



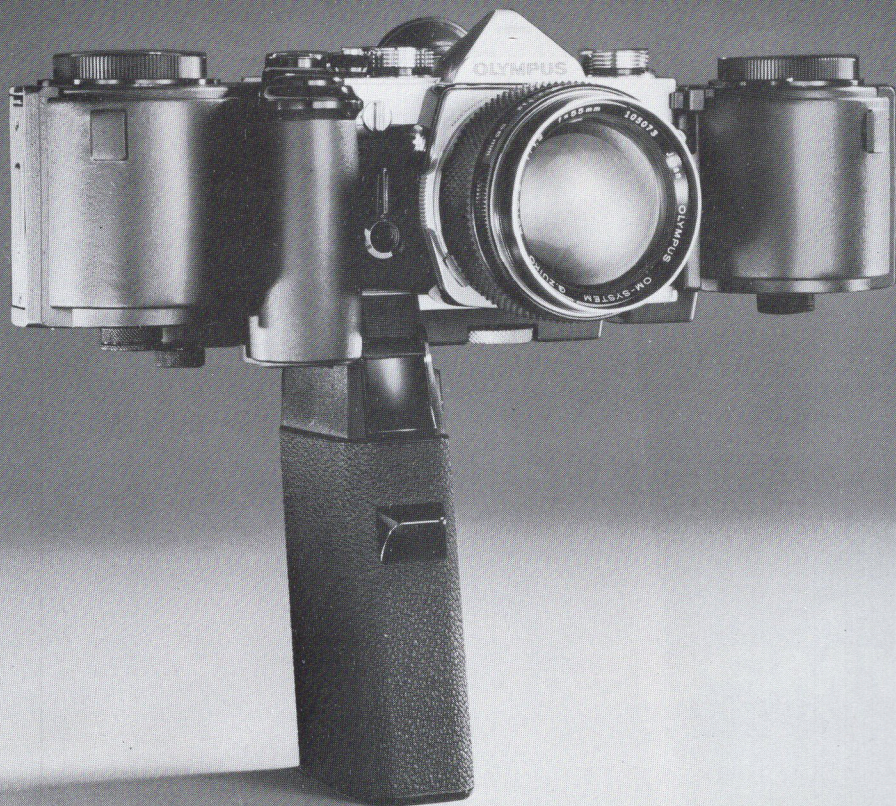
E

OLYMPUS

OM
SYSTEM

**MANUAL FOR
MOTOR DRIVE GROUP**

(WITH OPERATING INSTRUCTIONS
FOR MOTOR DRIVE 1
& M.18V CONTROL GRIP 1)



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The motor drive is a useful and creative tool for the advanced amateur, professional and scientific photographers. The motor drive not only automatically advances the film and cocks the shutter, freeing the photographer from the burden of manually advancing the film, but also allows him to shoot a series of pictures that might otherwise be lost through the time-consuming manual method. Usually a motor drive provides capabilities of single-frame shooting and sequence filming of several frames per second. A professional photographer has compared the single-frame operation to a sniper's sharpshooting, and the sequence filming to the rapid, sustained firing of machine-gun. Many sports magazines feature athletes

in motion. Most of these entertaining, instructive pictures are taken with cameras equipped with motor drive. . . The motor drive is ideal for exciting sports photography, fashion photography and photojournalism, plus informal shots of your family and friends, and will help you freeze the vivid moments of ever-changing, unpredictable children — a difficult task with an ordinary camera.

The motor-driven camera permits more effective recording of wild life with telephoto lenses from a distance, and with macro lenses and auto bellows for close-ups. More efficient copying work can be done with macrophotographic equipment. For industrial and scientific purposes the motor-driven camera is used in

conjunction with an automatic timing control box in which time intervals between exposures can be set. When the timer is switched on, the camera continues to make exposures at predetermined intervals of time requiring no further attention; the recording of cell division with photomicrographic equipment is an example.

The motor-driven camera linked with remote control equipment is advantageous to take pictures in inaccessible or sensitive environments; even multiple motorized cameras can be operated simultaneously and automatically for analyzing motions, securing evidences of bank robbery, etc. The applications of the motor drive are many and more ...

