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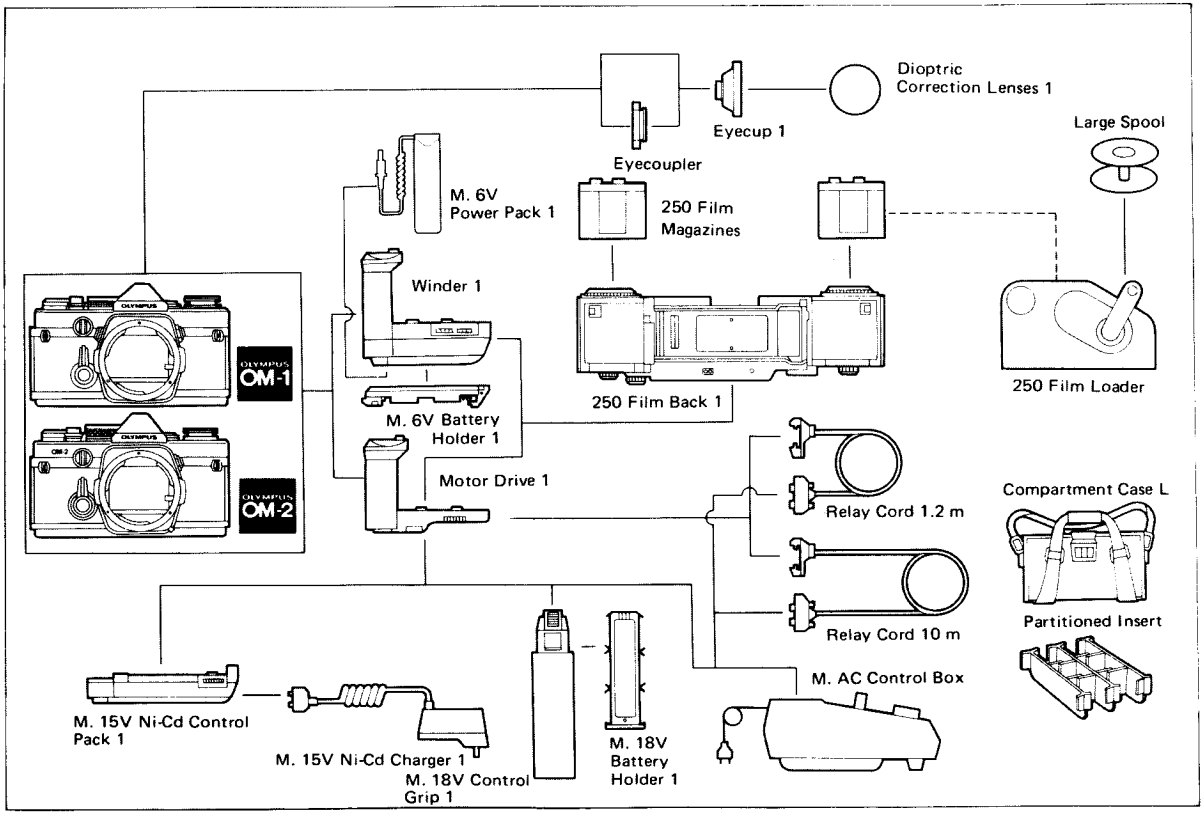
# OLYMPUS OM SYSTEM

## MANUAL FOR MOTOR DRIVE GROUP

# THE FULLY COMPREHENSIVE OM MOTOR DRIVE GROUP



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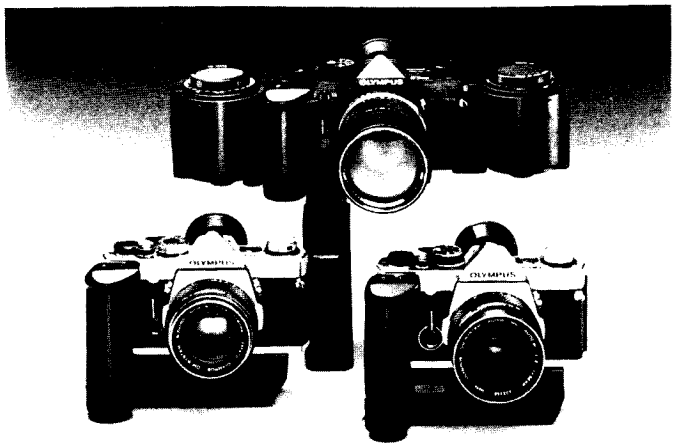

The motor drive has become conspicuously popular among a good many photographers in recent years. Many say they enjoy the whir of the motor-drive mechanism in action, and others appreciate it because it frees them from winding each frame of film individually, thus allowing them to pay full attention to picture composition and timing.

The real attraction of the motor drive, however, is its ability to capture fleeting phenomena that cannot be discriminated visually or that are not within human capabilities of manipulation. To capture instantaneous motion is a world of expression available only in photography, and for modern man who lives in an era of rapid change, the ability to capture dynamic motion is indeed intriguing.

These are just a few of the many aspects which express the photographer's appreciation for the motor drive.

Generally speaking, the motor drive permits both single-frame shooting as well as sequence shots at the rate of several frames per second. In the single-frame mode of operation, which functions basically to wind the film, merely pressing the shutter button advances the film and sets the shutter for the next exposure.

Although film can also be wound rather rapidly by hand, it is difficult to look through the viewfinder for the entire time without experiencing camera movement; even taking your attention away from the subject for an instant to wind the film may result in blurring. Using the motor drive for single-frame exposures allows the photographer to keep his eye on the subject so he is always ready to shoot when the right opportunity appears. How decidedly large an advantage this is becomes apparent once having used a motor drive.

It has been said that the essence of good photography is waiting for the right moment and then very carefully taking the picture. There are always moments, however, with fast moving subjects as well as fleeting human expressions that change in unexpected ways. And, all too often, a better shot presents itself right after the shutter has been released. In anticipation of such occasions, it is definitely an advantage to have the shutter set for the next exposure. In effect, then, this makes the motor drive an extremely effective piece of equipment for single-frame shooting by the photographer who wants to be always prepared.

The greatest advantage of motor-drive photography however, is found in automatic sequential film advance, which is essentially a different application from single-frame shooting.

It has also been said that, ideally, picture taking means making a single photograph at the decisive moment.

This, however, is easier said than done and requires an outstanding degree of talent and skill. In the course of a scene or certain sequence of actions, it is extremely difficult to choose the decisive moment. Moreover, even if the photographer has successfully discerned the right moment, the time lag of about

1/10 second for the signal to release the shutter to be relayed from the brain to the shutter finger is often fatal. Furthermore, conventional SLR cameras require about the same amount of time for the shutter to open once the shutter button has been pressed, as it doesn't start to open until the mirror moves out of the way.

