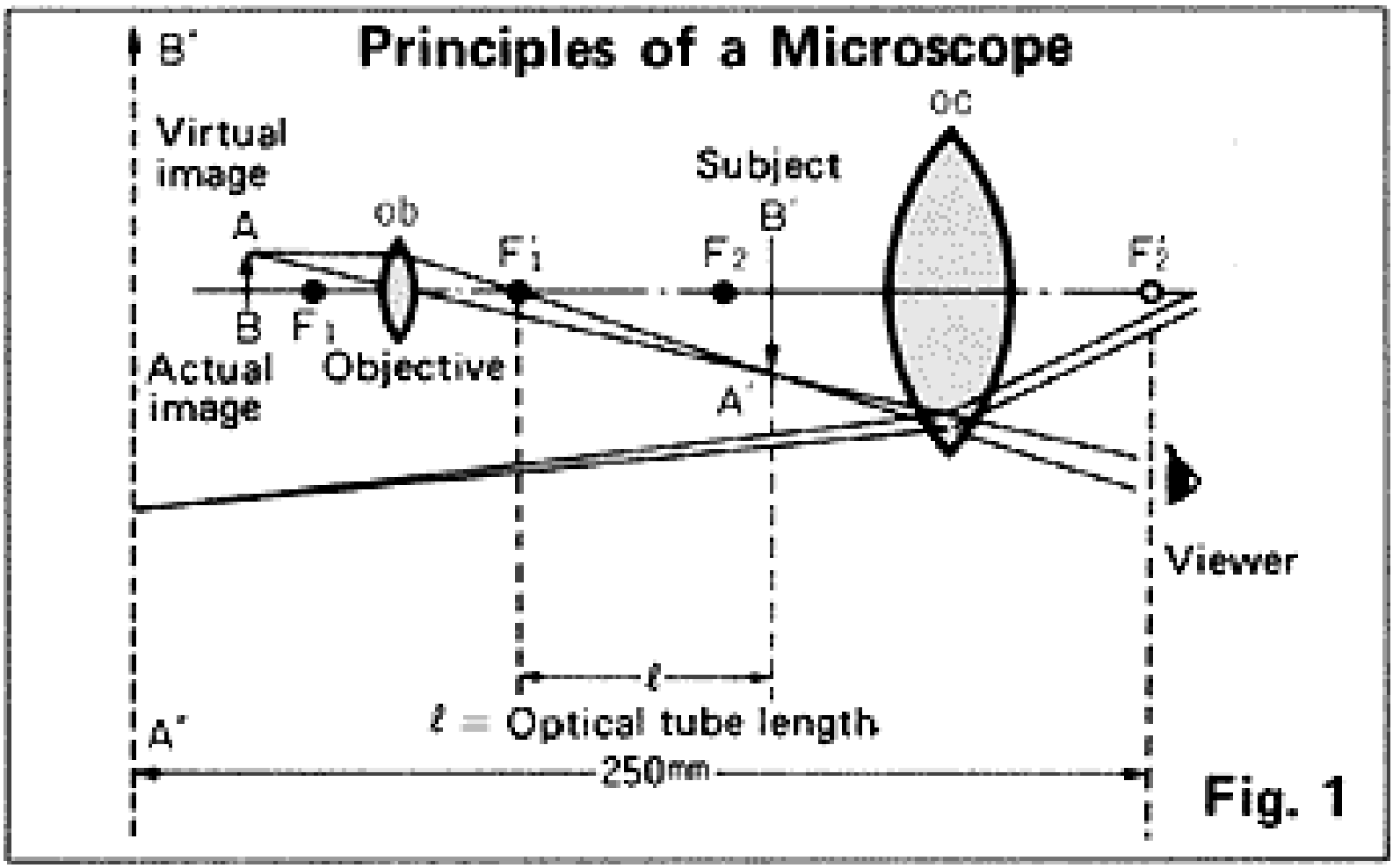
Principles of a Microscope
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ℓ = Optical tube length