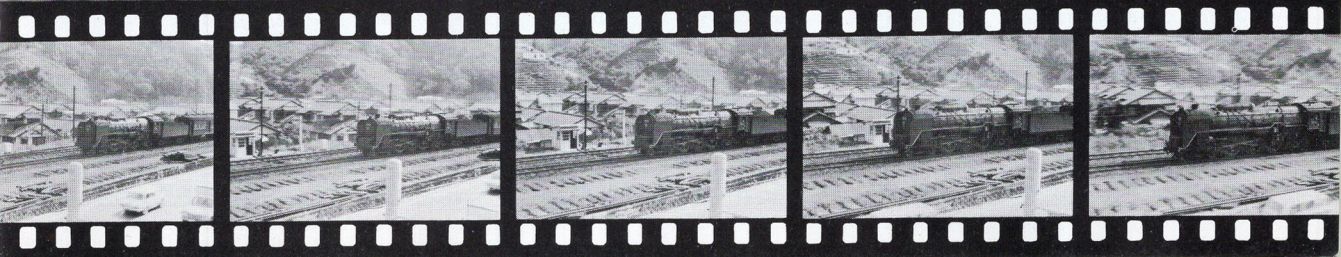
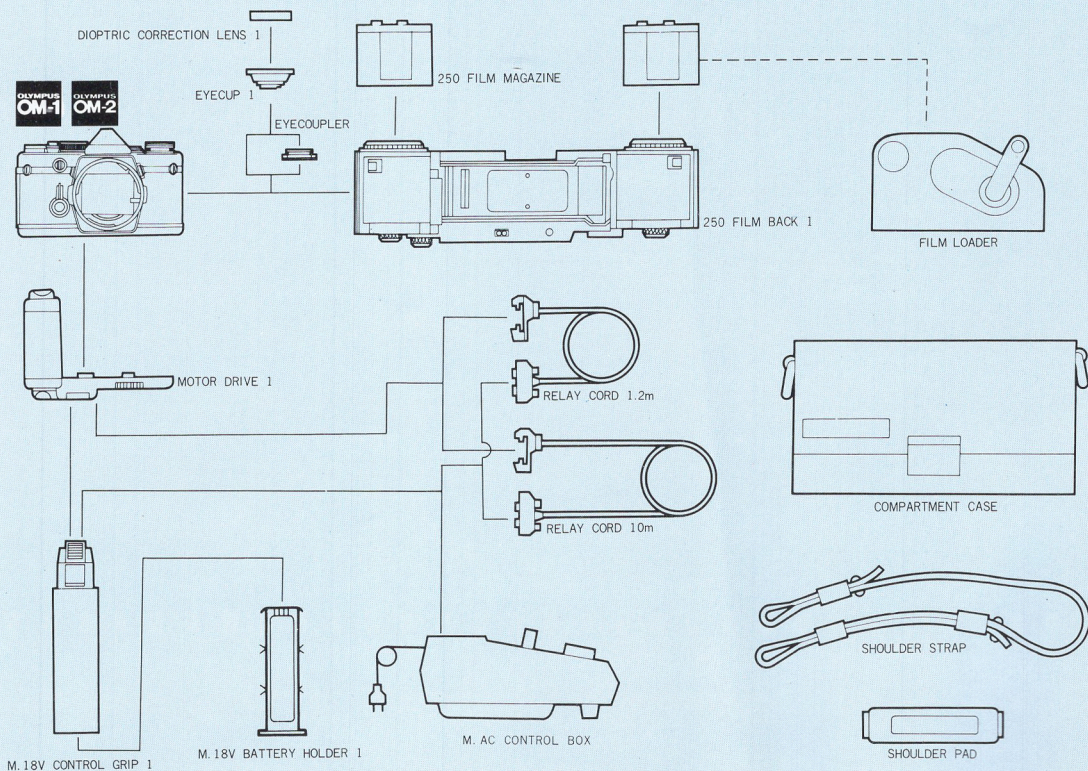


CHART OF MOTOR DRIVE GROUP



The Motor Drive Group is designed and engineered around the basic design concepts of the OM System — high performance, mobility, and ease of operation.

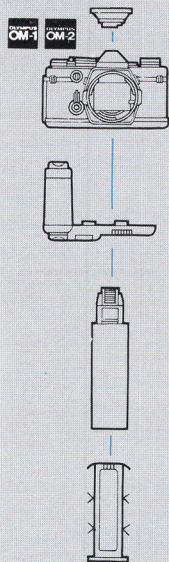
The motor drive is specifically tailored to the compact size of the OM camera. The basic motor drive package — the Motor Drive 1 combined with the battery filled M. 18V Control Grip 1 — makes one of the smallest, lightest motor drive systems available. For example, the OM-1 with the basic motor drive package and a 200mm telephoto lens weighs only about 1500 gr., almost half as much as some comparable motor drive systems. This means convenient portability and effortless hand-held motor drive photography with telephoto lenses, and more interchangeable lenses and accessories to carry or store in the gadget bag.

Although reduced in size and weight, the OM System excels in performance. The basic motor drive package can provide operation up to 5 frames per second in optimum conditions* and offers single release capability. As mir-

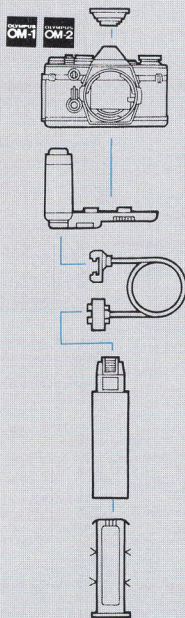
ror lock-up is not necessary during operation, the photographer can follow fast moving subjects through the viewfinder eyepiece all the way. In sequence filming, unlike other motor drives by which the film is wound at a definite constant interval of time, irrespective of shutter speeds used, the OM System motor drive activates film-wind as soon as the shutter curtain is closed, so that slow shutter speeds up to 1/2 of a second are available, thus extending photographic possibilities. The motor drive is powered by the M. 18V Control Grip 1 which acts as a power supply, a control mechanism for motor drive operation, and a pistol grip for the motor drive/camera package. With fresh superpower manganese batteries, enough power is supplied to expose approximately 70 rolls of 36-exposure film. With the addition of relay cords, the control grip can also be used as a remote control unit. Two shutter release buttons are provided for convenience in all situations — one on the pistol-type Control Grip 1, and one atop the handgrip of the Motor Drive

1. An electronic circuit acts as a safety device against film-wind while the shutter is operating and stops the motor when the last frame has been exposed. The Motor Drive Group proved exceptional in durability. The units withstood more than 200,000 cycle life tests and extreme temperatures up to -10°C (14°F) without the slightest impairment of performance. This drastically miniaturized, yet highly versatile equipment can be of great help to cope with the toughest conditions often encountered by news photographers.

