

120/220 Roll Film Power Drive and Power Drive Control Pack for Mamiya RB67



Instructions
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The 120/220 Roll Film Power Drive was designed for use with the Mamiya RB67 and RB67 Pro S cameras in conjunction with the Power Drive Control Pack, which is available separately. This Power Drive advances the film automatically when the shutter cocking lever is operated. And both 120 and 220 film can be used. The figure numbers throughout the instructions refer to pictures on the fold-out pages at the back.

Names of Parts

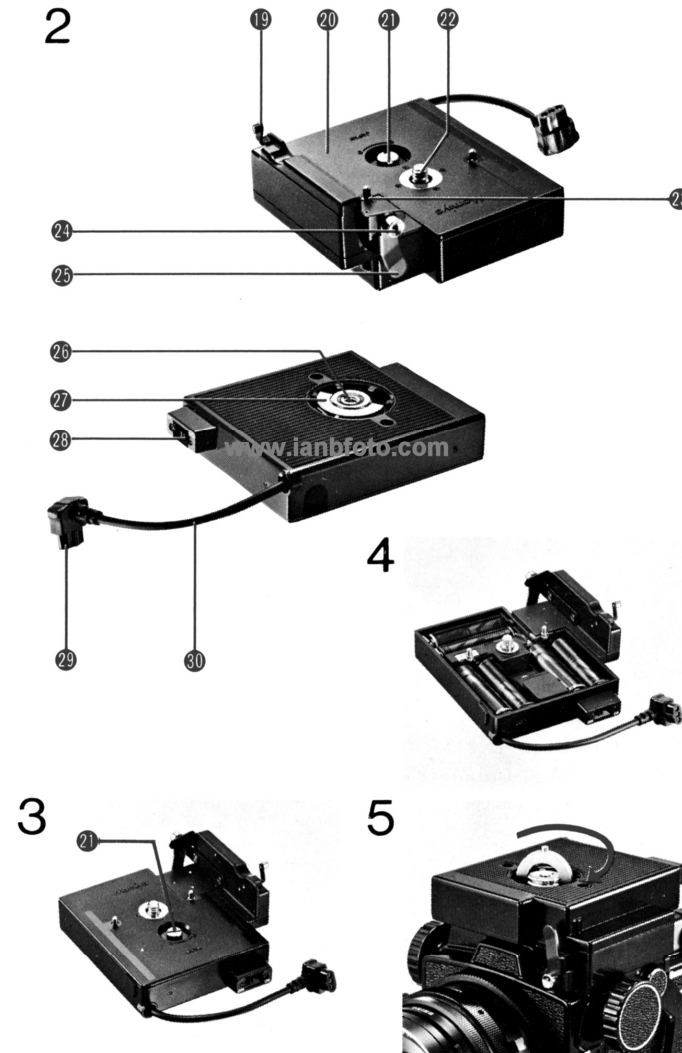
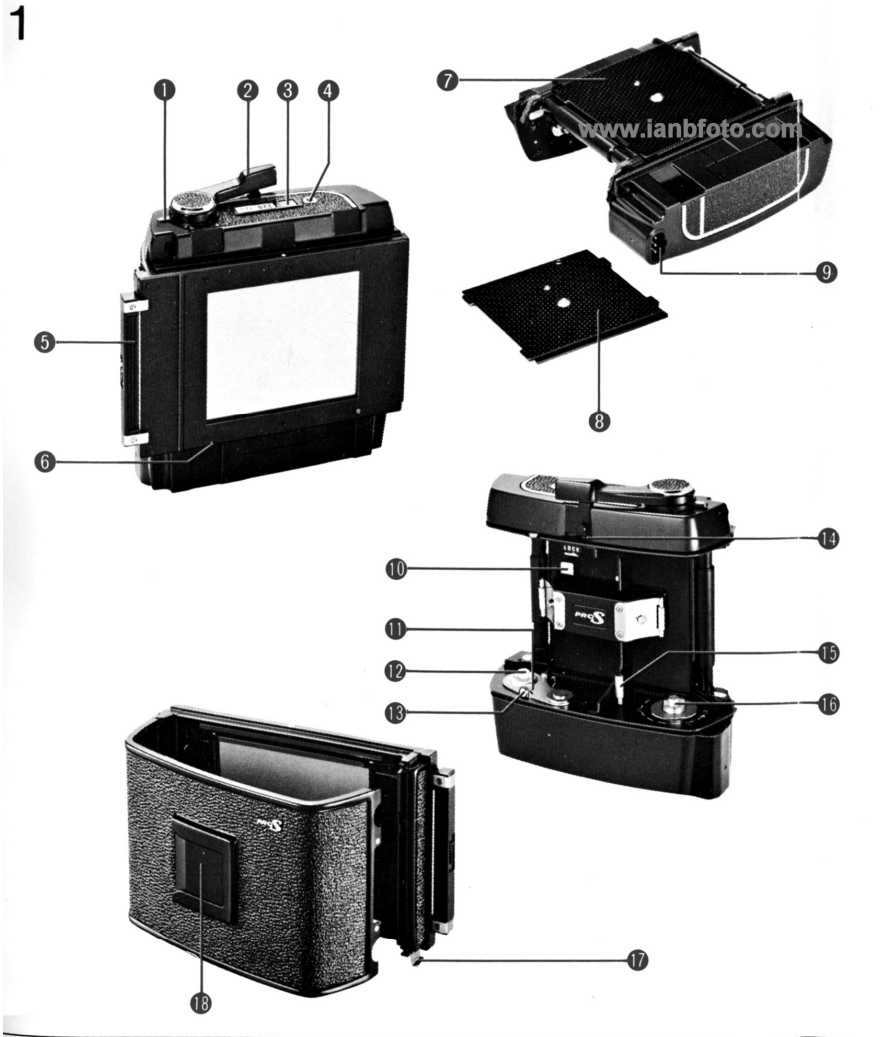
120/220 Roll Film Power Drive (Fig. 1)

