NIKON MOTOR DRIVE

F36, F250
S36, S72

REPAIR MANUAL

7, 1962.

NIPPON KOGAKU K.K.

Tokyo, Japan

NIKON MOTOR DRIVE

REPAIR MANUAL

Chapter I. Introduction and Tools

1. Introduction

Several models of Nikon Motor Drive are now in use to work with each model of the Nikon camera.
This manual will provide a consolidated knowledge of servicing on the malfunction or working failures of the Nikon Motor Drives ever introduced, except Model S-36 with two-core cord, whose production quite limited and now discontinued.

The same Model S-36 but with three-core cord is dealt with in this manual, and for quick identification of the both, see the attached Comparison Table.

S-36 (or S-72*): For use on the Nikon camera model SP, S3 or S3M
F-36 : For use on the Nikon camera model F or F-photomic
F-250: This type holds a sufficient length of film for up to 250 exposures andis used on the Nikon camera model F.

* S-72 differs from S-36 in providing the graduation up to 72 on the exposure counter dial, for use on the Nikon model S3M. It can operate in conjunction with the camera SP or S3.
Note that in the same way the Motor Drive S-36 can operate on the camera model S3M.

Below in Chap. 2 - 6 essentials of repairing method of the Motor Drive F-36, and in Chap. 7 and 8 important differences of the model S-36 and F-250 from F-36 will be described.

For dismounting the Motor Drive, refer to the "Service Parts Catalog" in which all the parts are shown by the order of dismounting procedure.

2. Requisite Tools

As a power source needed for checking and adjusting the Motor Drive, use a dry cell or lead condenser, which supplies 7.5 - 15V, 0.4 Amp. D.C. An A.C. rectifier may also be usable. In this case, take

care to keep the voltage drop within 1V or so, for the reason that, when a current of 0.4 Amp flows by a greater drop, difficulty may arise in measurement of the voltage during the operation and too great influence may be exerted by each individual power source.
It is also desirable to be able to vary the voltage.

(2) D.C. voltmeter

It is to permit measurement up to 15V.

(3) D.C. Ammeter

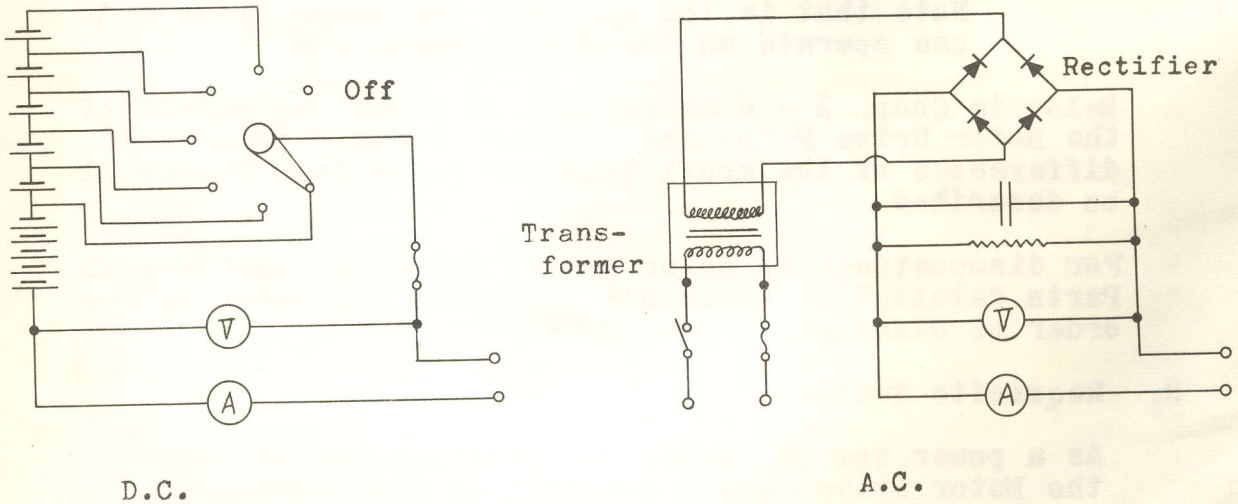
It is to permit measurement up to about 1 Amp.

(4) Terminals, switches, fuses, etc.

The same terminals as one used for the Motor Drive are necessary.
Furthermore, power source switches, fuses, etc. are to be arranged in the wiring as shown Fig. 1 - 1.
For connection of the terminal on the side of the Motor Drive, see Fig. 3 - 5. The plus (+) side should be connected to the Motor Drive terminal #330 and the minus (-) side to #336 and #340.

2. Radio tester and megger (megohm tester)

A radio tester such as usually used in a radio repair shop to examine conductivity.
A megger, permitting measurement over 500V D.C. 20M



D.C. A.C.

Fig. 1 - 1

3. Tension tester

Permitting measurement up to about 50g.

4. Tools

(1) Screw drivers

Besides a set of drivers, a double type screw driver such as illustrated in Fig. 1 - 2 is desirable.

(2) Pliers

A pair of pliers, with pointed ends

(3) Tweezers

A pair of tweezers

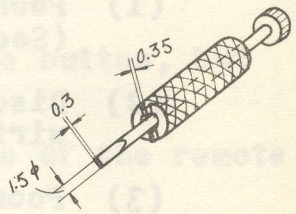


Fig. 1 - 2

(4) Soldering iron

One with a long thin end suitable for work in the narrow place.

(5) Pin spanner

With variable distance narrow pin type

(6) Punch and hammer

Chapter II. Derangements and Causes

Disorders or derangements which may be encountered most often and their causes are given below.

Part numbers are given according to the "Service Parts Catalog" except that three switches for successive exposure in the "M-Assembly are designated as M-C Switches, five switches as M-S Switches, and three switches in the "N-Assembly" as N-Switches.

Note that not only one, but also more than one disorders or derangements may often take place at one time.
Items to be checked in the first place in respect to the use of the Motor Drive and power source are marked.

§ 1. The motor doesn't work even when the Motor Drive has been connected to the power source and the release button S-C depressed.

⌖ Isn't the exposure counter on the Motor Drive set at 0?

⊕ What voltage has the power source?

Even though the power source itself indicates a sufficient voltage between the terminals, it often happens that, when it is connected to the Motor Drive for operation, the voltage falls suddenly to less than 8V.

⊕ Is the connecting cord cut off or deficiently insulated? Check it with a radio tester or megger.