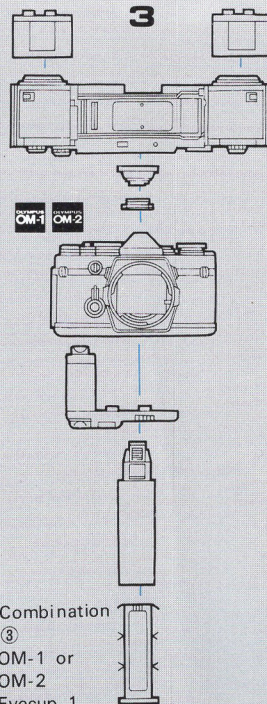
* Optimum conditions: Maximum framing rate varies with temperatures, types of films and batteries, etc. The word optimum implies such conditions in which sequence filming is made at normal temperatures at shutter speeds of 1/500 of a second and faster, using the M. 18V Control Grip 1 containing fresh superpower manganese batteries. Cartridges with smooth film moving must also be used.

1


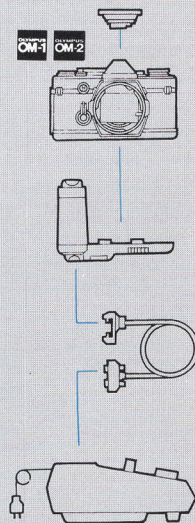
Combination ①
OM-1 or OM-2
Eyecup 1
Motor Drive 1
M. 18V Control Grip 1

2


Combination ②
OM-1 or OM-2
Eyecup 1
Motor Drive 1
Relay Cord 1.2m
M. 18V Control Grip 1

3


Combination ③
OM-1 or OM-2
Eyecup 1
Eyecoupler
Motor Drive 1
M. 18V Control Grip 1
250 Film Back 1

4


Combination ④
OM-1 or OM-2
Eyecup 1
Motor Drive 1
Relay Cord 1.2m
M. AC Control Box

The components of the OM System Motor Drive Group are pre-eminently easy and quick to use.

Combination ①

The Motor Drive 1 is fixed directly to the camera base tripod socket with a clamping screw, and functions with the camera as one unit. The M. 18V Control Grip 1 (with enclosed M. 18V Battery Holder 1) is attached to the base of the Motor Drive. This basic package will be used most frequently.

Combination ②

Depending on photographic conditions the Relay Cord 1.2m becomes indispensable. By incorporating the Relay Cord with the basic package, a 1.2m (3 ft. 11 in.) extension between the Mo-

tor Drive and Control Grip can be obtained. This allows the photographer to carry the Control Grip in his pocket or gadget bag to reduce the weight and bulk of his hand-held equipment, or to prevent battery degradation by keeping the Control Grip power pack warm in sub-zero temperatures. The Relay Cord 10m is used as a longer remote control. Combination ③

In motor drive photography, 20- and 36-exposure film can be used up in a matter of seconds and frequent changing of cartridges becomes a hindrance. The 250 Film Back 1 can be used to replace the rear cover of the OM-1 camera for bulk film photography in the combinations above. The OM-1

equipped with the complete bulk film outfit weighs about 2000 gr. — more than 1500 gr. lighter than comparable camera systems. This makes possible hand-held photography with bulk film, even with telephoto lens. When the 250 Film Back is used with the Eyecup 1, the Eyecoupler becomes necessary. Combination ④

By interchanging the control Grip 1 with the M. AC Control Box as a power supply, the motor drive can be operated on standard AC currents. A built-in timer in the Control Box provides for motor drive sequences from 4 frames per second to 1 frame every 120 seconds.



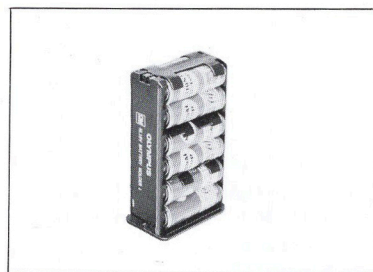
■ MOTOR DRIVE 1

The Motor Drive 1 is the foundation of the OM System Motor Drive Group. Extremely small and lightweight, it mounts directly to the camera base creating one of the most compact and maneuverable motor drive systems available. The M. 18V Control Grip 1 or M. AC Control Box connects directly or via Relay Cord to the Motor Drive 1 to act as power supplies.



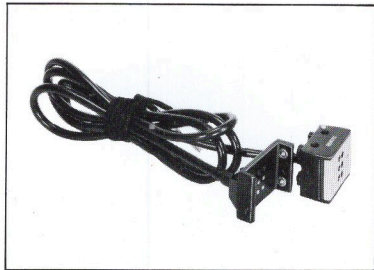
■ M. 18V CONTROL GRIP 1

The Control Grip 1 mounts quickly to the Motor Drive 1 and locks securely into place to assure proper connection at all times. The Shutter Release on the grip is positioned for maximum comfort and convenience. The 3-way Mode Selector switch is large and easy to read, with click stops at "SINGLE", "SEQUENCE", and "OFF" positions. A solid state circuit acts as a safety device against film wind while the shutter is operating and stops the motor when the last frame of a standard film cartridge or the 250 Film Magazine has been exposed. A Shutter Release Lock Lever is also provided to prevent accidental shutter release.



