ELMO

8mm DUAL PROJECTOR

FP-C

INSTRUCTION MANUAL FOR THE ELMO DUAL 8MM PROJECTOR, MODEL FP-C

Before you project a film for the first time we suggest that you read through this booklet, following the instructions until you are fully familiar with the use of the projector.

INDEX

Features of the Elmo FP-C

1. Fully automatic film-threading

The film is automatically threaded through the projector with the correct lengths of loop above and below the gate. The projection lamp is switched on automatically when the film attaches itself to the take up reel.

2. Push-button change-over

The FP-C has a unique system which enables it to project either Regular 8mm film or Super-8 film. The change-over from the one to the other is done simply by pushing inwards one of two buttons.

3. Sharp brilliant pictures

The high quality projection lens working in conjunction with the precision intermittent film transport mechanism gives superb definition and image clarity. The projection lamp with built-in reflecting mirror gives outstanding screen-brightness.

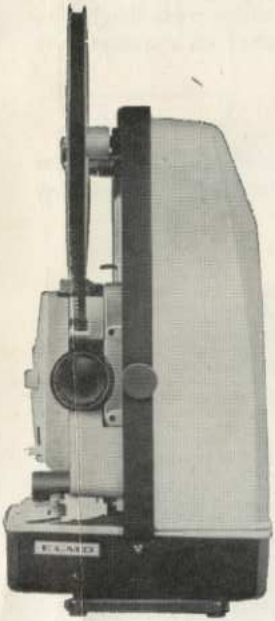
4. Elmo mechanism

Sound design and fine engineering have always been a feature of Elmo projectors. The Elmo transport mechanism is kind to your precious film records, and is built for lifetime service.

5. Versatility

Power rewind - speed adjustment - reverse and single frame projection - heat control - framing lever - loop restorer - film trimmer - these and other convenient features are standard on the FP-C.

Specification of the Elmo FP-C



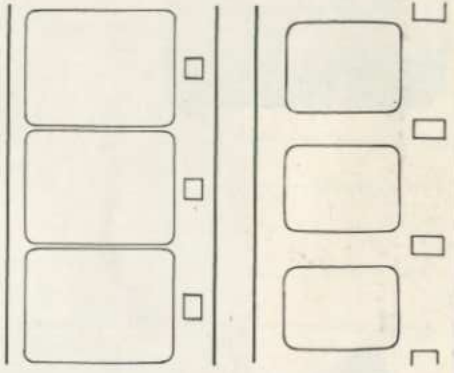
Dimensions :	25×33×18.5cm=10×13×7″
Projection lamp :	21.5V, 150W, with integral reflector
Projection lens :	F/1.3, 25mm Elmo projection lens
Motor :	AC Series commutator motor
Projection speed :	Variable by means of rheostat.
Single frame projection :	Bright single frame projection can be obtained.
Reverse projection :	Reverse projection by pushing a button.
Rewinding :	Power rewinding
Attachments :	Elmo viewer can be mounted. Elmo zoom converter available
Power supply cord :	3m, (10 ft. approx.) in pouch or 4m (13 ft. approx.) or 2m (6.5 ft. approx.) depending on countries.
Reel capacity :	Maximum 120m (400ft)
Accessories :	Automatic reel 120m (400ft) capacity. Dustcover, Film trimmer

Difference between Super-8 film and Regular 8mm film

Super-8 film is the same width as Regular 8mm film, but Super-8 gives 50% greater picture area. Hence, sharper pictures of greater clarity are given. The increase in frame area has been achieved by using smaller perforations in a different position from Regular 8mm film.

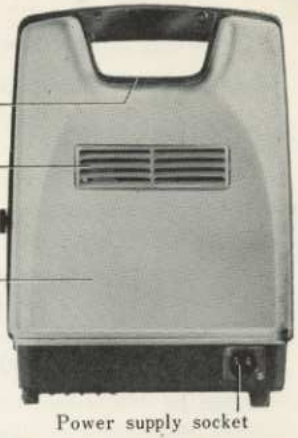
So Super-8 film is not interchangeable with Regular 8mm film in ordinary projectors but the FP-C projector is designed so that either type of film can be used, just by operating the push-button change-over device.