(1) Poor contact of the connecting cord with the terminal. (See Chap. 3 §1 - 1)

(2) Disconnection or deficient insulation in the inside wiring. (See Chap. 3 §1 - 2)

(3) Poor contact at the N-switch (See Chap. 3 §1 - 3 and Chap. 4)

(4) Poor contact at the M-C switch (See Chap. 3 §1 - 3 and Chap. 4)

(5) Poor contact caused by falling off of the contact material at each switch. (See Chap. 3 §1 - 3 and Chap. 4)

(6) Short circuit of the motor terminal to #241 (motor drive body) (See Chap. 3 §1-4)

§2. The power source, as soon as connected to the Motor Drive, gives rise to successive exposures even though the release button is not depressed, or these successive exposures once started don't stop even after the finger is lifted up from the release button.

⊕ Be sure that the connecting cord is inserted deep enough into the terminal.

(1) Derangement in the M-C switch. See Chap. 4.

(2) False operation of lever #31 in the L-switch.

(3) Poor contact in the M-S switch (not correctly returns). See Chap. 3 §1 - 3 and Chap. 4.

(4) Disconnection of deficient insulation in the wiring. See Chap. 3 §1 - 2.

(5) Poor contact of the connecting cord with the terminal. See Chap. 3 §1 - 1.

§3. Successive exposures operate correctly but single exposure does not, or even though the S-C ring is set at S, the successive but not single exposure takes place.

⊕ Be sure that the connecting cord has been inserted deep enough into the terminal.

(1) Poor contact of the M-S switch. See Chap. 3 §1 - 3 and Chap. 4.

(2) Poor contact of the connecting cord with the terminal.

§4. Successive exposures do not operate with a uniform speed.

(1) Derangement in the N-switch. See Chap. 4 -§4.

(2) Low efficiency of the motor. See Chap. 4 -§4.

§5. The motor drive operates with its own release button, but remote control cannot be operated.

⌖ Be sure that no disorder is found on the side of the remote control device.

⌖ Have the end of connecting cord sufficiently inserted into the terminal?

(1) Poor contact of the M-S switch. See Chap. 4 -§1.

(2) Poor contact of the terminal on the C-Assembly with the connecting cord. See Chap. 3 §1 - 1.

§6. The motor drive does not stop even when the exposure counter returns to 0.

(1) Derangement of screw #40 on G-Assembly #35. See Chap. 4 -§5.

§7. As soon as the release button is depressed after the C-S ring set at C, the motor drive produces only clattering sound but does not give rise to shutter winding and releasing.

Be sure that the A-R ring on the camera has been set at A.

(1) Incorrect return of lever #57 on the G-Assembly. This can be observed if the A-Assembly is removed. See Chap. 5 §1 - (5).

§8. The motor produces humming sound as soon as the winding is completed or in the course of winding. Only a minute electric current flows.

⌖ Too low voltage?

(1) Derangement of M-C switch.

§9. The shutter can be released or not according to the position of the camera.

(1) Loose fitting of the Motor Drive to the camera. See Chap. 5 -§1.

(2) Loose fitting of the camera back. See Chap. 5 - 1.

§10. Although the A-R ring on the camera top is set at R, the motor starts and keeps running when the C-S button on the Motor Drive is depressed.

(1) Incorrect fitting of the Motor Drive to the camera.

§11. Other simple disorders.

Chapter III. Repairing

§1. Electric circuit

As most of all the derangements or disorders are liable to take place in the electric circuit, especially due to poor contact or deficient insulation at the switches, it is important to learn the circuit and adjustment of the switches, as described below in this Chapter and Chap. 4 respectively.

1. Terminal (C-Assembly)

a. Poor contact of the terminal with the connecting cord. Most troubles in the terminal can be traced back to this poor contact. In the early stage of production (up to 300th series number) of the Motor Drive the terminal was so constructed as shown in Fig. 3 - 1 and likely to cause a poor contact between the connecting cord and #338. An improvement has been made by inserting spring coil #338A as shown in Fig. 3 - 2, by which a somewhat better but not satisfactory result has been obtained. So the second improvement has been worked as shown in Fig. 3 - 3. As a markshift, open the slot in the plug end of the cord in the earlier products. However, it is more recommendable to replace the terminal with the one of the latest type by exchanging the parts marked △ in Fig. 3 - 3. In assembling bend the spring part of #338 inward 0.3 - 0.4mm to make it more elastic as shown in Fig. 3 - 4.