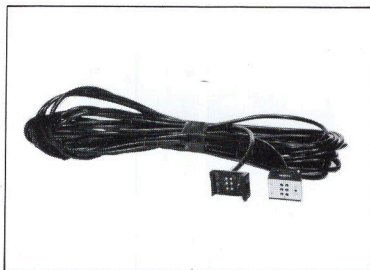
■ M. 18V BATTERY HOLDER 1

This magazine-type battery holder can be loaded with twelve 1.5V AA Alkaline batteries or twelve 1.25V NiCad batteries. It can quickly be inserted or removed from the Control Grip 1, and with additional battery holders the photographer can have a continuous source of DC power for the motor drive system.



■ RELAY CORD 1.2m

The Relay Cord 1.2m allows the photographer to carry the Control Grip power pack in his pocket or gadget bag to reduce the weight and bulk of his hand-held equipment or to prevent battery degradation by keeping the Control Grip 1 warm in sub-zero temperatures. It is also used in conjunction with the M. AC Control Box to provide an AC power supply for the motor drive. The power supply plug of the Relay Cord provides a terminal for wireless or wired remote control and a DC terminal to act as a relay box when separate DC power supplies are connected.



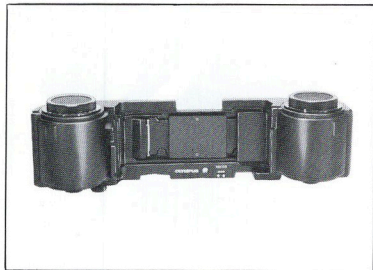
■ RELAY CORD 10m

This unit is ideal for extended remote control operation of the motor drive. However, due to the greater resistance in the long cord, a voltage drop of approximately one volt may occur with direct DC power. This may result in a slightly slower framing rate. Therefore, when using the Relay Cord 10m, best results are obtained with the M. AC Control Box and standard AC current.



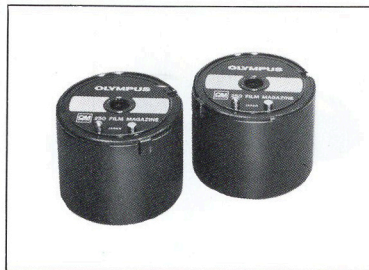
■ M. AC CONTROL BOX

This unit incorporates a terminal which provides an AC current power supply for the motor drive, a Single Frame-Sequence selector switch, a Release-Run switch, and a built-in timer to provide motor drive sequences from 4 frames per second to 1 frame every 120 seconds.



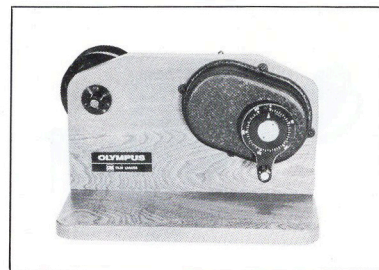
■ 250 FILM BACK 1

This unit provides for up to 250 exposures on 10m (33 ft.) lengths of bulk load film. Quickly interchanged with the standard rear cover of the OM camera either before or after the motor drive is attached, it features a built-in subtractive-type exposure counter with manual reset and is used with two optional 250 Film Magazines.



■ 250 FILM MAGAZINE

Used with the 250 Film Back 1, one 250 Film Magazine holds up to 10m (33 ft.) of bulk film and a second magazine is used as a take-up spool. A film cutter and blank for memo are provided.



■ 250 FILM LOADER

This unit is used in the darkroom for loading the 250 Film Magazine from 30.5m bulk film rolls. A built-in mechanism automatically stops loading at preset film lengths.

Because even in its conceptual stage the comprehensive OM System was designed to include the Motor Drive Group, the group is supremely effective to work with the rest of the OM System groups.

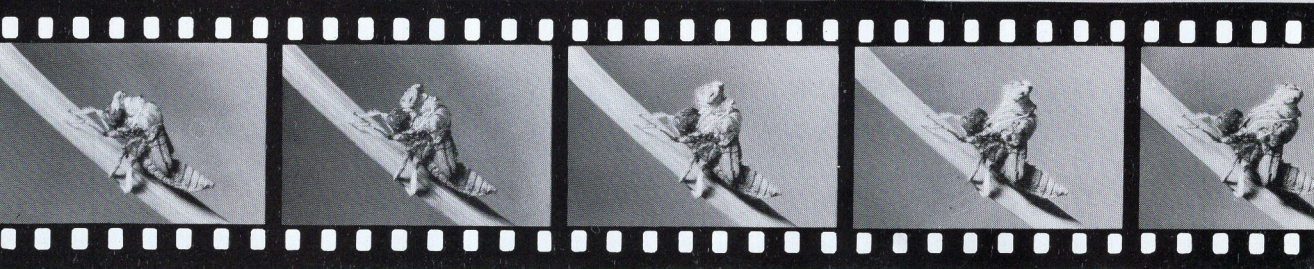
The motor drive units naturally afford complete compatibility with all interchangeable lenses from fisheye to super telephoto lens. In particular, since the camera, lens and motor drive are designed for compactness, limits governing hand-held motor drive photography with telephoto lenses have been considerably extended.

By the aid of the motor drive the

Close-up Photography Group, Macro-photography Group and Photomicrography Group can expand their photographic possibilities in the fields of copying work, nature study, observation of microorganisms and other industrial and scientific researches. In general, for close-up and high magnification photography, camera vibration caused by shutter and mirror shock gives adverse effects to the picture qualities. Although the OM camera is provided with an innovative shock damping mechanism to minimize the effects as far as possible, it is recommended to use sturdy supporting apparatus —

Copystand, Macrophoto Stand VST-1, Macrophotographic Unit PMT-35 or Photomicrographic Supporting Stand PM-PSS, to obtain the maximum resolution. The Relay Cord 1.2m, 250 Film Back 1 and M. AC Control Box are invaluable for comfortable shutter release operation, time-lapse photography, etc. Medical doctors can benefit from the motor drive coupled with the Endoscope Adapter or Stereo Operating Microscope MTX Adapter, to be free from distracting manual film winding.