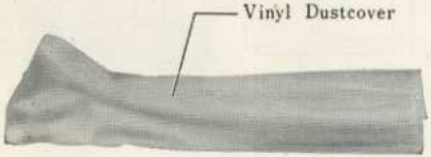
To distinguish the 2 types of film remember that in Super-8 the perforations are at the centre of each side of the frame whilst in Regular 8mm film they come between adjacent frames.

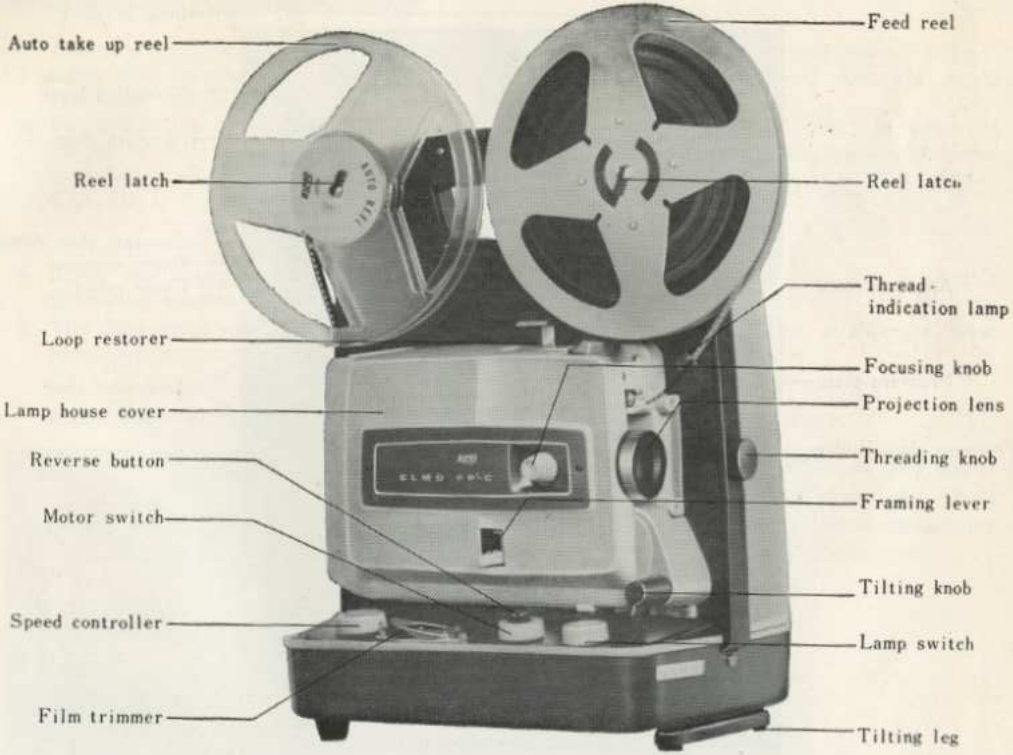


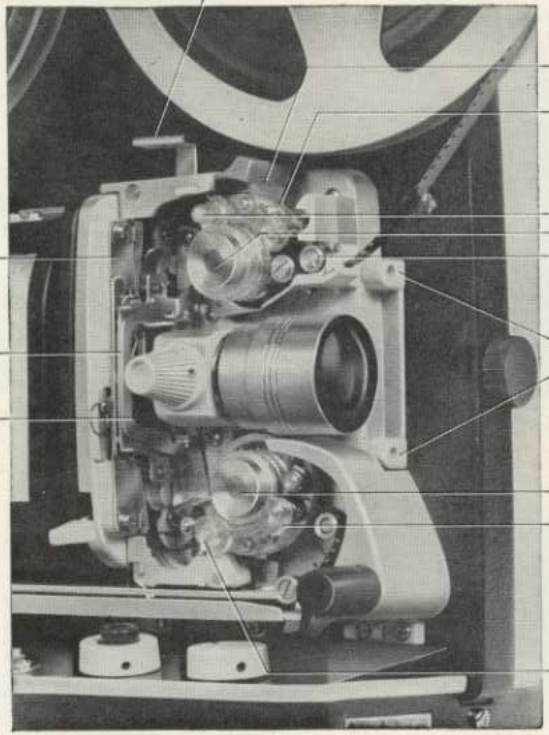
Super-8 film **Regular 8mm film**

Names of Projector parts






Auto take up reel
Feed reel
Reel latch
Reel latch
Thread-indication lamp
Loop restorer
Focusing knob
Lamp house cover
Projection lens
Reverse button
Threading knob
Motor switch
Framing lever
Tilting knob
Speed controller
Lamp switch
Film trimmer
Tilting leg