The experienced photographer can make allowances for such delays by anticipating and releasing the shutter several tenths of a second in advance. Ultimately, this is a gamble, however, and with multiple subjects or with subjects performing complex motions chances are often missed. It is with this kind of photography that the motor drive displays its full potential.

By using a motor drive, the photographer can zero in on the general timing and press the release. After shooting in rapid burst, he can later pick out his best shots from the sequence. And, frequently, excellent shots appear that were not anticipated when the photos were taken. Such possibilities also increase with a greater number of frames per second or increases in film advance speed. Not too much can be expected at two frames per second; four to five or more are highly desirable.

Because motor drives rely on chance in the above manner, they have been criticized as allowing the camera mechanism make the decision instead of the photographer. The element of chance, however, has always been a precondition in photography, and a large element of chance has always been conspicuous with snapshots in particular. Still, no one has ever criticized a good photograph because it contains the element of chance. Most people, in fact, appreciate a good photograph which glorifies the moment.

Moreover, with certain subjects the motor drive is the best method precisely because it *does* allow full play to the photographer's will and judgement. In the very instant that the photographer starts the motor drive in the middle of a sequence saying, "This is it!", it is easy to discern that his will is working and that the camera didn't take the picture by itself.

Thus, the motor drive requires skill and is not suited for thoughtless picture taking, whatever the field of photography. Without exercising proper judgement, use of a motor drive merely results in a waste of film.

What will happen in the next instant is always extremely difficult to anticipate. For pictures of sports events and children, animal photography, shooting the rapid movements of dancers and models, and other situations where it is difficult to anticipate the subject's next move, the thrill of discovering a superior shot from among several frames shot in sequence over several seconds is an exhilarating experience known only to photographers who use a motor drive.

(Akio Kojima)

# PEOPLE AND THE MOTOR DRIVE

The previous explanation gave you some idea of the convenience and effectiveness of using a motor drive with single lens reflex cameras such as the OM-1 and OM-2. The following will explain the use of the motor drive for photographing people, one of the favorite subjects of almost all photographers.

Human beings are sometimes called emotional animals. And the emotion of the moment is always shown, no matter how still the person may be. One of the most interesting things about photos is their ability to reflect subtle changes in expression or to help discover something in others that matches one's own image.

In other words, the purpose of the photograph is to fix human expressions on a sheet of photographic paper in such a way that the viewer is impressed that he is looking at a living person.

When people are still there is a problem of how to show movement, but human emotion is expressed most clearly by the eyes. The eyes clearly show whether a person is happy or sad.

Next is the mouth because when the mouth moves the eyes move in accordance. So always notice these two parts. When the hands are also added, a fair amount of movement can be expressed, even if the subject is perfectly still.

Thus, by aiming to include the functions of expression of the human being, movement can be expressed in a photograph. Until now, technical method of achieving this has been camera angle coupled with the element of chance. When a subject does not move or change expression one can change the camera angle or position to show a certain degree of movement.

When the subject is a child or old person, patience is demanded; otherwise, results will be unsatisfactory. But if you persevere in capturing the movements and expressions of that person, you will have a living photograph.

The expression "feeling of movement" can be defined in two ways. According to the dictionary it means "having a feeling of being in movement." Another definition is "the impression given by a photograph in which the subject is blurred as though moving." However, merely photographing a naturally-moving subject does not guarantee that the photograph will have a feeling of movement. This is really a matter of chance. Discovering just when a movement expresses emotion most clearly or which part of a movement will appear most strongly in the photograph is extremely difficult.

The motor drive is an extremely valuable device for overcoming this difficulty. It almost thinks for the photographer to discover the perfect shot in any moving situation.

(Kiyoshige Ikeda)

# ACTION PHOTOGRAPHY AND THE MOTOR DRIVE

With the sophisticated cameras on the market today great advances have been made in automation. Operation has become easier, also. But, nothing has really changed in the fundamental order of selecting the exposure, focusing, and composing the picture before releasing the shutter.

With stationary objects, as well as with subjects moving in a nonchalant manner, little difficulty is experienced in operating the camera. But, when a photographer wishes to release the shutter several times in rapid succession, he soon reaches a limit. Even the skilled hands of an experienced professional photographer operating a camera he is familiar with is capable of, at most, eight or nine shots in a five second interval. This averages out to a speed of 1.8 frames per second. For photographers who want to exceed this mark and can't, it is a constant point of dissatisfaction. The advent of the motor drive, however, has solved the photographer's frustration in this regard.

The motor drive is a versatile device which far exceeds the human capacity of manipulation, allowing continuous, high-speed photography with ease. Moreover, the Olympus motor drive employed in the OM System, with a speed of five frames per second, enables high-speed photography three times as fast as the top speed attainable by hand-winding. And, nothing can beat it for following racing vehicles which exceed speeds of 300 kph or racing bikes tearing through rough terrain in leaps and bounds and changing their direction several times within a split-second. For recording such dramas of the instant, obviously hand-winding won't do.

The motor drive has created a controversy, however, and a good number of photographers consider it an affront to their ideas of photography, I personally feel it has opened a vast new field of photographic possibilities. Moreover, to ignore a practical device which brings new possibilities within our reach is itself an affront to good photography.

To shoot bikes that jump out of a bright background and disappear into the dark or that fly out of direct light into uneven shadows, all one has to do is fix an automatic exposure camera such as the OM-2 with a motor drive and leave the light measuring decisions to the camera. He is thereby free to concentrate on camera work of a more essential nature such as framing and focusing.

Both the motor drive and the automatic film winder are devices which have simplified camera operation. I feel that they are a welcomed asset to the field of photography as they free the photographer from distracting nonessentials and allow him to concentrate on the art itself. In fact, I sincerely believe every camera should include at least a winder as a standard piece of equipment. What I also evaluate very highly about the motor drive components of the OM System is that the same winder and motor drive can be used with both the OM-1 and also the automatic, TTL direct light measuring OM-2. Such interchangeability is a must for a system, and compared with the same line of accessories made available by other manufactures, Olympus appears to be well ahead.

(Kazuhiko Mitsumoto)

# ANIMAL PHOTOGRAPHY AND THE MOTOR DRIVE

Perhaps because it's my field, but it appears to me that the motor drive was developed exclusively for the purpose of photographing animals. So convenient is its use in this field, and so wide are its applications, that the state of the art would suffer a great setback without it. The behavior of animals is extremely unpredictable and they move so swiftly that the motor drive is just about the only means available to capture the subtleties of their behavior on film.