KODAK SAFETY FILM

EKTACHROME X FILM



30



30A

31



31A

32



32A

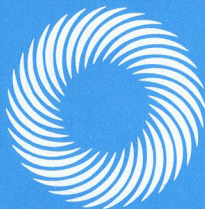
33



33A

34





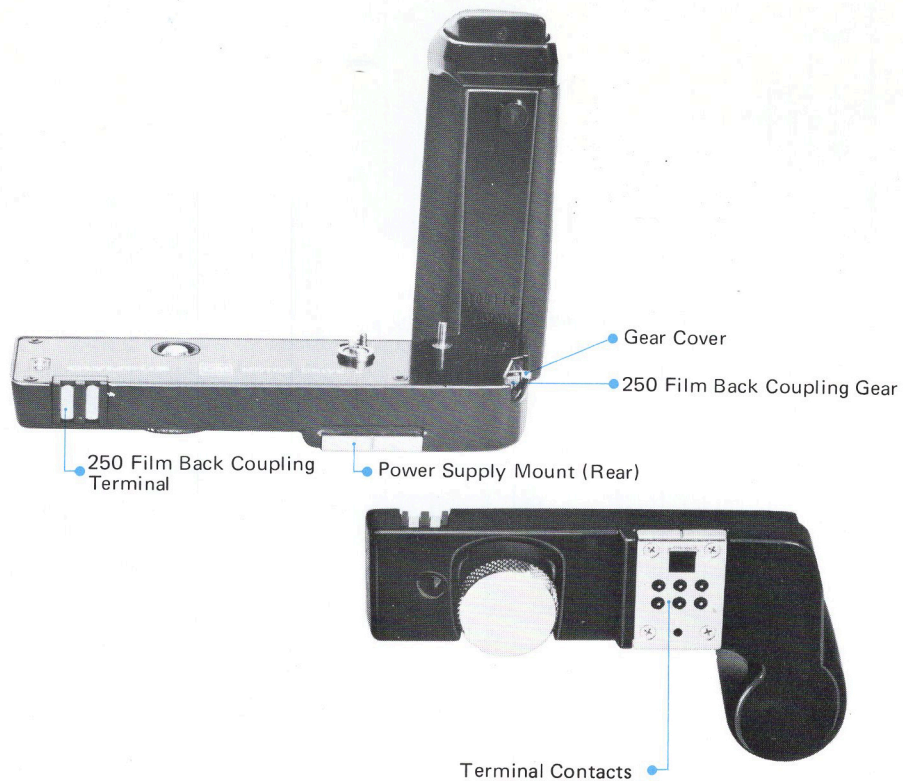
The following instructions are for the basic motor drive system consisting of the Olympus OM-1 or OM-2 Camera, Motor Drive 1, M. 18V Control Grip 1 and M. 18V Battery Holder 1.

■ MAIN SPECIFICATIONS

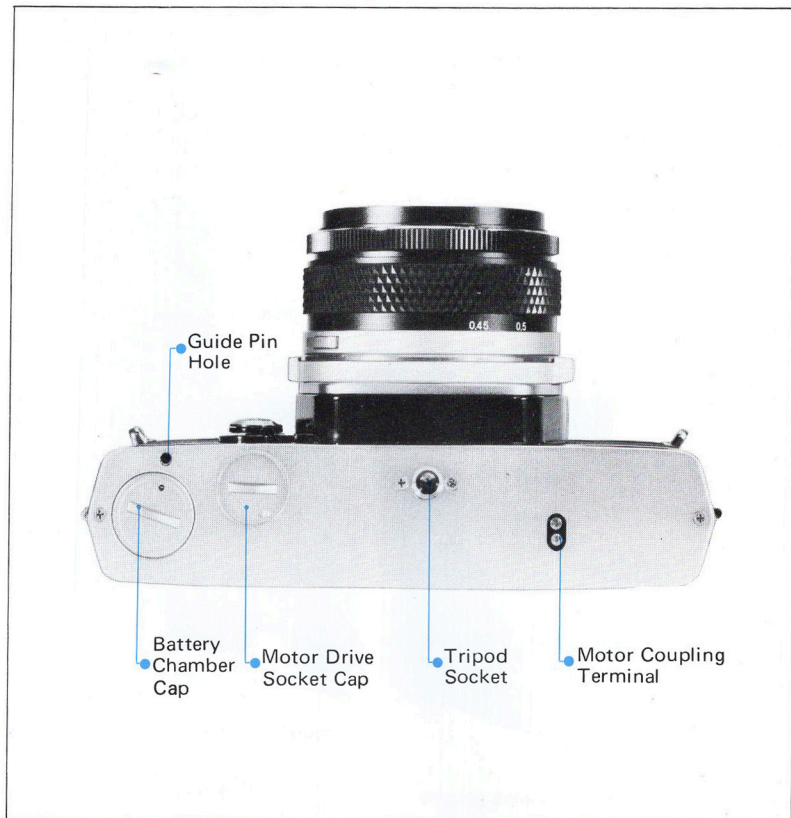
- **Camera:** OM-1 and OM-2 cameras.
- **Frames per second:** Up to 5 frames per second under optimum conditions and single frame shooting.
- **Shutter speed:**
 - OM-1 At "SEQUENCE" — 1/2 to 1/1000 sec.; at "SINGLE" — 1 to 1/1000 sec. (all speeds).
 - OM-2 (AUTO) — Approx. 60 to 1/1000 sec. (MANUAL) — 1 to 1/1000 sec. Both at "SEQUENCE" and "SINGLE".
- **Power supply:** M. 18V Control Grip 1 with M. 18V Battery Holder 1 (12 AA batteries); M. AC Adapter.
- **Maximum input voltage:** DC 18V; DC 12V~16V (other DC power supply).
- **Film capacity:** 12-, 20- and 36-exposure; and 250 Film Back 1 for up to 10m (33 ft.) of bulk film.
- **Shutter release:** Push-button type on handgrip or release on power supply.
- **Dimensions:** 116 x 82 x 66mm (4-5/8" x 3-1/4" x 2-5/8")
- **Weight:** 210 gr. (7.4 oz.)