Loop restorer
Threading lever
Sprocket shoe
Sprocket shoe release knob
Upper sprocket
Guide roller
Aperture plate
Pressure plate
Accessory shoe
Pressure plate holder
Lower sprocket
Sprocket shoe
Sprocket shoe release knob

Adjusting for the film in use

1. Check if the film to be projected is Super-8 or Regular 8mm, as explained on page 3.
2. Open the lamphouse cover, and open both the upper and lower sprocket shoes (coloured orange).
3. For projecting Super-8 film, push the upper sprocket shaft (marked red) inwards, as far as it will go. Alternatively, for projecting Regular 8mm film, push the lower sprocket shaft (marked black).

   WARNING.

   If the sprocket shaft cannot be pushed inwards easily don't force it but turn the threading knob a few times, then push the sprocket again.
4. Close the upper and lower sprocket shoes. If you forget to do this, the automatic threading system cannot work properly.
5. The feed-spool spindle can accommodate either a Super-8 spool, or a Regular 8mm spool, without any adjustment.

Open Push Close

These three simple movements change over from one film to the other.

Push the upper sprocket shaft for using Super-8 size film.

Push the lower sprocket shaft for using Regular 8mm film.

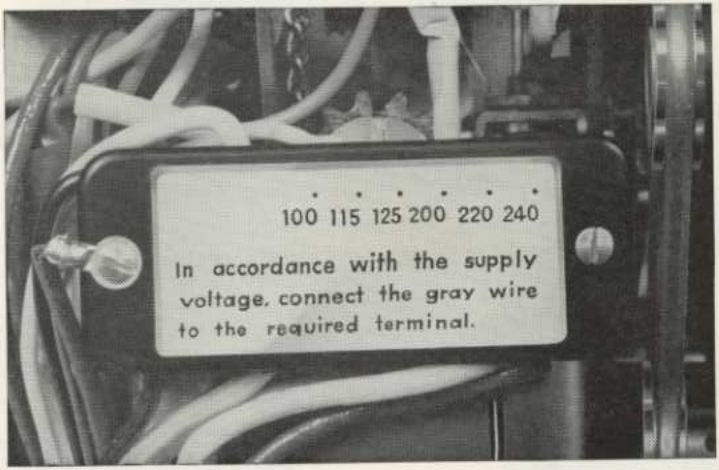
Adjusting for Voltage

The Elmo FP-C projector can work over the voltage range 100 to 240 volts A.C. The projector must be suited to the supply voltage or either the lamp life will be shortened or there will be loss of illumination.

Disconnect the projector from the mains. Unscrew the rear cover holding screw and remove the rear cover. Plug the gray wire into the tapping marked with the voltage to be used. Replace the cover.

Note:

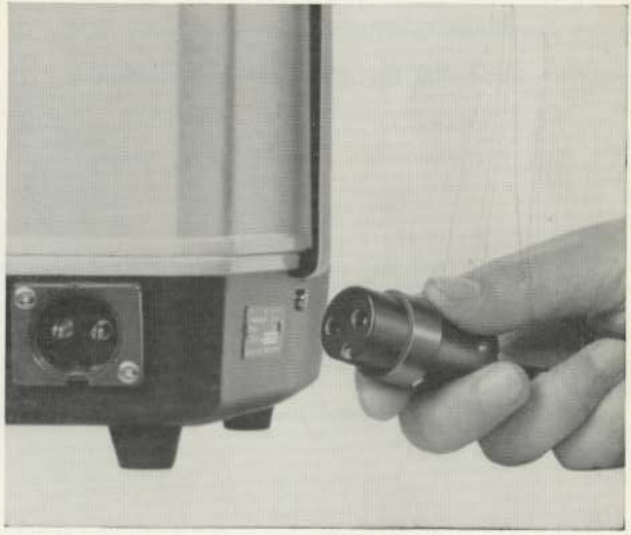
For certain countries the FP-C projector is delivered with a single voltage transformer, and in this case, the instruction on this page is not applicable.