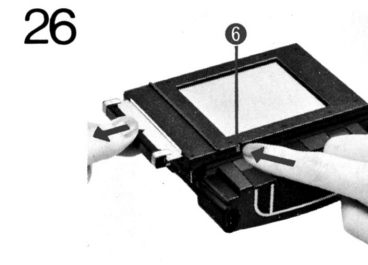
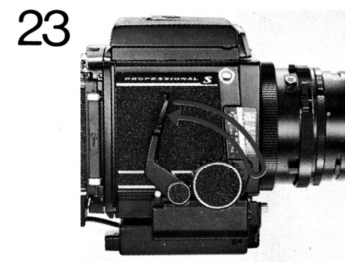
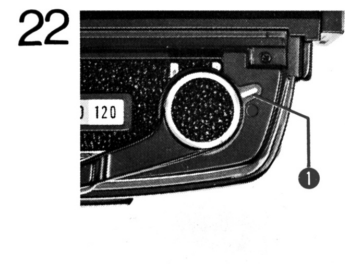
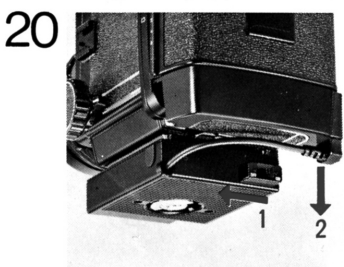
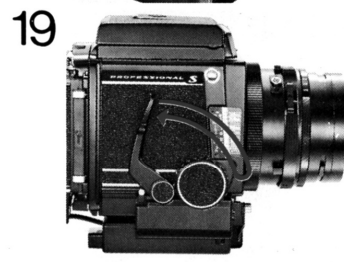
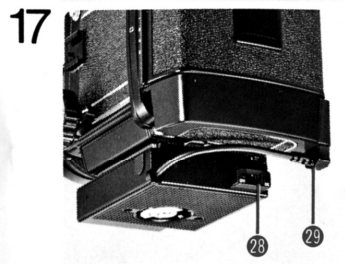
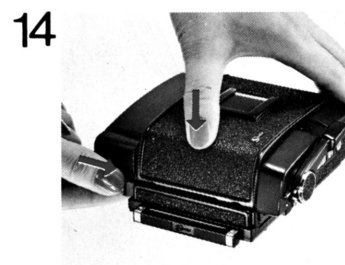
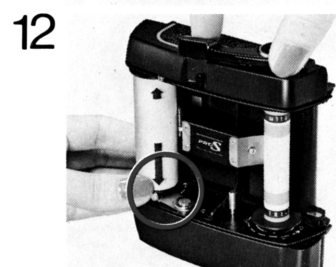
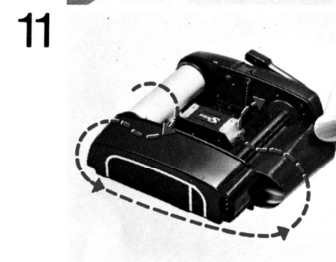
1. Multiple exposure lever
2. Film advance lever
3. Exposure counter window
4. Film type index window
5. Dark slide
6. Safety-catch for dark slide
(Film insert)
7. Pressure plate for 120 roll film
8. Pressure plate for 220 roll film
9. Power source socket
10. Pressure plate lock lever
11. Start mark
12. Film spool stud
13. Film spool stud swivel knob
14. Film wind-stop release lever
15. Spool release pin
16. Take-up spool stud
(Outer cassette)
17. Back cover latch
18. Film memo pocket