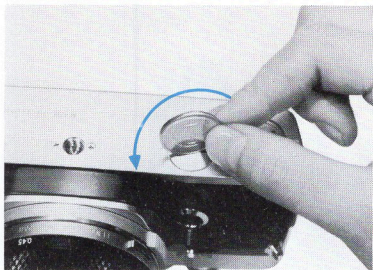






The Olympus OM cameras specially made for motor drive use can be identified by looking at the baseplate which will have a) two caps, b) two metal contacts, and c) a guide pin hole.



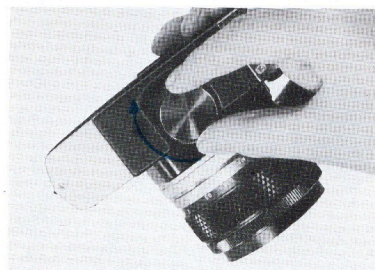


1. Remove the Motor Drive Socket Cap on the camera baseplate by rotating it counter-clockwise with a coin.

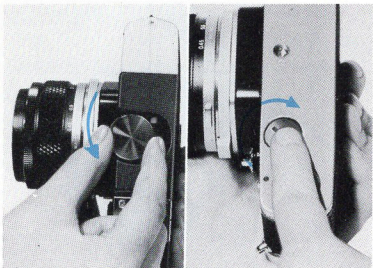
NOTE: Always store the socket cap in the same place to avoid loss.



2. Insert the Guide Pin on the Motor Drive into the Guide Pin Hole on the camera baseplate. To assure proper connection, adjust the position of the Motor Drive until it is flush with the camera.



3. Turn the Motor Drive Clamping Screw clockwise until the Motor Drive is securely attached to the camera baseplate.



1. Turn the Motor Drive Clamping Screw counter-clockwise and detach the motor drive.
2. To replace the Motor Drive Socket Cap, align the index of the cap with the index of the camera, press and turn the cap 90° clockwise with your finger to hitch, then with a coin until it stops.

IMPORTANT:

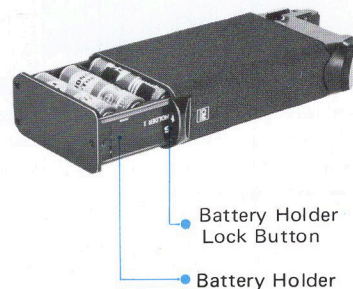
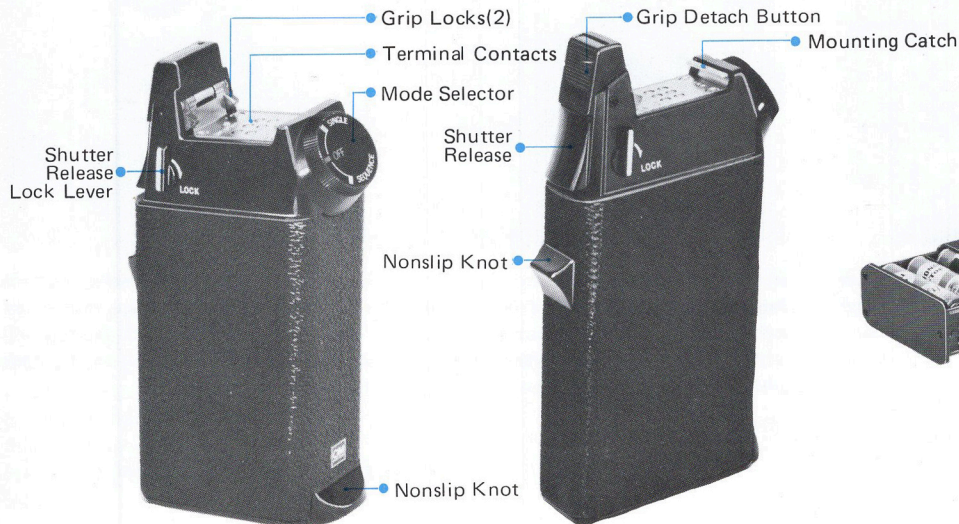
After removing the motor drive be sure to replace the socket cap on the camera baseplate to keep the camera free of dust and dirt, and to prevent the possibility of stray light entering the socket and fogging the film.

NOTE: The Motor Drive cannot be attached to the camera if the Release Coupling Pin on the base of the Motor Drive is moved out of its proper position by accident (e.g., hit in the gadget bag). To return the pin to the proper position:

- a. Connect the Control Grip to the Motor Drive;
- b. Turn the Mode Selector to "SEQUENCE";
- c. Short-circuit the Motor Drive by placing a small screwdriver or other metal object across both camera coupling contacts for a few seconds.