Power Supply Cord

The power supply cord is 3 metres (approximately 10ft.) long or 4m (approx. 13 ft.) or 2 m (approx. 6.5 ft.) depending on countries.

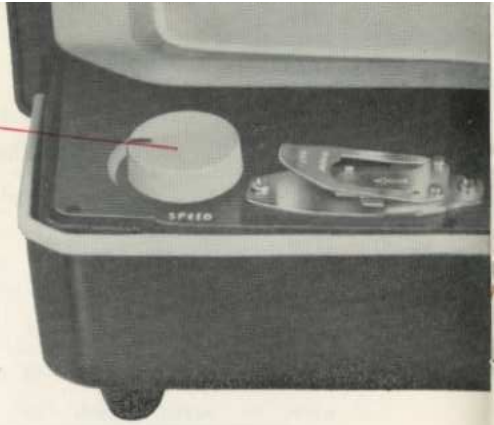
(The free end of the power supply cord must be fitted with a plug to suit the supply outlet in use. Connect green wire to earth, black to neutral, and red to live and use if possible a 2 amp. fused plug.) *.....This instruction is applicable only for British market.*



The electrical power supply and the projector switches should all be "OFF" before inserting or removing the supply cord.

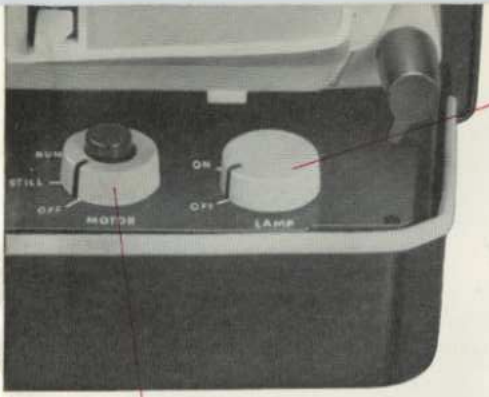
Projection speed adjustment

The projection speed is adjusted by turning the projector speed control knob. The speed should be selected within the range indicated by the arrow in such a way that the movement appears neither too fast nor too slow.



Feed reel shaft

The feed reel shaft of the Elmo FP-C accepts any type of reel up to 120m (400 ft.) capacity. It does not matter if they are of plastic or of metal or whether they are for Super-8 or Regular 8mm. (But note that the take up shaft will not take Super-8 reels.)



Lamp Switch

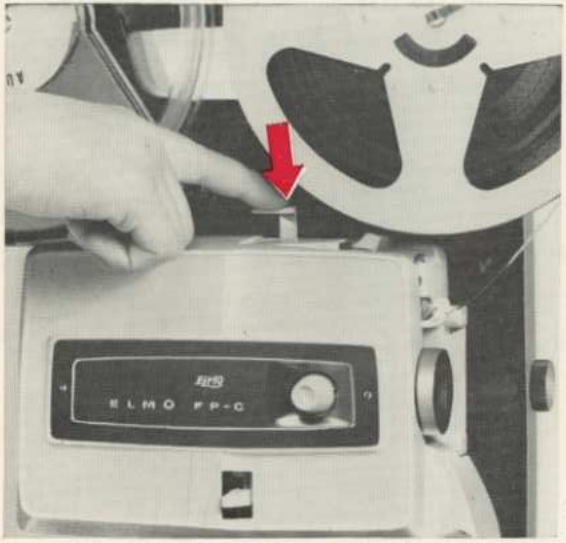
This should only be operated after the projector has been set running by the motor switch. When the lamp switch is set to "ON" the lamp will not light until the film has been threaded and taken up by the take up spool. It then lights up automatically. At the close of projection switch off the lamp immediately.

