

filled with too much film, so always leave at least 1 mm between the film load and the edge of the spool flange. Cut off the film.

NOTE: A loose film end always tries to unwind itself. This can be prevented if the film is held firmly after being cut off. Unwinding film can be scratched when rewound to take up the slack.

be scratched when rewound to take up the slack. Pull out about 20 cm (8 in) of film from the loaded supply spool and tape the end onto the takeup spool. Film shall be wound onto the latter spool with the emulsion side down. Hold the supply spool in one hand and the takeup spool in the other. Lead the middle of film into its designated pathway and under the film clamp and press the spools into their respective positions. Turn the spool-holder key (3) counter-clockwise so the film clamp grips the film. Turn the takeup spool (5) about one turn to take up the slack in the film while holding onto the entire spool-holder to keep the film on the takeup spool from unwinding. Insert the spool-holder to magazine. If entry of the spool-holder is obstructed, turn the film winding key (7) slowly about 1/4 of a turn so the driver (12) in the magazine rotates to a position enabling it to fit into the spool-holder key (3) clockwise 1/4 of a turn. Flip down the key and ensure that the key is in the correct, completely flat position. The lights can no be turned on.

## WITH THE LIGHT ON

WITH THE LIGHT ON Press the notched button (8) with a finger and turn it clockwise until a white triangle between the numerals 200 and 1 is opposite the film counter index (9). Flip up the film winding key (7) and rotate it clockwise until the number '1' is opposite the frame counter index. The film loading indicator (10) will now be white to indicate that the magazine is loaded with film. Rotate slowly and observe the indicator changing color from red to white. Stop rotating when the signal shows white. Ensure that the shutter cocking indicator (11) on the camera body displays the same color as the film advance indicator (11) on the magazine before attaching the magazine to the camera. Keep the magazine slide inserted when the magazine is not in use. Protect the magazine from exposure to excessive sunlight or other sources of bright light.



Fig 3

Fig 4

# MAGAZINE 70/100-200

This magazine holds 70 mm double-perforated film type 2 wound onto a spool loaded into the magazine in the darkroom. This feature permits greater film capacity than is possible in the corresponding magazine with cassette-loaded film.

# PROCEDURE WITH THE LIGHT ON

Insert the magazine silde (1) into the slot (2) with the handle retainer bend facing away from the magazine so the slide does not obstruct removal of the spool-holder. Remove the magazine from the camera. Lift the spool-holder key (3) and turn it counter-clockwise. Remove the spool holder. Turn the spool-holder key (3) clockwise so the film clamp (4) opens. The two spools (5 and 6) can then be removed by withdrawing them from the spool-holder. them from the spool-holder.

Carefully study the instructions and make special note of the path to be followed by the film fig 6. This pathway is also designated with arrows in the inside of the spool-holder panel fig 5. The loading procedure should be practiced in a lighted room for successful loading of the Magazine 70/100-200 in the dark. The loading area in the darkroom must be carefully set up before the light is turned off.

### WITH THE LIGHT OFF

Tape one end of the film onto one of the spools. Avoid tape with a crumbly adhevise that could deposit sticky particles along the film path. Attach 1/3 of the tape strip to the film and 2/3 to the spool. This will facilitate removal of the film from the spool after final exposure and film windup onto the takeup spool. (A magazine detent prevents further exposure once all the film has been wound onto the takeup spool to signal that no more film remains.)

The film is wound, e.g. from a bulk loader, onto one of the spools, the supply spool, with the emulsion side down. The supply spool must not be

### MISCELLANEOUS

**MISCELLANEOUS** The marking  $\phi$  (14) designates the position of the film plane. The magazine blocks film transport when there is no film in the film channel. The arm (3) can be taped in the position in which the film loading indicator (10) is white when you wish to test the magazine without film. If the signal (11) remains red, even though unexposed film remains in the magazine and the film has been advanced, cautiously turn the knurled button (8) until the signal (11) changes from red to white.

NOTE: The camera cannot be released as long as the signal (11) is red.

# CAPACITY

The number of exposures the Magazine 70/100-200 can hold depends on the thickness of the film loaded. This varies with the thickness of the film base and film emulsion. Exact information on these parameters can be obtained from the film manufacturers. However, here are a few guideline values:

Thickness	Capacity		
Emulsion+base (mm)	Feet	Meters	No. of exposures
0.14-0.15	21	6.4	100
0.12	25	7.6	115
0.11	27	8.2	125
0.08	34-37	10.4-11.3	162-175
0.07	42	12.8	200



Fig 5



Fig 6