Moreover, almost all animal photography is performed outdoors. And the principal prerequisite for outdoor photography is the photographer's maneuverability. This is where the OM System's motor drive shines. Apart from being the world's smallest and lightest, it is extremely easy to use. And working together with either the OM-1 or OM-2 camera as an integral unit it is a highly efficient piece of equipment.

Another precondition for effective animal photography, which the Olympus motor drive more than adequately fulfills, is the ability to follow the subject closely with the viewfinder while shooting. As the mirror functions normally (i.e., doesn't have to be locked up) even at five frames per second with the Olympus motor drive throughout the entire sequence run, once the subject is in your sights he's yours forever.

Today, animal photography is enjoying a rise in popularity, and this is sure to increase the demand for motor drives as well. For those interested or just starting out in the field and planning to use a motor drive, I would like to give a few pointers.

First of all, perhaps the best way to gain an understanding of the basics of animal photography, and to master the fundamentals of motor drive operation as well, is to visit the zoo. Although, generally speaking, animals in cages do not move very fast, the zoo, nonetheless, serves as an excellent place for learning about them. It permits long hours of observation which gives the photographer a chance to ingrain the animals behavior pattern on his mind. One must make allowances for a certain amount of wasted film at first, of course, but trial and error is the best way of gaining the knack of anticipating the best moment to release the shutter. In this respect, it is also important to note that birds, whether in captivity or wild, have a strong sense of danger and should be approached with extreme care so as not to frighten them with shutter noise.

The next step in the mastery of animal photography, is to practice shooting house pets. I like to take pictures of the family cat. Nothing quite can compare with photographing the shrewd body movements, vicissitude of expression, and complex behavior of a cat for mastering the difficulty and realizing the beauty of sequential photography.

Once having gone through the above steps you are ready to go out into the wild for actual field work. This is where my hobby of taking pictures of cats really comes in handy. Its surprising how similar the behavior of the common house cat is to lions, cheetahs, panthers and other members of the cat family.

For actual outdoor photography with a motor drive, superb results can be obtained by using remote control equipment. Again, taking into consideration the inborn sense of dangers that most all animals have, it often

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# CONCENTRATION ON PICTURE MAKING

● **Single-frame Winder:** A movie consists of a continuous flow of single frames divided into cuts and scenes. However, we could say that the essence of still photography is carefully exposing single frames. And,when we add to this the ability to take photos at high speed we get more than just mechanical drive. We also get the ability to make better photos. The Olympus OM System fully provides this ability with the Winder 1.

● **Concentration on Picture Making:** One of the greatest merits of Winder 1 is that it lets the photographer concentrate on picture making. After the shutter button is released the winder advances the film and resets the shutter in 0.3 second so the photographer is ready for the next shot without the need to take his eye from the finder.

When Winder 1 is used with the fully automatic exposure Olympus OM-2, the photographer has even more freedom to concentrate on the subject. This is possible whether the photographer uses the camera vertically or horizontally. Just eliminating the need for manual film winding increases speed considerably.

Of course, the winder is extremely useful in general photography without aiming for repeat shots. For example, there are no missed chances because of forgetting to wind the film as the winder does this automatically, even if the finger is left on the shutter button.

● **Use Like a Motor Drive:** Even though Winder 1 is primarily for single frame shooting, its high wind speed of 0.3 second makes it also suitable for continuous sequences. Instead of sequence, let's say rapid "snap shooting." Sequence photography is using a motor drive with its ability to shoot five frames per second when the shutter button is held down continuously. Motion can be analyzed using sequence photography or good photos can be selected from a sequence. For such applications, the motor drive should be used.

A motor drive, however, is a machine and we can't overlook the fact that the perfect shot may appear between frames. It would be perfect if we could capture such chances using keen vision and fast reflexes in the manner of single-frame photography. The winder's ability to take rapid snapshots comes into its own in this area.

● **The Winder Considered as a Standard Accessory:** The Winder 1 lives up fully to the name of the Olympus OM System in being extremely light and compact. The Olympus cameras, even with Winder 1 attached, are lighter than most conventional single lens reflex cameras alone, and can be left mounted on the camera at all times without becoming troublesome. In fact, it gives a feeling of added stability in camera operation. Not only is handling better, but there is a feeling of perfect fit for carefree use. And the feeling that comes with using superior equipment will prove an invaluable aid in making better pictures. (Masaharu Sato)

# FEATURES OF OM SYSTEM MOTOR DRIVE EQUIPMENT

The OM System was designed and developed with the objective of restoring the basic functionality of the 35mm SLR camera. Originally, the idea behind the 35mm SLR camera was to provide for maneuverability and ease of operation, but this became lost as camera systems grew bigger. With Olympus it has been rediscovered.

And this restoration of functionality applies no less to the vast array of equipment which constitutes the OM System Motor Drive Group — a highly sophisticated array of motor drive equipment which was specifically tailored to the OM camera itself.

As a basis for the criteria of maneuverability, let's see actually how small and light the Olympus motor drive package can be. Either the OM-1 or OM-2 camera fitted with a 200mm telephoto lens, the high-speed Motor Drive 1 unit, and the M. 15 Ni-Cd Control Pack 1, weigh roughly 1,350g or 48 oz.

The OM System motor drive package is not only smaller and lighter, however. The OM cameras handle extremely well when used in conjunction with the motor drive, thus assuring an even higher level of maneuverability for picture taking. So light is the OM package, that for general photographical applications, both the camera and the motor drive used together enable following the subject just as swiftly as a large camera without the motor drive attached.

Under very difficult picture-taking conditions, and in instances such as news photography where sudden movement is unavoidable, or when it is necessary to carry the camera around for long hours, the OM System works tirelessly to assure that your picture taking sessions go smoothly. What this adds up to is convenient and effortless handheld motor drive photography, even with telephoto lenses. And also, more interchangeable lenses and accessories to carry in the gadget bag than is even thinkable with other systems.

There's even more. When the people at Olympus set out to re-design the 35mm camera, they did not sacrifice camera performance and reliability. In fact, this is where the OM System motor drive equipment really excels. For example, with sequence shooting, often said to be the essence of motor-drive photography, the OM Motor Drive 1 is capable of a super-fast five frames per second without mirror lockup. This means you can follow fast-moving subjects through the bright and extra-large viewfinder of the OM camera for the entire duration of the sequence to take accurate pictures at the decisive moment. Moreover, with conventional systems, the shutter releases when you press the shutter button and doesn't start film advance until you lift your finger from the button. In other words, a breather is required before you can take the next picture. But, with the OM System, the film winding process is completed simultaneously with pressing the shutter button.