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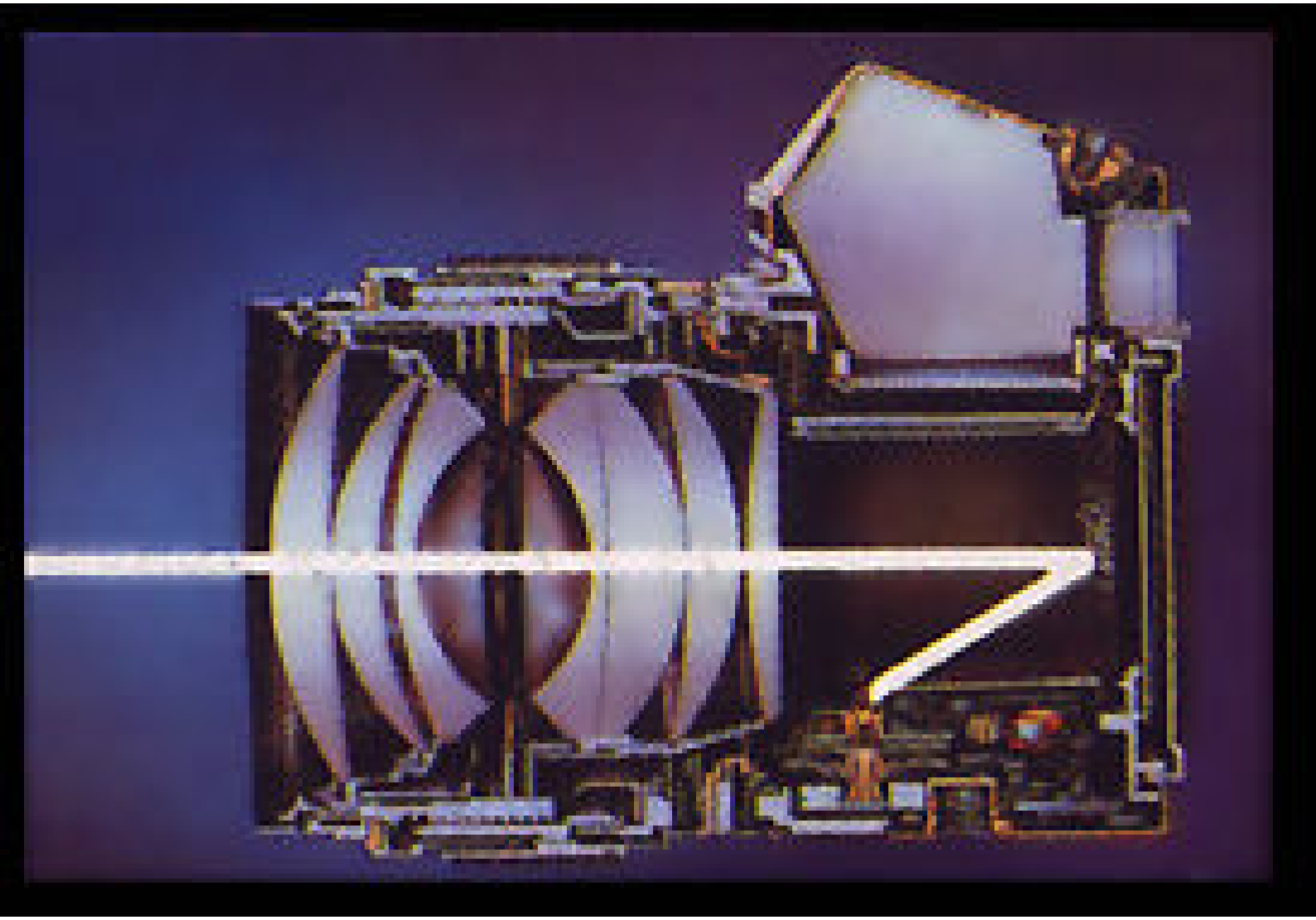
Fig. 1

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