CARE AND STORAGE (1)

- Make sure all motor drive units are attached securely. Do not apply excessive force.
- Do not apply force when the movable parts have been stopped by the safety mechanisms.
- Keep all electrical contacts clean and well away from metallic objects to prevent short circuit.
- Avoid storing the motor drive units in very cold, hot or humid areas.



■ MAIN SPECIFICATIONS

● **Batteries:** Twelve 1.5V AA Alkaline batteries (Eveready E91, Mallory MN 1500 or equivalent) or twelve 1.25V AA NiCad rechargeable batteries (Eveready CH500 or equivalent).

● **Voltage:** AA batteries — 18V; NiCad batteries — 15V.

● **Battery loading:** Magazine-type M. 18V Battery Holder 1 with built-in

lock button and polarity protector.

● **Mounting:** Snap-on type special mount; direct contact terminal; with Grip Detach Button.

● **Capacity:** Approximately 70 rolls of 36-exposure film with fresh super-power Manganese batteries.

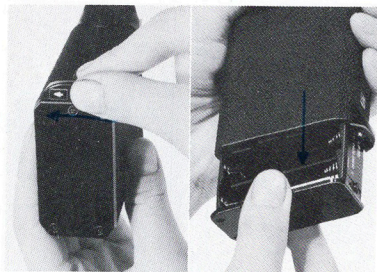
● **Mode Selector:** Rotating dial type with "SINGLE", "SEQUENCE", and "OFF" click stop positions; solid state

circuit for automatic film wind stop after last exposure.

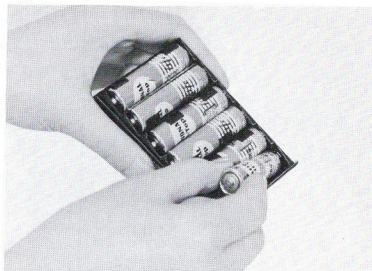
● **Shutter release:** Large trigger-type with lock lever.

● **Dimensions:** 32 x 87 x 136mm (1-1/4" x 3-3/8" x 5-3/8")

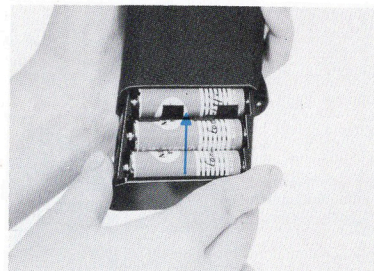
● **Weight:** Body only — 130 gr (4.6 oz.); with M. 18V Battery Holder 1 (30 gr — 1.1 oz.) and batteries 240 gr (8.4 oz.) — 400 gr (14.1 oz.).



1. Slide the Battery Holder Lock Button on the Control Grip in the direction of the arrow. The Battery Holder will spring out of the grip slightly for easy removal.



2. Insert twelve 1.5V AA Alkaline batteries or twelve 1.25V AA NiCad batteries into the holder noting correct polarity: Minus terminal against spring; plus terminal (+) against contact.



3. Insert the Battery Holder into the Control Grip until it snaps into place. The Battery Holder Lock Button will automatically reset itself to the lock position.



4. The batteries can easily be removed by applying your fingernail on the (+) contact side.

NOTE: If you are not going to use the Control Grip unit for several weeks or if the batteries appear weak, remove the batteries. This is a "just-in-case" precaution in the event the batteries leak.

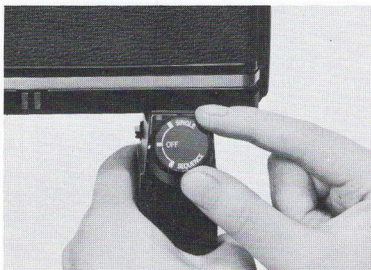


1. Align the red index line on the rear of the Control Grip with the red index line on the rear frame of the Motor Drive until the Mounting Catch is engaged.

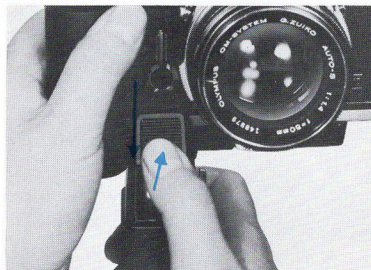


2. Carefully push the Control Grip forward and up until it snaps in the front of the Motor Drive.

3. Shoot several "blank" exposures by pressing the Shutter Release on the Control Grip to make sure the units are attached properly.



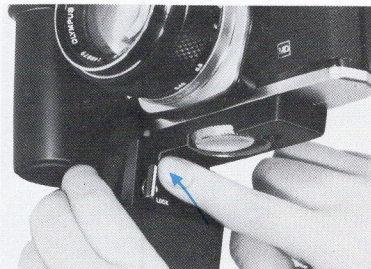
1. Turn the Shutter Release Lock Lever on the Control Grip to the "LOCK" position.
2. Turn the Mode Selector on the Control Grip to "OFF".



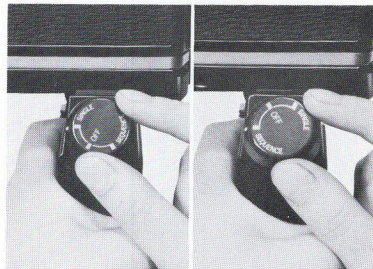
3. To remove the Control Grip, push in and down on the Grip Detach Button to disengage the Grip Locks, and then lift apart.