Power Drive Control Pack (Fig. 2)

19. Connecting lever for shutter cocking lever
20. Battery compartment cover
21. Locking screw for battery compartment cover
22. Mounting screw
23. Guide pins
24. Shutter release button with cable release socket
25. Shutter release lever
26. Tripod socket
27. Locking key
28. Power switch (ON/OFF)
29. Power source plug
30. Power source cord







Specifications

Film used:	120 or 220 roll film (by interchanging the pressure plate.
Negative size:	6 x 7cm.
No. of exposures per roll:	10 exposures on 120 film. 20 exposures on 220 film.
Film advance:	Motorized. Automatic double exposure prevention. Film wind-stop automatic release. Multiple exposure provision. Manual film advance also possible.
Film counter:	Automatic resetting type. Red mark disappears when film is wound.
Operation mode:	Single frame advance with each operation of the shutter cocking lever.
Film advance time:	Approx. 0.8 sec. per frame.
Power source:	Six AA-size manganese or alkaline batteries (not included).
No. of rolls of film per set of batteries (normal temperature, 120 film, Mamiya test conditions):	Manganese batteries: Approx. 60 rolls. Alkaline batteries: Approx. 150 rolls.
Others:	The Roll Film Power Drive is provided with a dark slide safety catch and film memo pocket. The Power Drive Control Pack has a tripod socket and cable release socket.

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Using the Power Drive Control Pack

● Loading the Batteries

Six AA-size manganese or alkaline batteries are required.

1. Remove the battery compartment cover by turning the lock screw (21) counterclockwise using a coin (Fig. 3).
2. Insert the 6 batteries in accordance with the plus (+) and minus (—) terminal indications on the bottom of the case; then replace the battery compartment cover (Fig. 4).

Concerning the Batteries

- Always turn the power switch off when not using the Power Drive. Remove the batteries and store them carefully when the Power Drive is not to be used for an extended period.
- The Power Drive may fail to operate due to lowering of battery performance and increasing load of mechanical movements in cold weather. In this case, immediately turn the power switch off.
- Effective battery life may vary greatly depending on the brand, type, time elapsed since manufacture, usage conditions (continually or occasionally), type of film used and ambient temperature.
- Replace all six batteries with fresh ones when Power Drive operation becomes sluggish.
- Do not mix various types of batteries or old and new ones.
- Be sure to load the batteries correctly.
- Do not use Nicad (nickel-cadmium) batteries.

● Attaching the Power Drive Control Pack (Fig. 5)

Insert the guide pins of the Power Drive Control Pack into the two holes in the bottom of the camera and turn the locking key clockwise to lock the unit in place. The handle can be folded flush to either side.

Using the Roll Film Power Drive

This Roll Film Power Drive can be used with either 120 or 220 roll film by merely interchanging the pressure plate. The film counter and film type index change automatically when the pressure plate is interchanged so always use the correct pressure plate for the film being used.

● Interchanging the Pressure Plate

The pressure plate can be removed by moving the lock lever (10) in the direction opposite to that indicated by the arrow mark. Hold the pressure plate to be inserted with the guide pin on its rear surface pointing upward. Position it so that this guide pin enters the hole in the film insert of the Power Drive and lock in place by moving the lock lever in the direction indicated by the arrow mark (Fig. 6).

When the film insert with the pressure plate attached is inserted into the outer cassette, the color of the film type index window (4) automatically changes to white for 120 film and orange for 220 film (Fig. 7).