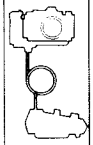
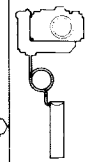
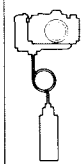
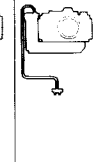
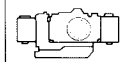
Also, conventional motor drives wind the film at predetermined intervals, irrespective of shutter speed. In the OM System, however, film wind begins immediately after the shutter is closed, no matter how long the exposure. This feature provides for utilization of shutter speeds up to 1/2 second with the OM-1, and any shutter speed with the OM-2 made possible by the versatility of the motor drive and TTL Direct Light Measuring. Moreover, a built-in electronic control circuit automatically stops the film advance as soon as the

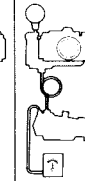
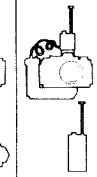
(Continued on page 30.)

# BASIC ASSEMBLIES OF THE VARIOUS UNITS OF THE MOTOR DRIVE GROUP

Ⓐ Winder 1
Ⓑ Motor Drive 1
Ⓒ M.15V Ni-Cd Control Pack 1
Ⓓ M. 18V Control Grip1
Ⓔ M. 6V Power Pack 1
Ⓕ M. AC Control Box
Ⓖ Relay Cord
Ⓗ 250 Film Back 1
Ⓘ 250 Film Magazine
Ⓙ Remote Control Cord*
Ⓚ Intervalometer*
Ⓛ Timer*
Ⓜ Radio Control Units*
*available commercially



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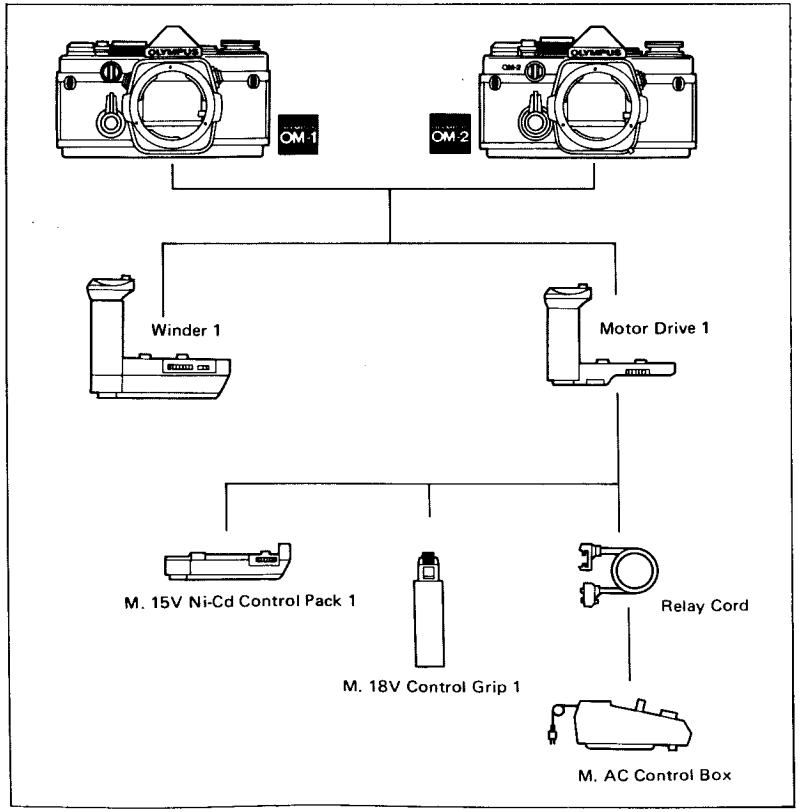
|---|---|---|---|---|---|---|---|---|---|---|---|
| Introductory Motor Drive Photography | ◎ | ○ | ○ | | | | | | | | |
| Advanced Motor Drive Photography | ○ | ◎ | ◎ | | | | | | | | |
| High-Speed Sequence Shooting | | ◎ | ◎ | ○ | | | | | | | |
| Single-Frame Shooting | ○ | ◎ | ◎ | ○ | | | | | | | |
| Automatic Film Wind | ◎ | ○ | ○ | ○ | | | | | | | |
| Continuous Sequential Operation with bulk film | | | | | | | | ○ | | | |
| Extra Small and Lightweight | | | | | | ○ | | | | | |
| One-hand Operation | ◎ | ○ | ○ | | | | | | | | |
| Photomicrography | △ | | | ◎ | | ○ | | | | | |
| Macrophotography | △ | | | ◎ | | ○ | | | | | |
| Copy and Close-up Work | ○ | | | ○ | | ◎ | | | | | |
| Low-temperature Photography | | | | ○ | ○ | ◎ | | | | | |
| Time-lapse Photography | | | | ◎ | | | | | ○ | ○ | |
| Remote Control Photography | | | | ◎ | | ◎ | ○ | | | | |
| Wireless Control | | | | | | | | | | | ○ |

Degrees of Suitability : Optimum Adequate ○ Possible

# SELECTING THE RIGHT MOTORIZED UNIT

The actual motorized units in the Motor Drive Group are the Motor Drive 1 and Winder 1. The major goal of motor-drive photography is speed and convenience by means of automatic film winding.

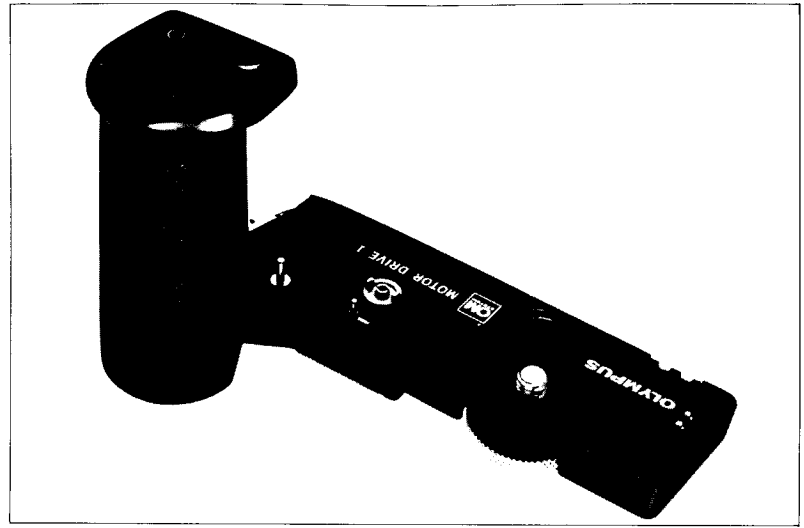
Generally speaking, there are two types of photography: sequential and single-frame. With fast-moving subjects, sequential photography by hand is faced with inherent limitations. It was for such photography – capturing sequences of movement and expression which are beyond hand-operated human capacities – that the Motor Drive 1 unit was developed. The Winder 1 unit, which is not capable of high-speed sequence shooting, was developed for always having the camera ready to capture that important shot which is often missed due to the limitations of hand-winding. Thus, Olympus has developed a winder unit which shoots up to 3 frames per second, and a motor drive capable of up to five frames per second, double to five times the capacity and durability of the winder. You might simply say that we offer a motor drive for essentially high speed motor-drive photography, and a winder for those who always want to be ready for that "big" shot.