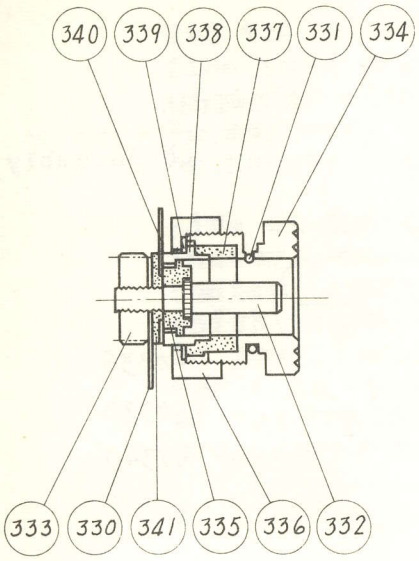


Fig. 3 - 1

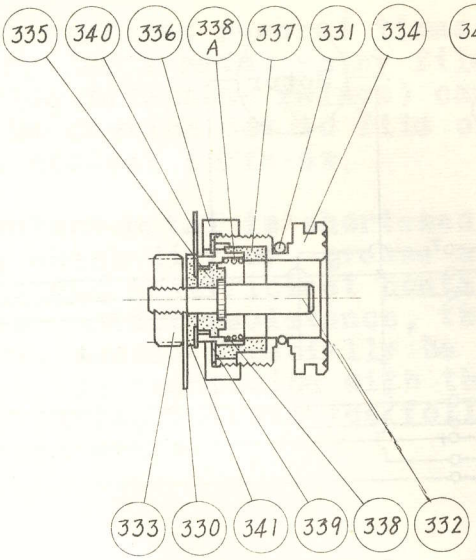


Fig. 3 - 2

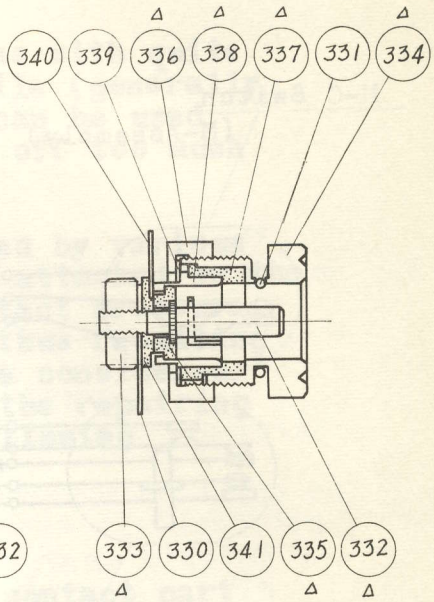


Fig. 3 - 3

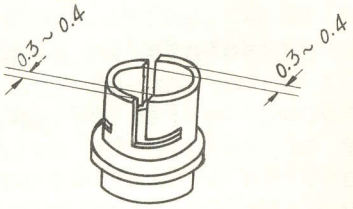


Fig. 3 - 4

b. Deficient insulation

This deficiency in the terminal is likely caused by loosening of nut #333 through rotation of central spindle #332.
Be sure that each pair of rotation stoppers #332 and #335, #335 and #338, #338 and #337, or #334 and #337 works effectively to each other.
After assembling as shown in Fig. 3 - 3 tighten up #333, and thereafter, fix it with lacquer or by other adequate means.

2. Wiring

The circuit is as shown in Fig. 3 - 5. Here is shown a state after the shutter has been wound up.

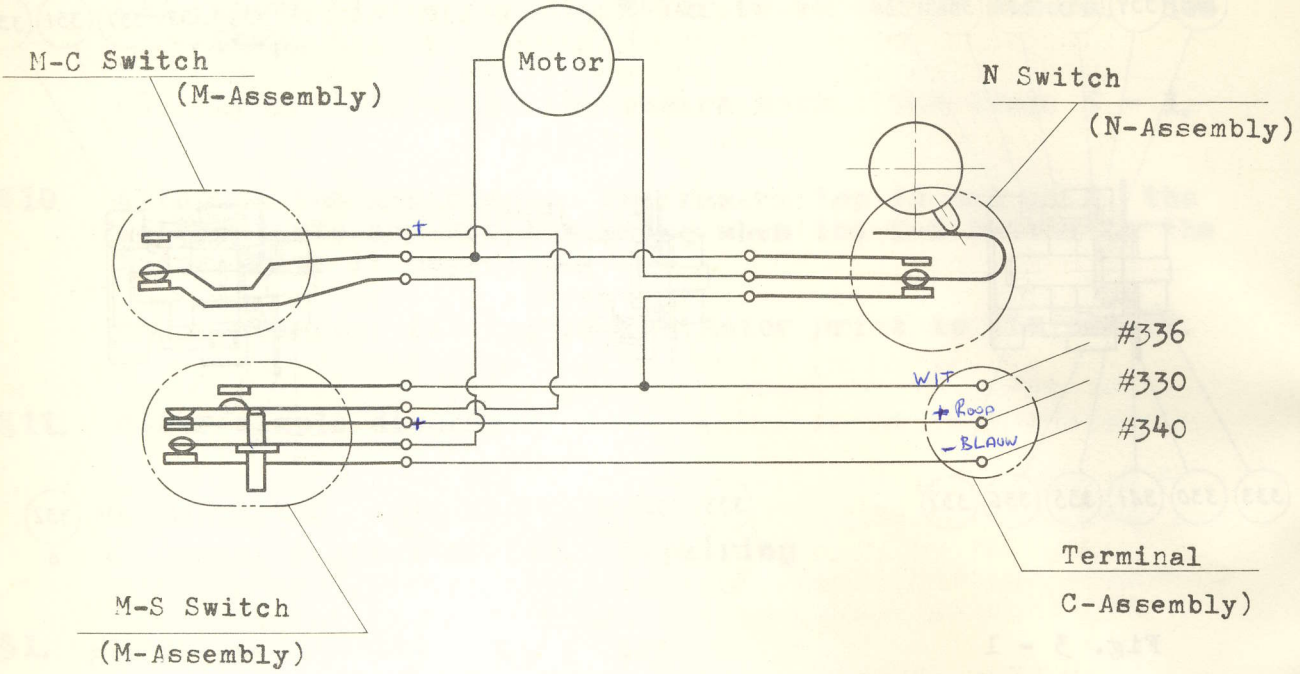


Fig. 3 - 5

a. Disconnection

Disconnection at soldered points in each switch unit at the terminals of the motor or on the Motor Drive terminal is liable to occur quite often. Repair with a little quantity of solder by using a small soldering iron so as not to affect other adjacent parts. As wiring cord, a vinyl-covered cord with 13 lengths of inside wires of 0.08mm thick stranded are used.

b. Deficient insulation

Covering of the connecting wire breaks sometimes and the inside wire is brought into contact with metal parts. Especially, the connecting parts of the M-Switch have only a small clearance against motor attaching part #149 and are liable to contact. For replacing, the wire should not only be separated from the metal parts, but also insulated using vinyl tape.

3. Switches

(1) Poor contact caused by dirt on the contact point

The connecting points in almost all the Motor Drives which come back for repair, are likely in the state to be cleaned. Therefore, make it a rule to clean the contact points of all the Motor Drives by the following way:

Rub the contact surfaces several times with quite fine sand paper. Or a metal relay file (generally used for cleaning telephone relays) can be used. In any way, take caution not to file off too much or roughen the contact surfaces.

Life of the contact metal is shortened by various factors, among which dirt or grease attached on the contact surface and insufficient contact pressure, which increases contact resistance, thus resulting in poor contact, should especially be considered. For this reason, in connection with the repairing of the contact parts, execute the following procedures by all means:

A. Cleaning

a. Before reassembling, clean the contact part with alcohol, benzine, trichlorethylene so as to remove grease and dirt completely.

b. For cleaning, don't use an agent other than those described above. Never use gasoline, which gives injurious effect to the contact point.

c. After cleaning, take care not to touch the contact point with your fingers or any tool.

B. Retaining the definite contact pressure

Keep the contact pressure not less than 5 g. For measurement use a tension gage. See Chap. 1.

(2) Poor contact caused by falling off of contact metal

The contact alloy metal is spot-welded and falls off, if it has not been worked well. For a makeshift, solder it. If possible, exchange the whole switch part (M-Assembly or N-Assembly). In this case, do not leave this contact metal fallen in the assembly, as it is liable to cause some troubles afterward. Take out the metal by all means.

(3) Derangement in switches

For adjustment, see Chap. 4.