As the 120 roll film pressure plate is changed to the one for the 220 film, the automatic film wind-stop mechanism and the film counter are switched from 10 frames to 20 frames automatically. Although the automatic film wind-stop mechanism is cancelled after the tenth frame with the 120 roll film, the film counter alone will advance approximately three frames further.

● Testing the Roll Film Power Drive

Prepare a test spool by winding only the paper film backing on an empty spool. Insert this test spool instead of a roll of film and operate using the following procedure. (The film wind-stop device only operate when the Power Drive is loaded with film.)

● Loading the Film

Always load and unload film in the shade or in the shadow of your own body. Avoid direct sunlight.

Film can be loaded or unloaded in the same way regardless of whether or not the outer cassette is attached to the camera.

1. Open the back cover by pressing it in lightly and pulling out the back cover latch. Remove the film insert (Fig. 8).

2. Pull out the film spool stud swivel knob (13); then insert a roll of film first on the upper film spool stud (Fig. 9). Load the film so that the leader paper can be pulled out along the arrow mark of the leader paper guide mark. In this way, the black side of the leader paper will appear on the outside. If the printed side appears on the outside, the film has been loaded upside-down.

3. Next, engage the film spool on the lower film spool stud (12) and push in the film spool stud swivel knob (13).

4. Insert the film take-up spool on the right side by first engaging the upper film spool stud and then pressing the spool release pin (15) to engage the lower film spool stud (Fig. 10). (A take-up spool is supplied with the Power Drive film insert.)

5. Pull out the film leader paper and insert the tip into the slot of the take-up spool (Fig. 11).

6. Operate the film advance lever gently until the start mark (arrow) of the paper leader aligns with the start mark of the film insert (Fig. 12). The film advance lever can be operated in either single strokes or multiple strokes.

- Position the film so that the leader paper winds evenly between the spool flanges; otherwise, the film may be damaged by uneven take-up.

● Attaching the Film Insert

1. Put the film insert into the outer cassette, aligning the top edge of the insert with the white dot (A) and close the back cover (Fig. 13). If the film insert is attached upside down, the back cover cannot be closed.

2. Press in lightly on the back cover and push the back cover latch fully (Fig. 14).

● Attaching the Power Drive

1. Before attaching the Power Drive, make sure that the upper and lower slide locks (B) are at the left end of the indented portion when viewed from the back.

Note:

Should the slide locks be moved to the right while the Power Drive is not attached to the revolving adapter, the slide lock release lever (C) will engage and prevent the slide lock moving. To release, press the release lever (C) and return the slide locks to the open position (Fig. 15).

2. Position the Power Drive and slide both slide locks firmly in the direction of the arrow marks (Fig. 16).

- If the slide locks of the revolving adapter are not pushed fully in or out, the shutter locking safety device will prevent the shutter being released. Always operate the slide locks fully.
- If the lower slide lock is not locked, the safety device will prevent the dark slide being removed.
- If the dark slide is completely inserted, or if film has not been loaded, the shutter release button cannot be pressed. A feature that prevents missed picture opportunities.

● Connecting the Power Cord (winding to the first frame)

Insert the power plug (29) into the power socket (9) in the bottom of the film insert. When the power switch (28) is turned on, the Power Drive will automatically advance the film to the first frame (Fig. 17). The numeral 1 will appear in the film counter window and the red mark will disappear, completing the preparations for making the first exposure.

- The red mark in the film counter window indicates that the film has not been advanced, and the safety lock device prevents the shutter being released.
- The Power Drive starts to operate immediately when the power plug is inserted if the power switch is on.
- When the Power Drive does not operate, even if the power switch is on, press down the shutter cocking lever.

When the shutter cocking lever cannot be pressed down

When the shutter is cocked before the Power Drive and Control Pack are attached to the camera, and the shutter release button (24) or (25) is pressed before the power is turned on, the switch inside the Control Pack will turn off automatically. Thus, the Power Drive will not operate even if the power switch is turned on and the shutter cocking lever will not operate. In this case, proceed as follows (Fig. 18).

1. Push the multiple exposure lever forward so the red mark will appear.
2. Pull the dark slide out about 1/4 in. or 5mm (until the triangle shaped opening is fully visible) and release the shutter.
3. Return the multiple exposure lever and the dark slide to their original positions.
4. Turn on the power switch and press down the shutter cocking lever. The Power Drive will start operating and advance the film to the first frame. The film can also be advanced to the first frame manually using the film advance lever. The first exposure can then be made when the dark slide is removed.