## ■Motor Drive 1

The standard motor drive unit which forms the heart of the Motor Drive Group. An extremely high-performance unit capable of high-speed sequence shooting at 5 frames per second without requiring mirror lockup, capturing phenomena of the moment which exceed the capabilities of human response. Can be switched to the "single" mode of operation winding at a high speed of 0.16 second.

Featuring an amazingly compact and lightweight design tailored perfectly to match the OM camera bodies, the Olympus motor-drive package can follow with ease swift moving subjects which larger-format cameras can't keep pace with.




**Specifications**

- **Camera:** OM-1 and OM-2 cameras
- **Drive speed:** Up to 5 frames per second under optimum conditions; single-frame shooting
- **Shutter speed:**

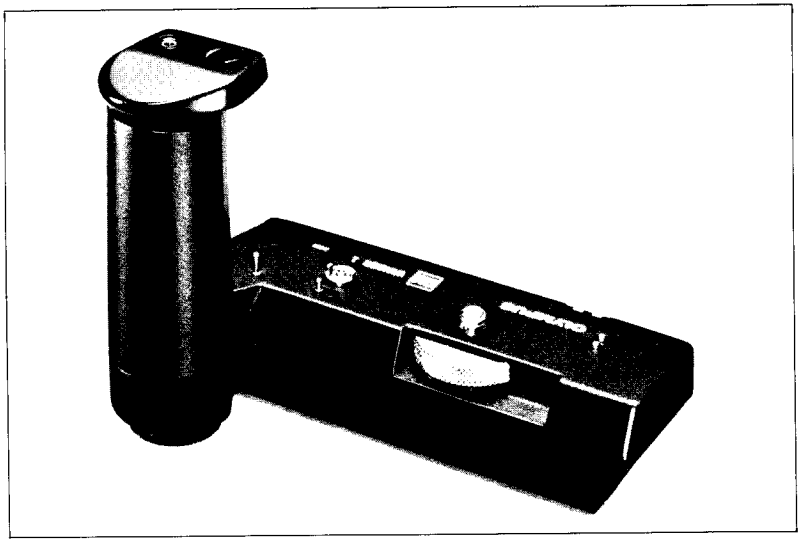
OM-1 on "SEQUENCE": 1/2 to 1/1000 sec.; on "SINGLE"; 1 to 1/1000 sec. (all speeds). OM-2 (AUTO): Approx. 60 to 1/1000 sec. (Manual): 1 to 1/1000 sec. both on "SEQUENCE" and "SINGLE"

- **Power supply:** M. 18V Control Grip 1 with M. 18V Battery Holder 1 (12 AA batteries); M. 15V Ni-Cd Control Pack 1 with built-in Ni-Cd rechargeable cells; built-in jack for external power source; M. AC Control Box
- **Maximum input voltage:** DC 18V; DC 12V – 16V (with large potential external power source, incl. Ni-Cd batt.)
- **Film:** 12, 20 and 36-exposure cartridges; bulk film: up to 10m (33 ft.) with 250 Film Back 1
- **Shutter release:** Push-button type on handgrip, or release on power supply; automatic film stop at end of roll
- **Remote control provisions:** 2.5mm mini-jack
- **Size & Weight:** 116 x 82 x 66mm (4-5/8" x 3-1/4" x 2-5/8"), 210g (7.4 oz.)

## ■Winder 1

An extremely lightweight and compact motorized unit designed specifically for single-frame photography. Film wind is an extremely fast 0.3 second, unthinkable with conventional winders. Moreover, it features instantaneous film wind, readying the camera for the next shot simultaneously with completion of the picture. Even though it is designed for single-frame photography, film wind speed is so fast that a skilled operator can shoot continuously at a rate of 3 frames per second -- a speed comparable with most motor drives.

The winder unit is powered by four 1.5V "AA" batteries. An external power jack is provided for hookup with the external power source (up to DC 6V).



**Specifications**

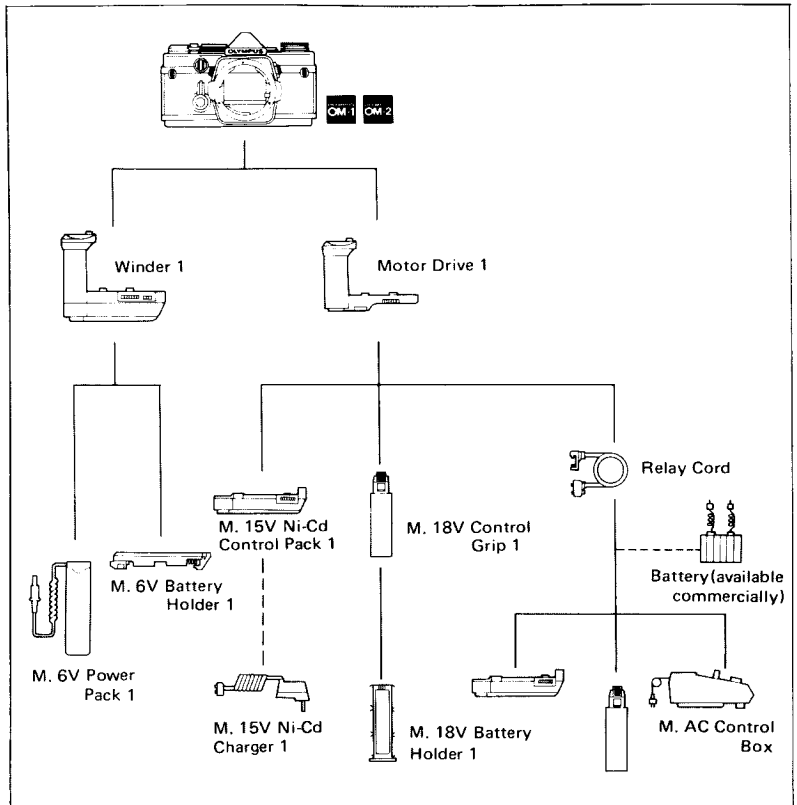
- **Camera:** OM-1 and OM-2 cameras
- **Film advance:** Single-frame advance, instant film wind after exposure
- **Wind-on time:** Approx. 0.3 sec.
- **Shutter speeds:** OM-1: 1 to 1/1000 sec. OM-2 (AUTO): Approx. 60 to 1/1000 sec. (MANUAL): 1 to 1/1000 sec.
- **Power supply:** Four 1.5V AA (penlight) batteries; external power source via built-in jack
- **Battery loading:** Snap-in magazine-type M. 6V Battery Holder 1
- **Input voltage:** DC 4 – 6V (DC 4 – 5.5V with large potential external power source)
- **Capacity:** Approx. 50 rolls of 36-exposure film with a set of fresh alkaline batteries
- **Film:** 12, 20, and 36-exposure cartridges; bulk film – up to 10m (33 ft.) with 250 Film Back 1
- **Remote control provisions:** via 2.5 mm mini-jack
- **Shutter release:** Push-button type on hand grip, automatic film stop at end of roll
- **Size & Weight:** 130 x 64 x 100mm (5" x 2-1/2" x 3"), 290g (10.2 oz.) excluding batteries.

