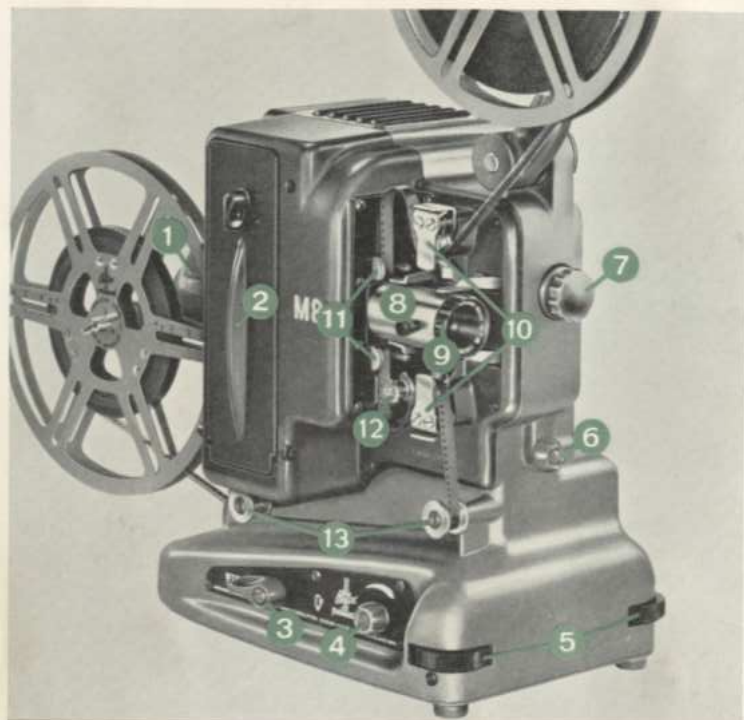




Instructions for Use
M8
PROJECTOR





- | | |
|------------------------------|-------------------------|
| ❶ Motor | ❸ Lens-holder |
| ❷ Panel with lamp-holder | ❹ Focusing ring |
| ❸ Three-way switch and stop | ❺ Upper sprocket guides |
| ❹ Speed control | ❻ Film-guides |
| ❺ Tilt controls | ❼ Automatic loop-former |
| ❻ Framing adjustment control | ❽ Guide-rollers |
| ❼ Rewind pulley | |

PICTURE SIZE ON THE SCREEN, IN CM

Focal length	Distance from projector to screen							
	3 m	4 m	5 m	6 m	8 m	10 m	12 m	14 m
20 mm	66 × 50	88 × 66	110 × 83	132 × 99	176 × 132	220 × 165	264 × 198	308 × 231
25 mm	53 × 40	71 × 53	88 × 66	105 × 79	140 × 105	176 × 132	211 × 158	247 × 185
33 mm	40 × 30	53 × 40	66 × 50	80 × 60	106 × 80	133 × 100	159 × 119	186 × 139

I. General data

The Bolex M8 projector is supplied in a handsome leatherette case, complete with the following accessories: 500 watt projection lamp, length of connection flex, 400 ft. take-up spool, oil can, belt for rewinding film and brush for cleaning. The lens comes packed in an individual cardboard box.

The M8 projector is manufactured in two versions:

Model M8: 110-125 V, for A.C. (~) and D.C.(—) supplies;

Model M8R, with voltage selector (see Fig. 1): 110-250 V, for A.C. (~) supplies only.

A built-in resistance and the voltage selector (Fig. 1) mark the difference between the M8R model and the M8 model. Both bear the designation M8 in relief on the case.

The power input socket (Fig. 2) can be connected to a 3-pole (female) plug (with grounding). The necessary 3-conductor flex and special pin are available from Bolex distributors.

II. Setting up the projector

1. Insert the lens in its socket.
2. In the case of the M8 model, screw the milled knob of the voltage selector opposite the number corresponding to the mains supply voltage (125 V in the fig.).
3. Connect the projector to the power supply (minimum fuse rating: 6 amperes).
4. A room lamp can be plugged into the auxiliary mains outlet, which will take standard European and U.S. type plugs (Fig. 3). The room lamp is extinguished automatically when projection begins, and lights up again at the end of the show. The total wattage consumed by this lamp must not exceed the rated voltage of the power supply.
5. Check that the motor operates correctly and that the projection lamp lights up (see page 4: "Controls").
6. Switch on the projection lamp.
7. Bring the lens into focus by turning the focussing ring (Ⓒ).
8. Adjust the position of the image on the screen by means of the knurled knobs (Ⓓ).
9. Set the projection speed, checking it with the built-in stroboscope (see Section VII, page 6).