CARE AND STORAGE (2)

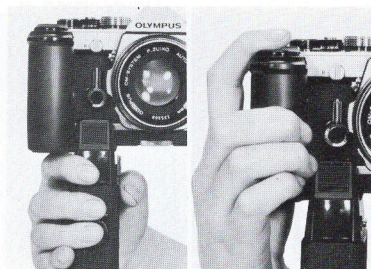
- When storing the Control Grip 1 for long periods, remove the batteries from the Battery Holder for longer battery life.
- After shooting with the Motor Drive, always turn the Mode Selector on the Control Grip 1 to the "OFF" position. Set the Mode Selector at click positions.
- If cleaning is necessary, wipe the units with a soft cloth only. Do not use cleaning solvents or other harsh chemicals.
- Do not store motor drive units near mothballs or similar materials to avoid the possibility of damage to metal surfaces.



1. Unlock the Shutter Release Lock Lever on the Control Grip by moving it forward and up opposite the word "LOCK".



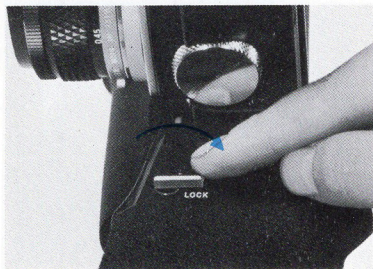
2. Turn the Mode Selector on the Control Grip to either "SINGLE" or "SEQUENCE". In the "SINGLE" mode, the Motor Drive advances the film by one frame and automatically cocks the shutter. In the "SEQUENCE" mode, the Motor Drive repeatedly winds the film and cocks the shutter as long as the release is pressed.



3. To release the shutter, press either the Shutter Release on the Control Grip or atop the Handgrip of the Motor Drive, whichever is more convenient.

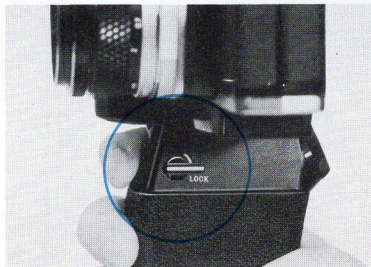
● MANUAL SHUTTER RELEASE

Should you wish, you can use the camera's shutter release even with the Motor Drive and Control Grip attached. The film can then be advanced manually or with the motor.

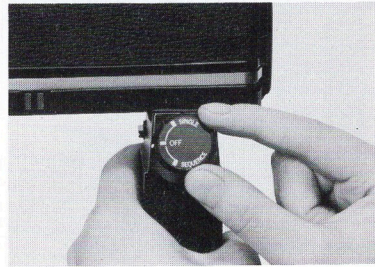


To lock the Shutter Release on the Control Grip, turn the Shutter Release Lock Lever in the direction of the arrow until it stops with a click.

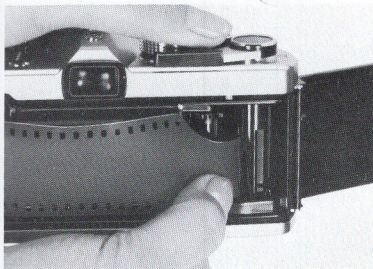
NOTE: The Shutter Release atop the Handgrip of the Motor Drive cannot be locked.



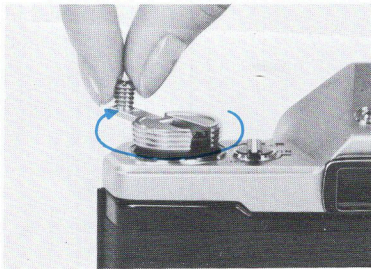
* When using the Motor Drive's Shutter Release, turn the Shutter Release Lock Lever to the "LOCK" position to prevent accidental release while holding.



* When you are not taking pictures, turn the Mode Selector to the "OFF" position.



1. Always try to load your camera **after** the Motor Drive has been attached. This eliminates even the remotest possibility of light leak through the Motor Drive Socket. If this is not possible, attach the Motor Drive unit in a dimly-lit area.
2. Load the camera with film in the normal manner. (Refer to your Olympus OM Camera Instructions.)



Unload the film in the normal manner. (Refer to your Olympus OM Camera Instructions.)

■ HELPFUL HINTS

● IF THE MOTOR DRIVE STOPS DURING PICTURE TAKING . . .

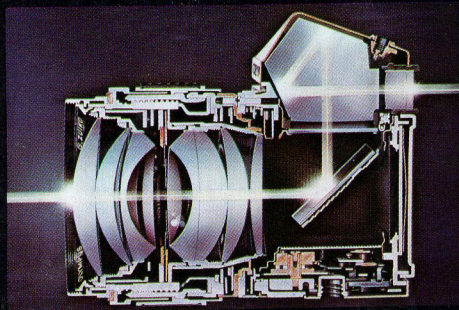
1) Check the exposure counter. The Motor Drive automatically stops advancing after the last frame is exposed. Rewind the film into the cartridge.

IMPORTANT: After the last frame is exposed avoid pressing either Shutter Release to prevent the possibility of film damage.

2) If the Motor Drive stops in the middle of a roll and makes a droning sound, the batteries are exhausted. Turn the Mode Selector to "OFF" and insert fresh batteries.

● SHOOTING IN LOW TEMPERATURES

If the Motor Drive will not advance when shooting in extremely cold temperatures, advance the first frame manually and then use the motor. The Relay Cord 1.2m is recommended when shooting in low temperatures because it allows you to keep the batteries warm by carrying the Control Grip in your pocket.



OLYMPUS

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