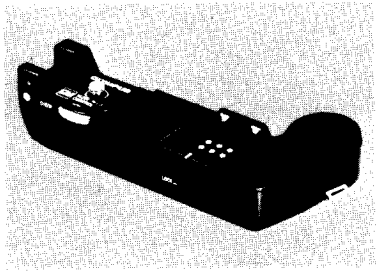
# CHOOSING THE POWER UNIT

Basic among the power units for Motor Drive 1 are the compact, lightweight and highly portable flattop-type which attaches horizontally to the bottom of the motor drive, and the snap-on pistol-grip type which fits instantly into place and assures extra stability when telephoto lenses are employed. One method of selecting the power source for the motor drive is the photographer's preference for holding the camera.

Another method is by battery type. The flattop unit is an economical, rechargeable unit powered by built-in Ni-Cd cells, offering practically endless reuse with a few hours of recharging. One unit alone, however, would not be adequate for heavy shooting sessions in excess of 40 rolls of film. On the other hand, the pistol-grip unit is powered by 12 penlight (AA) batteries. Continuous and virtually uninterrupted power could be supplied merely by taking a spare set of batteries along with you. Throwaway batteries, however, could become expensive if used wastefully.

Still another option is the M.AC Control Box which comes in handy for copy work and other indoor photography by transforming household current to DC for motor drive use.

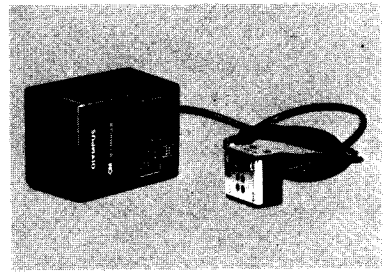




**■M. 15V Ni-Cd Control Pack 1**

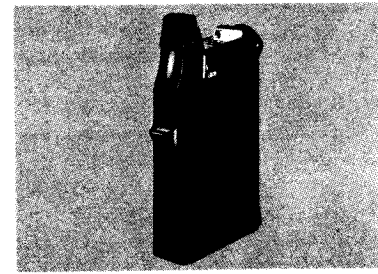
A rechargeable flattop-type power unit utilizing built-in Ni-Cd cells attaches horizontally to Motor Drive 1. This is an ultra-compact, direct power unit housing the motor drive control circuitry and equipped with a mode selector for selecting "SINGLE," "SEQUENCE," and "OFF" functions. It also features an independent shutter release and battery checking device.

With a full 4-5 hour charge, this unit can expose 40 rolls of 36-exposure film and should be purchased in conjunction with M. 15V Ni-Cd Charger 1 to be maintained in a state of operability.



**■M. 15V Ni-Cd Charger 1**

This unit serves as the exclusive charging device for recharging M. 15V Ni-Cd Control Pack1 from ordinary household current. It can be fully charged in a relatively quick 4-5 hours and various voltage ratings (100, 115, 220, and 240V) can be switched with a setscrew.



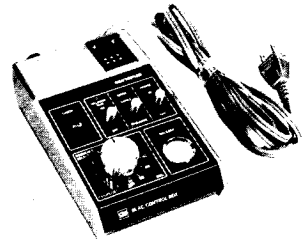
**■M. 18V Control Grip 1**

This pistol-grip type power unit snaps instantaneously onto the Motor Drive 1 unit and uses twelve penlight (AA) batteries. It is secured with a foolproof double lock to assure stability. The rear selector dial indicates "SINGLE" and "SEQUENCE" modes as well as "OFF." It is also equipped with a built-in control unit for the motor drive; a device to automatically stop the motor drive after the last frame has been exposed, and a failsafe system preventing film advance during shutter operation.

This unit has been designed to the finest detail; the shutter-release button is conveniently positioned so that it may be pressed easily and is equipped with a release lock lever to prevent accidental shutter release.

■ **M. 18V Battery Holder 1**

This unit slips quickly into the M. 18V Control Grip 1 and is also sold as an accessory item to be loaded with a spare set of batteries to eliminate delays due to battery changes. It is especially convenient for trips or during heavy shooting sessions and takes twelve penlight (AA) manganese, alkaline or Ni-Cd batteries.



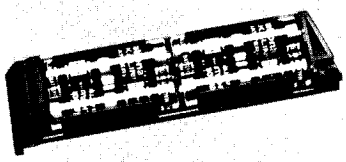
■ **M. AC Control Box**

The M. AC Control Box transforms AC household current to DC current for powering the Motor Drive 1 unit via a relay cord. It features a mode selector for "SINGLE" and "SEQUENCE" motor drive photography, a release run switch (permitting the motor drive to run freely), and a timer permitting selection of intervals from four frames per second to one frame every 120 seconds.

■ **Relay Cords 1.2m and 10m**

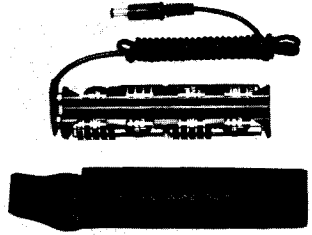
Attaching directly to the Motor Drive 1 unit, both cords are useful when it is preferable to have the control units separate from the camera/motor drive combination. The 1.2m cord is particularly useful in low temperatures for assuring against battery failure as it permits the photographer to hold the control grip in his pocket; while the 10m cord is useful when greater distances are desired.

A remote terminal built into the power supply plug allows wireless and wired remote control and a DC terminal serves as a relay box when connected to a separate DC power supply.



■M. 6V Battery Holder 1

This snaps quickly into the Winder 1 unit and holds four penlight (AA) batteries. The unit is also sold as an accessory item to be used as a spare for heavy shooting sessions (batteries available commercially).