(4) Motor

a. Low efficiency of motor

When the motor runs independently at 0.05 - 0.1 Amp., it is all right. If it runs at 0.2 Amp. or above, replace it with a new one.

b. It sometimes happens that the terminals of the motor touch the Motor Drive body #241, resulting in deficient insulation. Correction of the attaching positions will suffice in most cases.

§ 2. Mechanical disorders.

Mechanical disorders, except the two following cases, may scarcely occur. Even though they take place, it is not hard to judge the parts to be replaced referring to the "Service Parts Catalog".

1. Wear of ratchet gear for picture frame counter knob

In this case, replacement of #246 in the B-Assembly with a new one will do at least. Be sure, however, that the attached position of P-Assembly #26 is correct, (Fig. 3 - 6) so as not to have the same trouble again due to insufficient gearing to the Assembly.

2. Damage of pin #96 in the J-Assembly

Knock in pin #96 and finish its length as shown in Fig. 3 - 7.

Coil spring #127 is to be wound up 2 - 2.5 times from the released position.

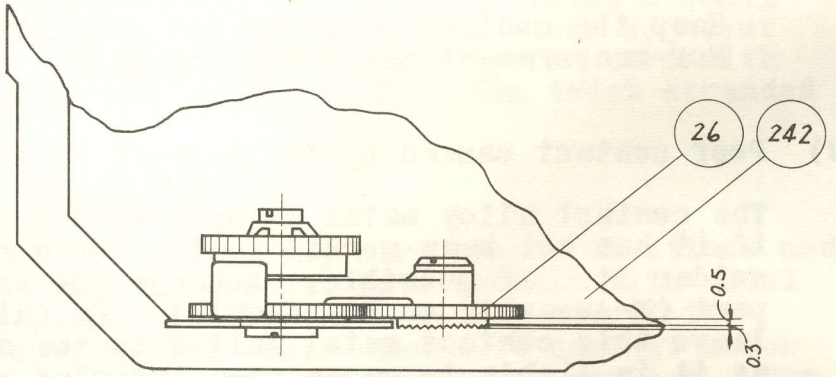


Fig. 3 - 6

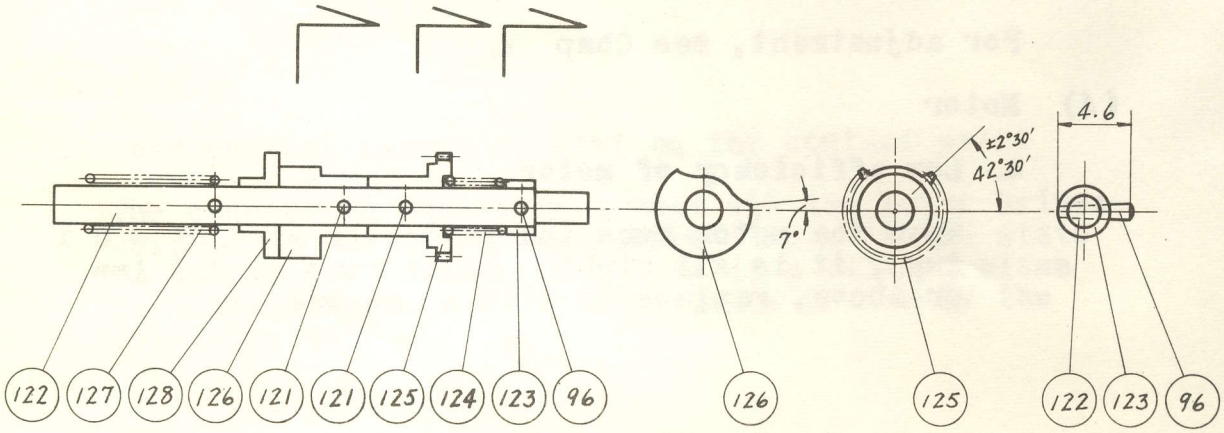


Fig. 3 - 7

Chapter IV. Adjustment of Switches

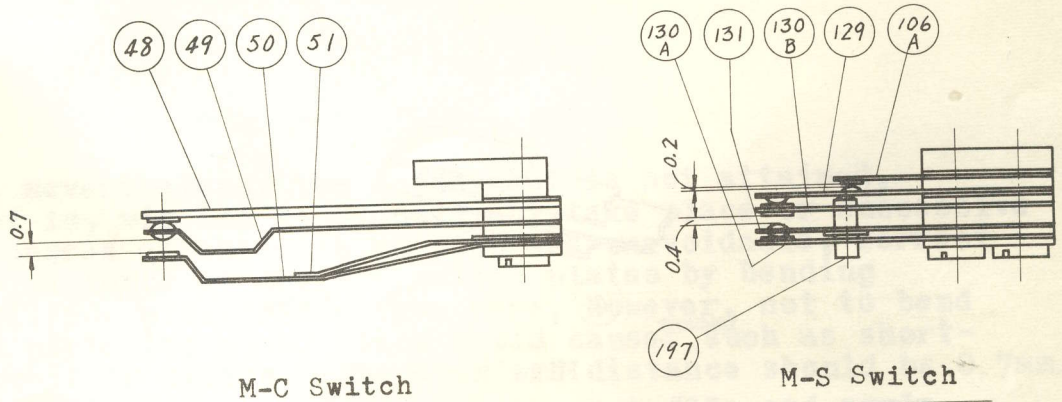
§ 1. Before assembling each switch, clean the contact points and check the correct contact pressure as previously described. See Chap. 3 -§1. Then, proceed as follows:

1. M-Assembly

(1) If the tension of plate spring #50 among three ones in the M-C switch is found too weak, bend it inward using pliers. For, if it were too weak to touch plate #49 with sufficient pressure at the moment of completion of winding, it would subject to vibration, causing deficient contact and imperfect stop of motor running, thus successive exposures may be unavoidable.

(2) Bend auxiliary plate #51 found inside of plate #50, so that the distance between the M-C switch and the contact points is about 0.7mm. See Fig. 4 - 1.

(3) Check if, when the button in the N-S switch is depressed, #131 and #129 come in contact with #130B and #106A respectively, and when the finger is lifted up from the button, #131 in contact with #130 and then #129 with #130, or not. If the contacts do not occur in these orders, correct by bending #130B to get the clearance 0.4mm against #131 and then by bending #106A to get 0.2mm against #129. See Fig. 4 - 1.



M-C Switch M-S Switch

Fig. 4 - 1

2. N- and E-Assembly

For the Motor Drives to be delivered since 1962 September N- and E-Assembly will be improved as described in Chap. 6. Here is given repairing procedure for the present type of the Assemblies before the improvement.