Motor Switch

When the switch is turned from "OFF" to "STILL" the film is not set running but only when turned from "STILL" to "RUN". The button in the centre is for reverse projection and rewinding as described later.

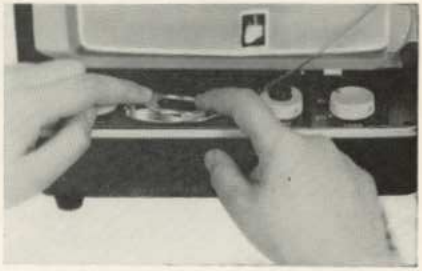
Loop restorer

If the film loop disappears during projection, the film comes under excessive tension. When this happens, the picture jitters badly on the screen, and there will be an unusual sound as the film passes through the gate. If this should happen, depress the loop restorer to its full extent and release it quickly. This will restore the loop without having to stop the machine.



Film trimmer

When the leading end of the film becomes torn or creased, it should be trimmed with the film trimmer which is fixed below the lamphouse cover.

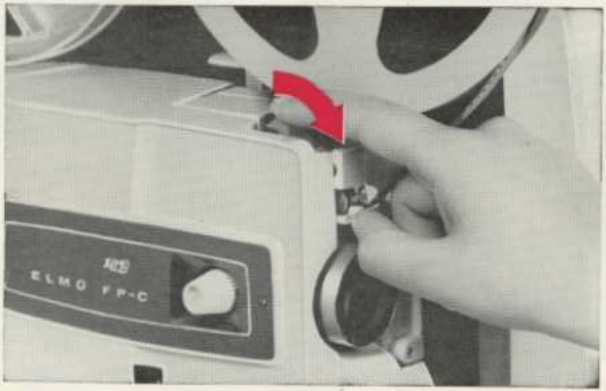


Remove the vinyl dustcover. Remove the front cover by depressing the cover release button and pulling the cover outwards. Take out the power supply cord, and fit it to the power supply and the projector and switch on the power outlet. At this point, it is necessary to confirm the type of film that is to be projected, i.e. Super -8 or Regular 8mm film. Open the lamphouse cover and both sprocket shoes. For Super-8 film the upper sprocket must be pressed inwards (for Regular 8mm film, press the lower sprocket inwards).

Push down the green threading lever. The green threading indication light is then switched on and the letter 'S' or 'W' appears in the window. The letter 'S' shows that the machine is ready to accept Super-8 film, while 'W' shows that the projector is ready for projecting Regular 8mm film. Close the sprocket shoes. Close the lamphouse cover.

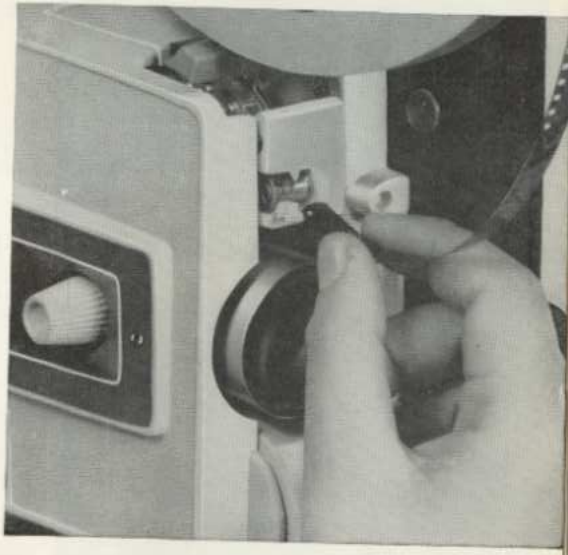
Take the reel of film to be projected, and mount it on the feed reel shaft with the film coming away downwards at the front.

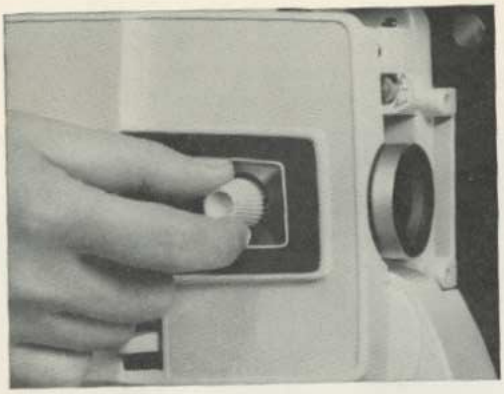
Take out the empty take up reel from the front cover, and put this reel on the rear reel shaft.