■M. 6V Power Pack 1

A cold-resistant, external power source for the Winder 1 unit. Connects to the external power jack of the Winder by cord. When the power pack is used, current is automatically cut off from the batteries inside the winder and switched to the pack.

When kept in the photographer's pocket, it prevents battery failure and permits operation in extremely low temperatures.

# CHOOSING THE RIGHT FILM BACK

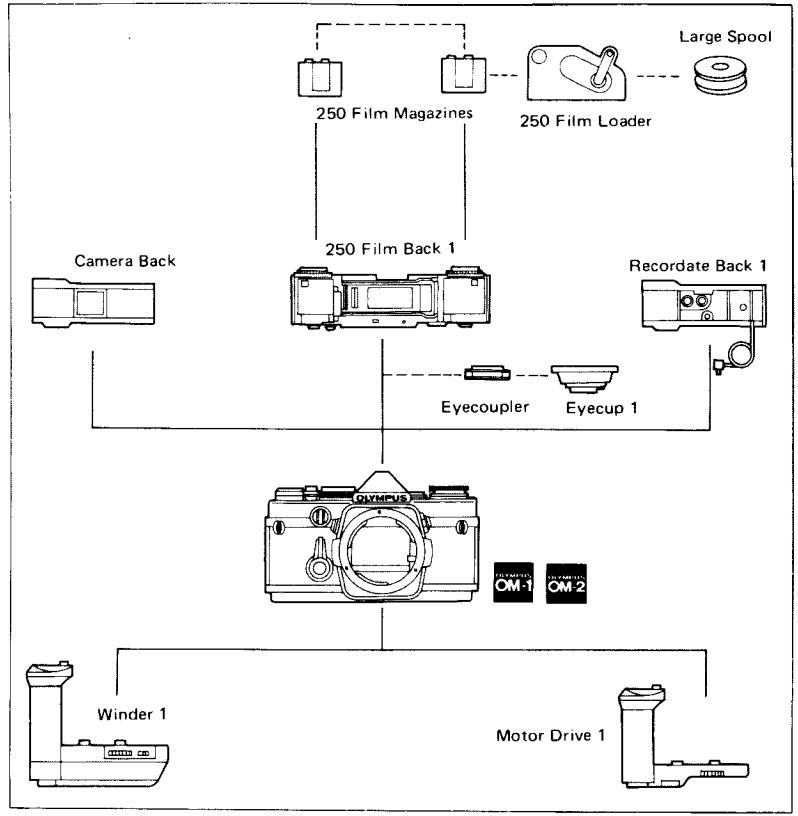
In motor drive photography several frames are shot within a second. Consequently, 20 (24) and 36-exposure film cartridges are used up in no time, and always having to change films gets to be quite bothersome. Moreover, even when not doing heavy sequence shooting, but just taking a few shots here and there in the course of a day with a motor drive, cartridge film gets used up in a hurry and would render the motor drive rather ineffective.

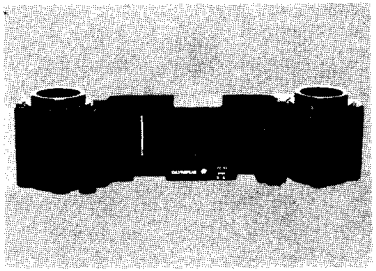
To avoid such inconveniences, the OM System includes a 250 Film Back 1 unit among its motor drive equipment which holds enough bulk film to give 250 exposures. To attach the 250 Film Back all one has to do is substitute it for the standard camera back.

An Eyecoupler will be necessary to insure full coverage of the viewfinder field when Eyecup 1 is used in conjunction with the 250 Film Back 1.

The Recordata Back 1 unit may be used in conjunction with Motor Drive 1 or Winder 1 to imprint date and alphabetical symbol on the standard 35 mm cartridge film.

Both of these specialized film backs can be fitted to the camera with the motor drive attached.

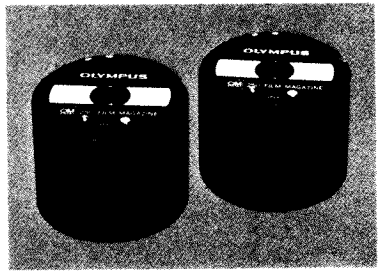




■ **250 Film Back 1**

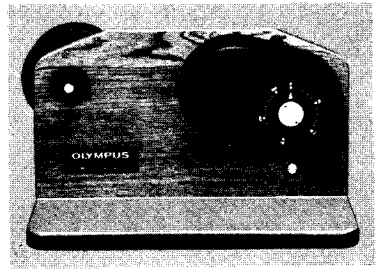
The 250 exposure film back is used for bulk film photography in excess of 36 frames. 30.5m bulk film is used which is wound to the necessary length into special 250 film magazines. A subtractive, manual resetting type exposure counter is built in.

250 Film Back 1 can be attached to the camera body either before or after Motor Drive 1 or Winder 1 is employed. The 250 Film Back 1 is designed to be used in conjunction with a pair of 250 Film Magazines and these items should be purchased together.




■ **250 Film Magazines**

A companion piece of equipment for 250 Film Back 1. A blade edge on the magazine permits film to be cut to any desired length and a blank space is provided for memos. Two 250 Film Magazines, one for film supply and the other for take-up, are used in conjunction with 250 Film Back 1, and it is also convenient to use the 250 Film Loader in conjunction with this equipment when rolling film.




■ **250 Film Loader**

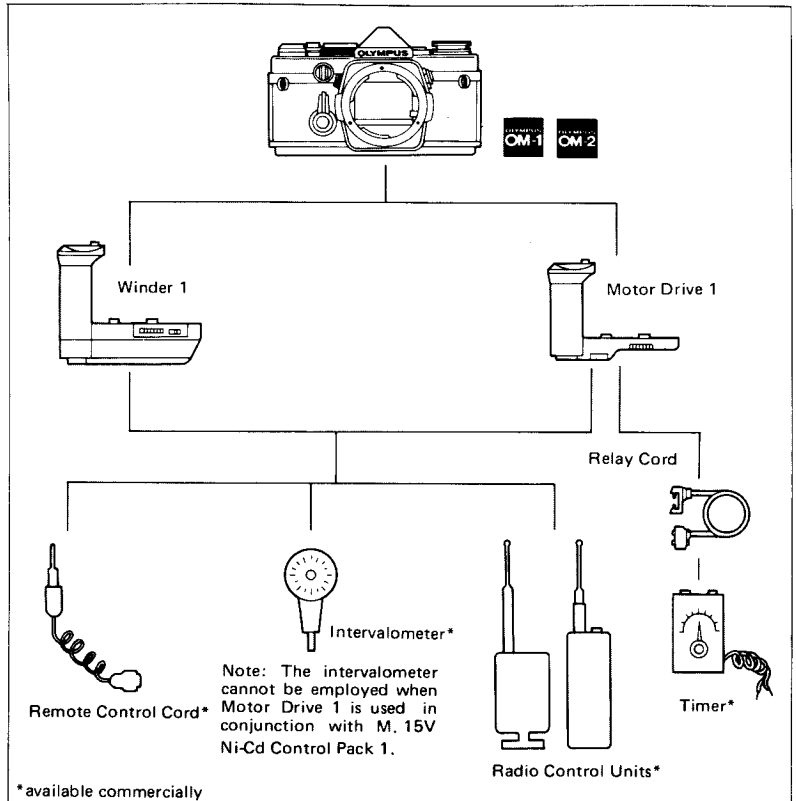
A darkroom unit for loading the 250 Film Magazine with bulk film. After presetting the desired number of exposures to be rolled, a built-in mechanism automatically stops the loading process at the preselected film length.