(1) Too strong tension of the contact plate #275 at the center of the N-Assembly is liable to cause too slow repeating speed of the successive exposure. If it is too weak, poor contact will result.
The correct contact pressure is about 10g.
It is recommended to make a depression at the end (b) of the plate, as illustrated in Fig. 4 - 2, by suiting pliers with curved ends, since the tension at the portion (b) should be somewhat stronger than 10g at the portion (a) as described above, so that the switch can be opened or closed securely by depressing the portion (b).

(2) Adjusting the spring in E-Assembly

Removing large lever #274, fix piece #257 at the position where screw #268 on the fly wheel #255 comes just beneath. Then, revolving the fly wheel about 3/4 revolution from the above position, engage the end of the large lever #274 to the screw #268.

3. Checking operation of large lever #274 and of shutter releasing lever #273. See if both the levers have no great play and move smoothly during their movements which likely cause contact with other parts. If the large lever #274 shows too great play, its coupling to the screw #268 on the fly wheel will be released, which hinders the E-Assembly from operation.

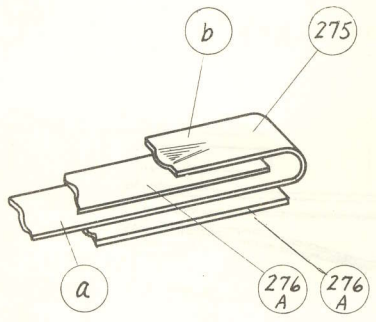


Fig. 4 - 2

§2. Reassembling of switches

For attaching each switch, refer to the "Service Parts Catalog".

§3. Adjusting switches after the Motor Drive has been fitted to the camera.

1. Adjustment of M-C switch

Adjust the times at which connection and disconnection of the switch is performed (Fig. 4 - 3) by screwing in or out screws #34, after releasing nut #33 on the lever #31 in the L-Assembly, so that the wind-and-stop motion takes place positively at an operating voltage of 8V - 12V.

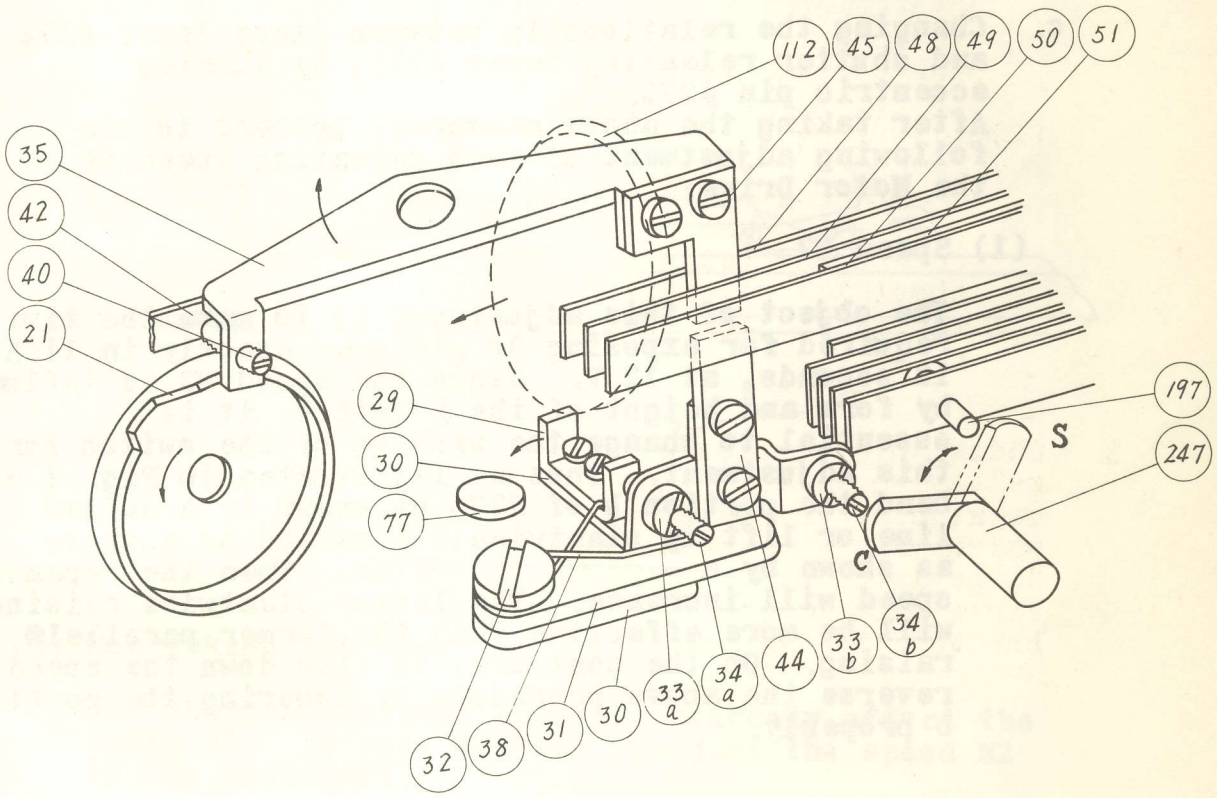


Fig. 4 - 3

If, nevertheless, the adjustment is not attained, that is, win ing at 8V does not take place or successive exposures at 12V with no stop are unavoidable, correct the distance of the M-C switch plates by bending auxiliary plate #51. Take care, however, not to bend the plate too much, which would cause troubles such as short-circuit or others. The standard distance should be 0.7mm.

After the adjustment, fasten the nut #33a and apply lacquer for tightness.

2. Checking M-S switch

The adjustment of the M-S switch having once been accomplished as described previously in Paragraph 1, 1 - (3), it will not need to repeat the same adjustment. Be sure only that the single exposure can positively work.

3. Adjustment of speed of successive exposure

This adjustment will be performed by the following procedures a - c:

a. Changing height of the N-switch.

b. Changing tension of fly wheel returning spring #265 in the E-Assembly (#255).

c. Changing the relationship between large lever #274 and shutter releasing lever #273, by turning eccentric pin #272.
After taking the above measures, proceed to the following adjustment of each repeating speed of the Motor Drive:

(1) Speed M2

The object of this adjustment is to make the time required for exposing 36 pictures exactly in 11.5 - 12 seconds, at 12 V. Since the speed M2 is influenced by form and height of the N-switch, it is essential to change the bending of the switch for this adjustment. Thus as illustrated in Fig. 4 - 4, bend the portion b of #275 as shown by a dotted line or lift up slantwise the switch as a whole as shown by a —·—·—·— line. Then the repeating speed will increase. The latter slantwise raising will be more effective than the former parallel raising. On the contrary, to slow down the speed, reverse the above procedure by lowering the portion b properly.