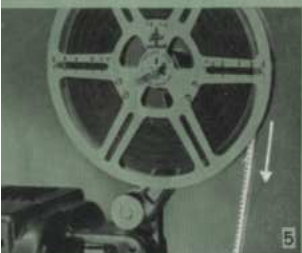
The M8 projector is supplied equipped with a lens having a focal length of 20 mm. If films are to be shown in large rooms or halls, the use of lenses with a focal length of 25 or 33 mm is recommended, as the projector can then be installed at the back of the audience without causing the picture to overlap the screen. These lenses can be supplied on request.



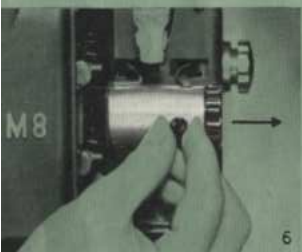
III. Threading



Erect the upper reel arm by accomplishing movements *e* and *f* simultaneously.



Place the full reel on the upper spindle and the empty reel on the lower (take-up) spindle, taking care that the film perforations are on the side nearest the operator.



Open the film gate by swinging out the lens-holder, and unwind about 2 ½ ft. of film.



Insert the film between the upper sprocket guides by pulling it gently upwards. Then give a gentle sideways pull on the film to ensure that the sprocket teeth are mating properly with the film perforations.

the film

Form the upper loop and insert the film between the film gate guides.

Hold the film in this position and close the lens holder gently onto it.

Form the lower loop by passing the film underneath the automatic loop-former, then insert the film between the lower sprocket guides, by pulling on it gently in the direction shown by the arrow.

Pass the film under the rollers and insert the free end in the slot in the core of the empty take-up reel. Then turn the latter in a clockwise direction to take up slack until film is slightly taut.



IV. Projecting

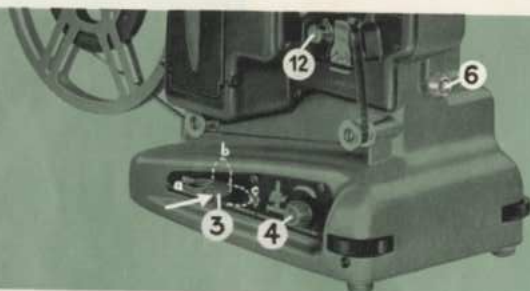


Fig. 12

1. Controls

Three-way switch (3)

- a) Switch in STOP position.
- b) Motor running, lamp switched off (see page 5: "Motor rewind").
- c) Motor running, lamp switched on (room lamp is switched off automatically).

There is no danger of scorching the film, as the projection lamp can only be switched on when the motor is running.

Safety STOP (allows projection to be interrupted immediately in case of need): simply press on switch as shown by the arrow in Fig. 12 (the room lamp lights up automatically).

Speed control (4)

The projector should be kept running at a sufficient speed to avoid flickering of the picture on the screen.

Framing control (12)

This control alters the position of the film drive claw; use it to frame the picture accurately on the screen.

2. Safety devices

Centrifugal contactor

This device prevents the motor speed from falling below the minimum necessary to ensure adequate ventilation. If the projection rate is allowed to drop to 12 frames per second, the contactor causes the motor to accelerate briefly, at regular intervals, and a characteristic noise is heard.

Automatic loop-former (10)

This ingenious device—an exclusive feature of the Bolex M8 projector—allows films with damaged perforations to be screened without risk of breakage. If the lower loop begins to shrink, the automatic loop-former pulls on the film and causes the loop to re-form itself automatically.

V. Rewinding



The lens-holder must be in the closed position.
Thread the film as shown in Fig. 13.

1. Manual rewind

Turn the rewind crank in a clockwise direction.

2. Motor rewind

1. Fit on the rewind belt as shown in Fig. 14.
2. Start the motor running, leaving the projection lamp switched off.
3. Press on the rewind pulley (●) to engage the clutch.

It is best to remove the rewind belt before showing the next reel.

VI. To unload a partly run-off film from projector

1. Open gate by swinging lens-holder forwards.
2. Remove film from sprockets by pressing on sprocket guides (see g, Fig. 15).
3. Rewind film.

VII. Adding sound to film

The pleasure obtained from a film can be enhanced still further in many cases by adding incidental music, background effects or running commentaries, by means of a record-player or a tape-recorder.