# SELECTING REMOTE CONTROL EQUIPMENT

Often situations arise in photography where it is desirable to use remote control equipment. One good example is for wildlife photography, often impossible when human beings are too close to the equipment. Remote control equipment is also convenient for photography in places where it is difficult to enter, for photography over long periods of time, for candid snapshots, and for other situations requiring special measures.

Problems inherent to remote control photography have always been those of how to obtain proper exposure control and to advance the film effectively. Thanks to progress in automatic exposure control, however, and to the coming of age of the motor drive, both of these problems have been solved recently. By employing remote control in much the same manner as a self-timer, one can also effectively take remembrances of enjoyable occasions.

Both the Motor Drive 1 and Winder 1 units are equipped with a 2.5mm mini-jack by means of which various remote control devices sold commercially may be employed for remote control photography.



# INTERRELATIONSHIP WITH OTHER GROUPS IN THE OM SYSTEM

The OM System motor drive is an extremely high-performance mechanism in itself. But to put it to effective use it is important to consider its relationship with other groups in the OM System.

More than any other, the motor drive is used most frequently with the Zuiko Lens Group consisting of an abundant array of interchangeable lenses from fisheyes to super-telephotos. Capable of following quick moving subjects with telephoto lenses, the Olympus motor drive frees the photographer from troublesome film winding and allows him to focus without taking his eye off the viewfinder. Likewise, with the zoom lens, a more effective degree of zooming and focusing is possible. It is also an important tool to use with wide-angle lenses for creating the desired effect with snapshots by having the shutter always ready for the next shot — one of the most important characteristics of the motor drive.

Compared with conventional SLR camera systems, the OM System first of all offers a lighter and smaller camera body. But the lenses, including telephotos, are smaller also. And when the compact camera and lenses are used in conjunction with the still smaller and lighter high-performance motor drive, the real value of the OM System becomes strikingly apparent. Moreover, hand-held motor drive photography with telephoto lenses, heretofore unthinkable with conventional systems, becomes a reality.

Another important feature of attaching a motor drive to the camera body is that it frees the left hand for other functions. With flash photography, for example, the direct lighting which is produced when the flash unit is attached directly to the camera often results in unwanted shadows in the background of the picture. In order to avoid these, off-camera flash may be employed, but with the left hand free to hold the electronic flash unit this becomes much easier than ever before, allowing for greater lighting possibilities in flash photography. Moreover, sequential photography can be performed within the capacity of the flash unit being employed.

Use of the motor drive in conjunction with equipment from both the Macrophoto and Photomicro Groups has enabled expansion of the photographical possibilities of both groups. Whether shooting close-ups of flowers or small animals, copying documents, observing cell divisions of microscopic life — anything from recording daily happenings to the scientific and industrial fields — the effectiveness of the motor drive is immeasurable.

With close-up and macrophotography, picture quality often drops due to blurring as a result of shutter and mirror shock which increases in correspondence with the degree of magnification. This can be minimized, however, by employing the Copy Stand, Macrophoto Stand VST-1 or other equipment from the Macrophoto Group.

Often when such equipment is used in conjunction with motor drives, however, access to the shutter release button becomes difficult. The M. AC Control Box used in conjunction with relay cords eliminates this difficulty.

The many, many uses of the units of the Motor Drive Group of the OM System in conjunction with other units and groups of the system permit even a greater range of photographic possibilities with the motor drive than originally imagined. The OM System has not overlooked a detail in giving you a command of the world of photography.

(Continued from page 11.)

proves rewarding to utilize their night feeding habits by spreading feed to lure them to your set-up. With the OM System, relay cords are available for off-camera control, and wireless remote control equipment sold on the market can also be used. One of my favorite methods is to wire the site so that the motor driven cameras will operate when the animals trip a cord I have laid. With this method, I have even succeeded in photographing an *Iriomote* wildcat, a near extinct species.

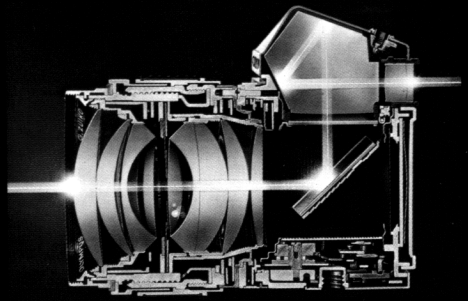
I certainly hope that everyone interested in animal photography will make use of the many applications of the motor drive and go out and challenge the many facets of this fascinating field of photography.

(Mitsuaki Iwago)

(Continued from page 17.)

end of the film is reached. Such high performance cannot be found with other cameras and has been backed up by severe motor-life testing (up to 200,000 releases), and cold-weather tests in excess of −10°C (14°F).

The Olympus goal of restoring functionality to the 35mm SLR camera has been realized in the perfection of a system which highly adaptable to a wide variety of photographical needs. The Motor Drive Group which centers around the five frame per second high-performance Motor Drive 1 unit. This may be used in conjunction with three different power sources: There is the M. 15V Ni-Cd Control Pack 1, a flattop-type rechargeable power unit; the pistol-grip type M. 18V Control Grip 1; and the M. AC Control Box which may be used to run the motor drive on household current. In addition to the motor drive, the Winder 1 unit is also available which is so fast — up to three frames per second — that it could well be considered a motor drive itself. Starting with the 250 Film Back 1 unit, there are numerous other accessories, including provisions for macrophoto and photomicro and a vast variety of other photographical fields.



# OLYMPUS

OLYMPUS OPTICAL CO., LTD.
43-2 Hatagaya 2-chome, Shibuya-ku, Tokyo, Japan

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