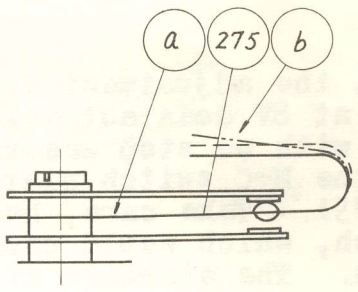


Fig. 4 - 4

(2) Speed L

The object of this adjustment is to make the time required for exposing 36 pictures exactly in 18 - 20 sec. at 12 V. After finishing the above adjustment (1), make horizontal the eccenter pin #272 on the shutter releasing lever as shown in Fig. 4 - 5. Then, if the tension of the fly wheel returning spring (#265) in the E-Assembly is made weaker, the speed will be slowered and vice versa. Consequently, the adjustment will be accomplished by changing the attached position of metal piece #257 by means of screw #258. If, however, this adjustment does not produce a satisfactory result, turn eccenter pin #272.

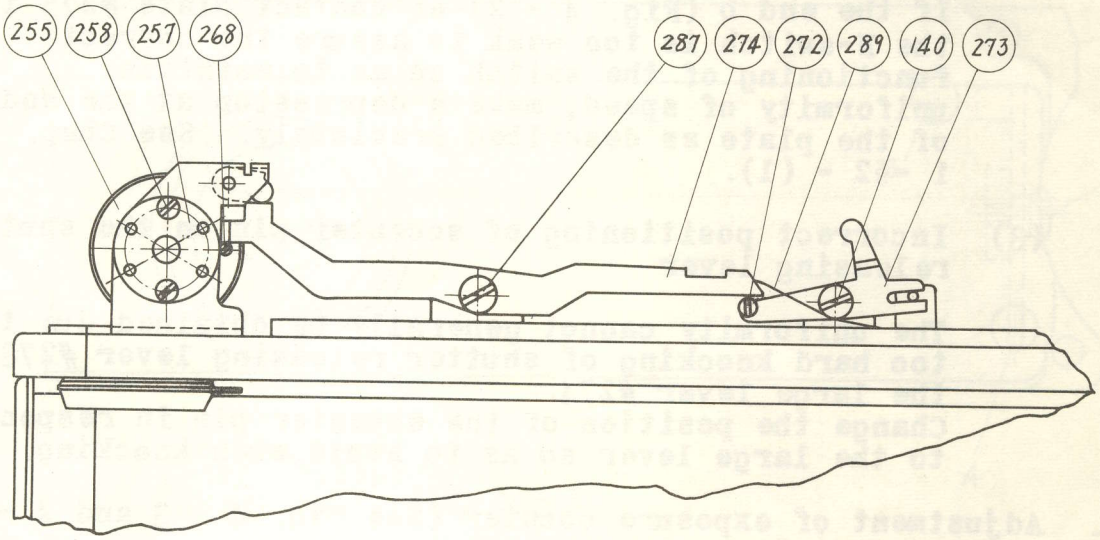


Fig. 4 - 5

(3) Rechecking the speed M2

The above adjustment (2) will scarcely affect the speed M2. If need arises, readjust the speed M2 by the method (1).

(4) Checking speed M1

To make the time for 36 pictures 14.5 - 15 seconds at 12V. The speed M1 will be determined by the adjustment of L and M2 speeds as a natural consequence. If it does not differ from the standard (14.5 - 15 sec.) to a great extent, let it go.

4. Uniformity in repeating speed of successive exposures

Even if the previous adjustments have been accomplished, uniformity in the speed may not always be obtained. This can be detected by the sound, and will be due to the following three causes:

(1) Low efficiency of motor

Run the motor independently. If the current flows at about 0.05 - 0.1 Amp. 12V, the motor will be normal. Otherwise, replace the motor by a new one.

(2) Defect in N-switch

If the end b (Fig. 4 - 2) of contact plate #275 in the N-switch is too weak to assure the correct functioning of the switch so as to maintain uniformity of speed, make a depression at the end of the plate as described previously. See Chap. 1 -§2 - (1).

(3) Incorrect positioning of eccenter pin on the shutter releasing lever

The uniformity cannot generally be obtained due to too hard knocking of shutter releasing lever #273 on the large lever #274.
Change the position of the eccenter pin in respect to the large lever so as to avoid such knocking.

5. Adjustment of exposure counter (See Fig. 4 - 3 and 4 - 6)

In successive exposures the picture frame counter should come to zero, when the Motor Drive stops operation. If it does not, carry out the adjustment so that, when the counter reaches a position about 1/4 of division before the zero point, the counter lever #35 comes halfway between the zero position, the bakelite piece #45 at the end of the counter lever #35 comes halfway between #48 and #50. This adjustment can be achieved by moving screw #40 back and forth so that this screw does not touch #50 nor 48, as shown in Fig. 4 - 6.

After the adjustment apply lacquer to the screw #40 for tightness.

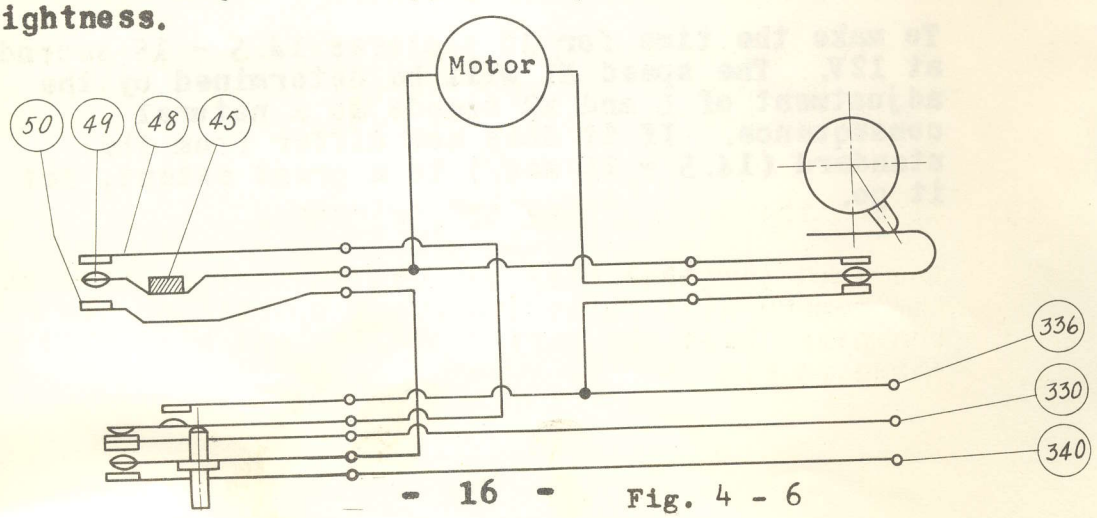


Fig. 4 - 6

Chapter V. Fitting and Checking Motor Drive on the Camera

§1. Fitting to the camera

(1) First check if the "Q-Assembly" (a part provided with a tripod socket) in the camera is the one which operates the Motor Drive or not. If it is not, replace it with the correct one.
The bottom plate #243 can be identified by two holes as shown in Fig. 5 - 1 and a see-saw shutter release lever #202 inside.