Fig. 16

1. Built-in stroboscope

A built-in stroboscope disk, lit by a neon lamp, is mounted under the lower sprocket (cf. fig. opposite). It provides an accurate check on projection speed which can thereby be set to precisely 18 frames per second. Thanks to the projector's high luminosity, this rate is sufficient to eliminate flicker, if a screen of reasonably good quality is used. An approximate synchronization of picture and sound accompaniment can likewise be achieved by using the stroboscope to maintain a steady projection rate.

The speed of 18 frames per second is reached when the luminous dots on the stroboscope disk appear to be motionless. If the dots appear to be moving towards the screen, this means that the speed is faster than 18 f.p.s., while it is lower if the dots seem to be moving in the opposite direction.

The stroboscope disk is provided with two rows of luminous dots, one of which corresponds to 50 cycle A.C. mains supplies (standard in most countries of the world) and the other to 60 cycle A.C. mains supplies (used chiefly in the North American Continent).

Ordinarily, the neon lamp lights up only when the projection lamp is lit. However if the mains supply voltage is higher than 200 V, and the speed is sufficient, it will light up when the motor is switched on.

2. Bolex M8 Synchronizer

This electro-mechanical device ensures perfect synchronization of the film with the sound from a tape recorder. The unit is very easy to operate, since the speed control on the tape recorder automatically controls the projector, which runs at approximately 16 frames per second; consequently the speed must not be checked with the stroboscope. (Detailed pamphlet available on request.) Before it can be used with the Synchronizer, the M8 projector must be provided with a special coupler, which can be fitted to it by any Bolex Agent.



Fig. 17

VIII. Maintenance

Never use a metal tool or other metallic object to clean the projector.



Fig. 18

1. Lubrication

After every 25 hours of operation (and in any case, at least once or twice a year), the projector must be lubricated by inserting 3 or 4 drops of oil in the lubricating ducts identified by letters *h*, *i* and *k* in Fig. 18, at the same time letting the motor run very slowly. Use a good fine sewing-machine oil for this purpose. Hole *i* feeds the central lubricating system of the projector, while holes *h* and *k* lubricate the upper reel spindle and the motor respectively.

2. Cleaning

Optical system : First remove dust by brushing the lens, the reflecting mirror behind the lamp and the glass heat screen in front of it gently with a clean, dry, soft-haired paintbrush, then wipe these parts clean using a clean, dry chamois-leather cloth.

Pressure-pad and film gate. These parts, which are easily reached, must be cleaned frequently to remove dust and emulsion deposits. A soft, dry cloth can be used for this purpose. Check that the gate aperture is quite clean by inspecting its edges as seen silhouetted on the screen.

Sprockets and rollers. Deposits of emulsion or dust on the sprockets, film guides or rollers may score the film. Although these parts are designed expressly to avoid any contact with the exposed portion of the film, they must be cleaned frequently. Deposits of emulsion are more likely to occur when recently-developed films are being shown.

3. Changing the projection lamp

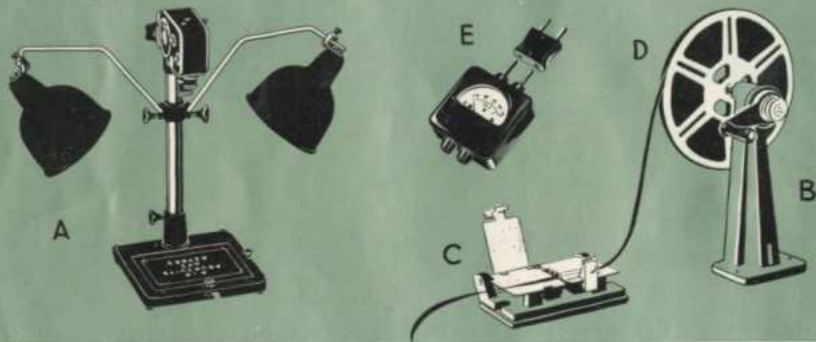
1. Open the lamp-holder panel.
2. Press down the lamp in its socket, using adequate pressure, and turn it a quarter turn in the direction shown by the arrow in Fig 19.
3. Insert the new lamp by reversing these operations.

M8 projector: use 500 W, 110 or 125 V lamps.

M8R projector: use 500 W, 110 V lamps only.

Never use lamps of higher or lower rating than just stated. The standard projection lamps now generally available are interchangeable and no readjustments are required following replacement.

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D Film reels. Made of first-quality steel; non-warping. Capacity: 400 ft. of film.

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