● Advancing the Film

1. Remove the dark slide after cocking the shutter and setting the exposure. (The red mark will appear in the film counter window as soon as the shutter is released.)



Exposed

2. The Power Drive will automatically advance the film to the next frame when the shutter cocking lever is pressed, and the red mark will disappear from the film counter window.



Film advance completed
(Before exposure)

- **The shutter cocking lever must be pressed fully on the models previous to the RB67 Pro S.** The film will advance without the shutter being released if the shutter cocking lever is pressed only part way (Fig. 19).
- The double exposure prevention device locks the shutter until the exposed frame has been advanced. This device also locks the shutter while the film is being advanced. The shutter can be released only when the film has been fully advanced to prevent double exposure or any other mistakes.
- There is no need to operate the film advance lever of the Power Drive, but this is possible if desired.

● Unloading the Film (Fig. 20)

1. The shutter release button will lock when the full number of frames has been exposed. The film will advance to the end when the shutter cocking lever is pressed. Turn off the power switch after about 3—5 seconds to stop the Power Drive.
 2. Disconnect the power cord from the bottom of the film insert to avoid damaging the cord when removing the film insert.
 3. Open the back cover and remove the film insert.
 4. Press the spool release pin on the right side and remove the exposed film. Tape the film to prevent it unwinding (Fig. 21).
 5. Place the empty spool on the take-up side in preparation for the next roll of film.
- The film counter resets to S (start) when the back cover is opened.
 - If an other designation besides S appears, this means that there is still film in the film insert.

● Multiple Exposure Photography

The multiple exposure prevention mechanism is released when the multiple exposure lever is moved to the position where the red mark is visible (Fig. 22). The shutter can then be released any number of times by operating the shutter cocking lever (Fig. 23).

- The multiple exposure lever can be operated for the first multiple exposure either before or after the shutter is released.
- The switch inside the Control Pack turns off automatically when the multiple exposure lever is operated so the Power Drive will not operate. Also, the film counter does not advance when making double exposures.
- After completing the multiple exposures, return the multiple exposure lever to its original position.

● Storing the Dark Slide (Fig. 24)

The dark slide can be stored by inserting it into the slots in the side of the camera body while taking photographs.

● Film Memo Pocket (Fig. 25)

The pocket on the back cover can be used for holding the cover of a film box or a slip of paper for recording data.

● Removing the Dark Slide from the Power Drive when detached from the Camera (Fig. 26)

A safety device prevents the dark slide being inadvertently removed when the Power Drive is not attached to the camera body. The dark slide can be removed, however, by depressing the dark slide safety catch (6) on the bottom of the outer cassette with a fingernail.

● Testing the Shutter when the Camera is loaded with Film (Fig. 27)

After advancing the film, the shutter can be released without exposing the film by pressing the shutter release button with the dark slide pulled out approximately 1/4 inch. This allows the shutter to be tested before making an exposure.

1. Press the multiple exposure lever forward so the red mark appears.
2. Cock the shutter and pull the dark slide out approximately 1/4 inch until the triangular shaped hole is fully visible. The film will be exposed when the shutter is released if the dark slide is pulled out further.
3. Release the shutter for the test (the red mark will appear in the film counter window).
4. Cock the shutter with the camera set for multiple exposure and remove the dark slide before making the first exposure. Next, move the multiple exposure lever to its original position and continue taking pictures.

● Removing the film before all the frames have been exposed (Fig. 28)

If the power switch is on, press the manual film wind-stop release lever (14) down and in the direction of the arrow; then release. This releases the wind-stop mechanism and allows the film to advance one frame without being exposed. By repeating this operation, the film can be rapidly wound to the end without releasing the shutter.

The film can also be advanced to the end without activating the wind-stop mechanism if the film advance lever (2) is operated continuously keeping the film wind-stop release lever (14) pressed down in the direction of the arrow.

● Removing the Power Drive (Fig. 29)

1. Fully insert the dark slide into the slot between the white lines on the side of the Power Drive.
2. Remove the power plug from the socket.
3. Move the two slide locks in the opposite direction of the arrow marks and remove the Power Drive from the camera.
 - If the dark slide is not inserted, the slide locks are locked so the Power Drive cannot be removed from the camera. This prevents the accidental film fogging.