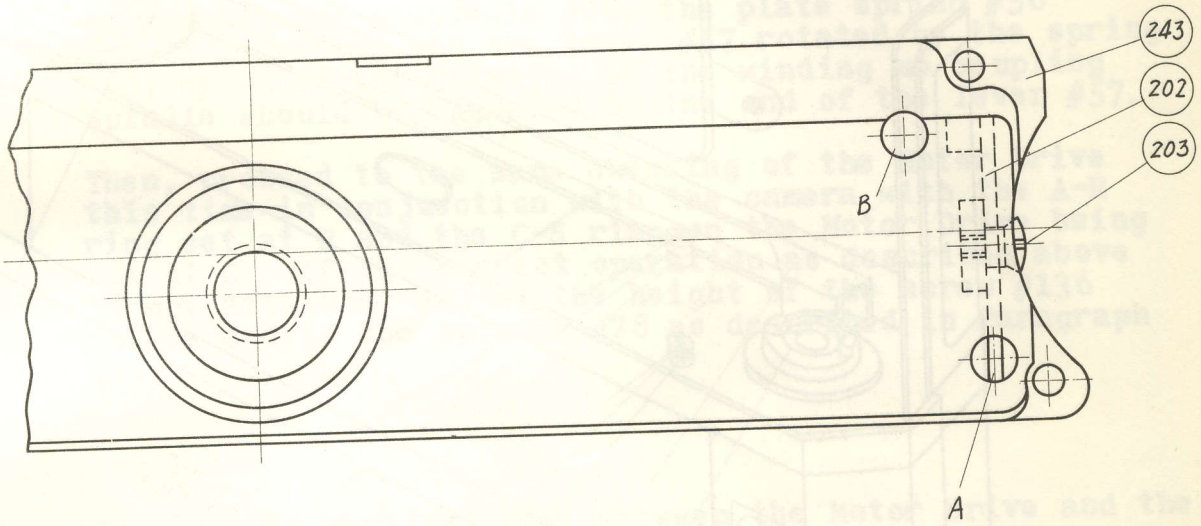


Fig. 5 - 1

(2) Replacing the Q Assembly

a. Unscrew 4 attaching screws and remove the bottom plate.

b. Attach the correct bottom plate #243 with the 4 screws, so that the end of the see-saw lever #202 comes inside of the shutter spring plate in the camera. (Setting the A-R ring on the camera top to R will facilitate the work.)

c. Wind up the shutter. Then, if the shutter is released by means of a narrow bar inserted through the hole A in the bottom plate, the replacement is completed.

(3) Attach the Motor Drive to the camera

Too much vertical play between the Motor Drive and the camera will cause incorrect operation. To reduce the play, bend the part D of #157 and E of #292 as shown in Fig. 5 - 2.

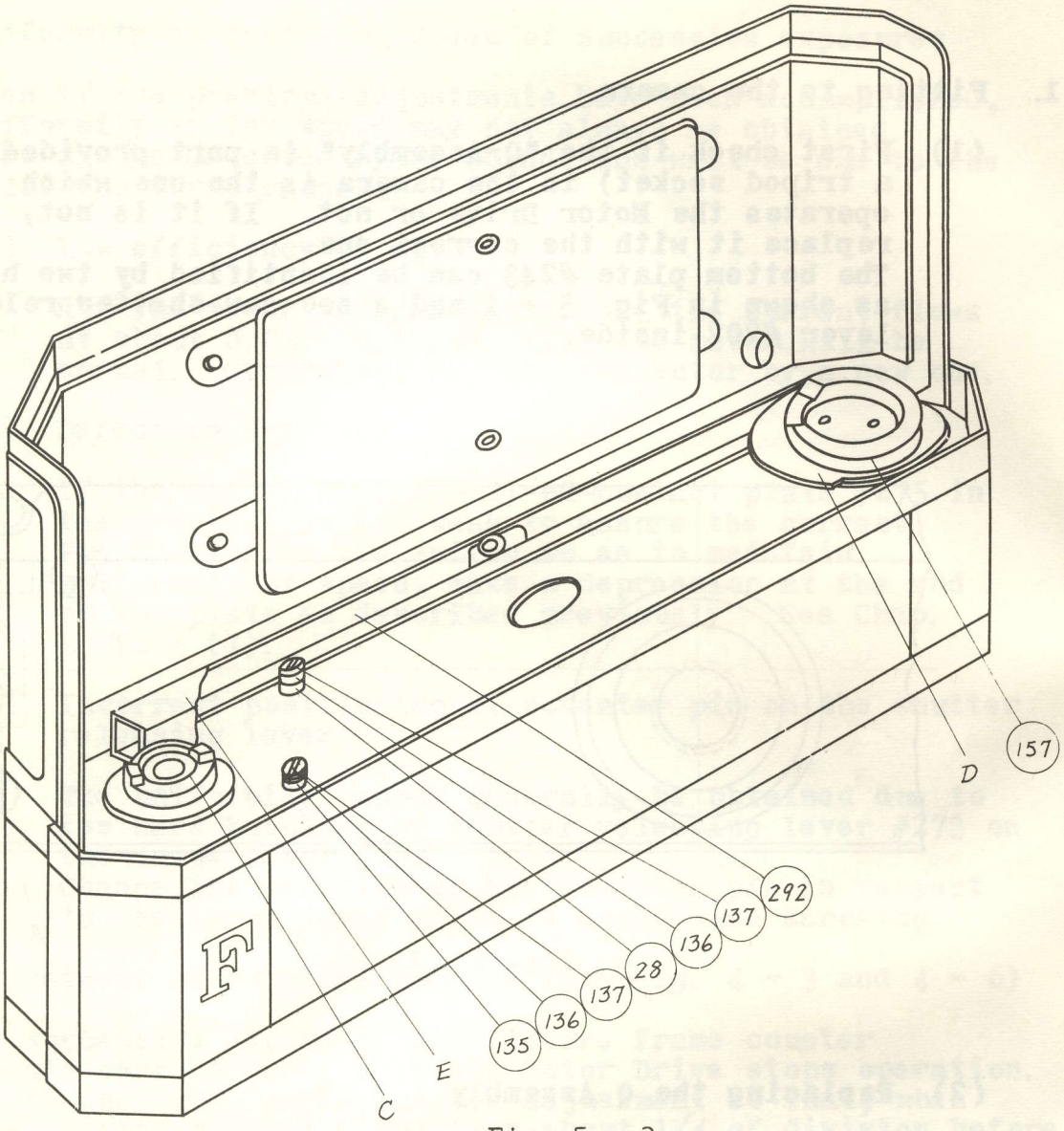


Fig. 5 - 2

(4) Adjustment of shutter releasing spindle #135

Once move washer #137 at the end of shutter release spindle #135. Lower the position of screw #136. Attach the Motor Drive and operate the shutter. If in this position the shutter is not released, raise the screw #136 gradually up to the position where the shutter can be released positively.

Choose washer #137 (of 0.3, 0.5 and 0.7mm thick are prepared) corresponding to the height of the screw determined above and insert it between the screw #136 and the release spindle #135.
Fasten the screw #136.

(5) Adjustment of spindle #28 in the A-R safety mechanism

Push down the spindle #28 on the Motor Drive, detached from the camera, with the finger. Set the C-S ring to S and depress the button. If, in this case, clattering sound is heard and no rotation of the exposure counter takes place, the A-R safety mechanism of the Motor Drive itself is all right.

On the contrary, if no sound is heard and rotation of the counter occurs, remove the A-Assembly and check the operation of lever #57 in the G-Assembly in the following way:

By pushing the p spindle #28, the plate spring #56 should be raised and the lever #57 rotated by the spring #58, by which the rotation of the winding up coupling spindle should be hindered by the end of the lever #57.

Then, proceed to the same checking of the Motor Drive this time in conjunction with the camera with the A-R ring set at R and the C-S ring on the Motor Drive being set at C. If the correct operation as described above is not attained, adjust the height of the screw #136 at the end of the spindle #28 as described in Paragraph (1).

§2. Checking Items

(1) Permissible vertical play between the Motor Drive and the camera.

(2) Dependable operation of every part and of every button, as well as click-stop action on the Motor Drive.

(3) Correct operation of the single and successive exposures.

(4) Positive remote control from the battery case for single and successive exposures.

(5) Zero return of the exposure counter at the same time with stop of operation in the cases (3) and (4).

(6) Correct operation of the A-R safety mechanism.

Comparison Chart of Nikon Motor Drives

Type	Features	Identification by external appearance	Camera mode to be used
S - 36 Two-core cord	Single exposure is operated by depressing the shutter release button on the camera.	A chromium-plated part is provided on the left-hand of the front (front side toward you) Change-over knob on the back has C (or K). L	S2.* S3 and SP
			SM3
S - 36 S - 72 (for 53M) Three-core cord	Single and successive are operated by depressing the button on the Motor Drive. Remote control for single and successive exposures is possible by a simple electric device.	No such chromium plated part is provided. Change-over knob on the back has three figures S,L,C	S2.* S3 and SP
			SM3
F - 36 Three-core cord	Same as above. Repeating speed of successive exposures is changeable in 4 steps.	Has on the lefthand front of the Motor Drive a engraved white F letter. Has a repeating speed adjusting knob.	F
F - 250 Three-core cord	Same as above. Permits loading 33 ft. (1/3 of 100 ft) length of film.		F
Remarks			*For S2 Wind-up part should be adapted.

Camera model to be used	Number of exposures by one load	Battery case to be used	Repeating speed of successive exposures per sec.	Shutter speed range capable of being used	Electr flash or not
S2*. S3 and SP	36	Two-core cord	3	1/60 - 1/1000	used
SM3	72*	6 batteries used	4.5	1/60 - 1/1000	used
S2*. S3 and SP	36	*Three-core cord 6 batteries used	3	1/60 - 1/1000	used
		Three-core cord 8 batteries used	4	1/125 - 1/1000	not
SM3	72*	*Three-core cord 6 batteries used	4.5	1/60 - 1/1000	used
		Three-core cord 8 batteries used	6	1/125 - 1/1000	not
F	36	Three-core cord 6 or 8 batteries used	L 1.8	1/8 - 1/1000	used
			M_1 2.3	1/60 - 1/1000	used
			M_2 3	1/125 - 1/1000	not
			*H 4	1/125 - 1/1000	not
F	250	Same as above	Same as above	Same as above	Same as
For S2 Wind-up part should be adapted.	*Exchanging the exposure counter on the Motor Drive is recommended.	*6-Battery case is to be used as standard	*Used with the mirror at up-position		Ele fla Mot to cha

eed ble sed	Electronic flash used or not	For Operation	
		On the side of Motor Drive	
		Single exposure	Successive exposure
000	used	1. Depressing the button on the battery case, turn this clockwise up to the white mark. 2. Then deppress the shutter release button on the camera. 3. Finger being lifted, the film advances and the shutter is wound up for the next exposure.	Depressing the button on the battery case, turn this clockwise up to the white mark. Set the C-L ring on the back of Motor Drive at the white mark. While depressing the button on the C-L ring, the shutter releasing and film advance is repeated.
00	used		
000	used	1. Set the S-C ring on the back of Motor Drive to S. 2. Depress the button on the S-C ring. The shutter is released. 3. Finger being lifted, the film advances for the next exposure. The button on the battery case can be set at any position. Setting at L is recommended for safety.	Set the S-C ring on the back of Motor Drive at C. While depressing the button o the S-C ring, exposure is repeated suceessively. It is recommendable to set th button on the battery case at L.
000	not		
00	used		
000	not		
0	used	Same as above. Setting the repeating speed adjusting knob at H is recommended to avoid inside vibration.	Same as above. Repeating speed of successive exposures is changed by setting the adjusting knob at L,M1, M2 or H. For H, fix the mirror in the camera at the up-position.
00	used		
000	not		
000	not		
	Same as above		
	Electronic flash for the Motor Drive is to be of rapid charge type		