Pull out the end of the film from the reel, and trim the end with the film trimmer. Place the projector squarely facing the screen.

Turn the motor switch to the "RUN" position, and the lamp switch to the "ON" position (in that sequence). Put the end of the film into the film slot, and the film will be loaded and wound on to the take-up reel automatically and the lamp will be switched on. At the same time the green threading indication lamp is switched off.

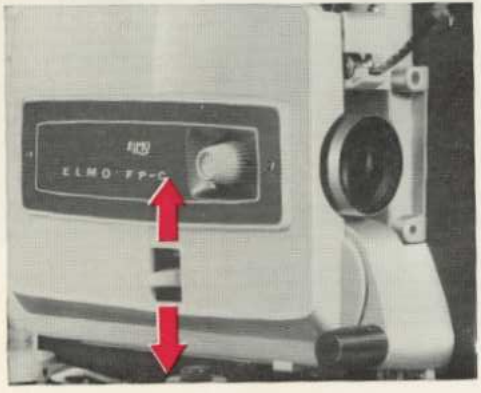




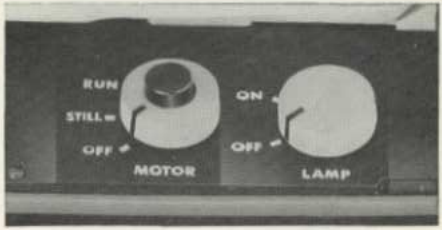
If necessary now focus by turning the focussing knob in either direction.

You should also adjust the speed so that the movement on the screen looks natural.

If a frame division line appears at either the top or the bottom of the screen, the framing lever should be moved up or down until the frame line is no longer visible.



To centralize the picture on the screen, first slacken off the tilting adjustment by turning the tilting knob to the left. Then set the projector at the proper angle, and lock the adjustment again by turning the knob to the right.

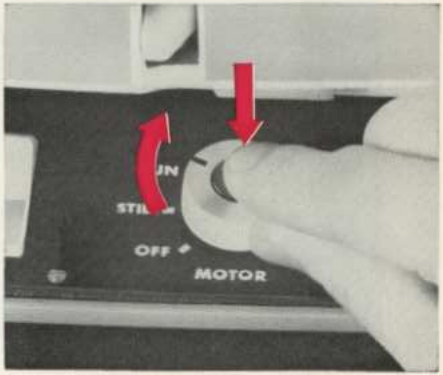


Close of projection

When all the film has run through, switch off the lamp and the motor in that sequence.

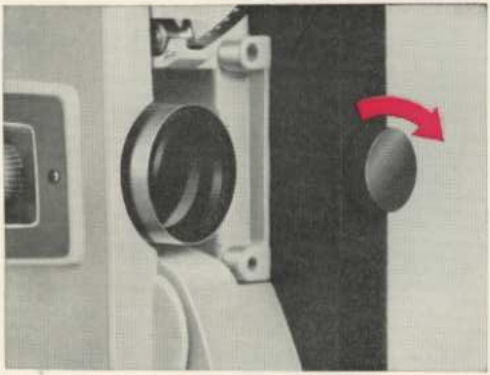
Reverse projection

For reverse projection, turn off the motor switch, then press the reverse button in the centre of the motor switch, and still keeping the button pressed, switch the motor on again, passing through the "STILL" position to the "RUN" position. The picture will now be projected on the screen in reverse. On completion of reverse projection, reset both the lamp and the motor switch to the "OFF" position.



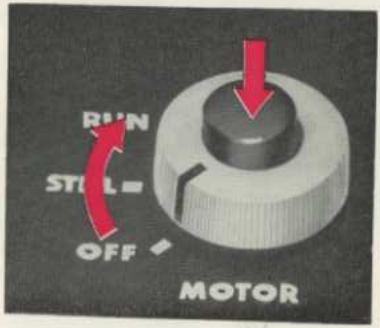
Single frame still projection

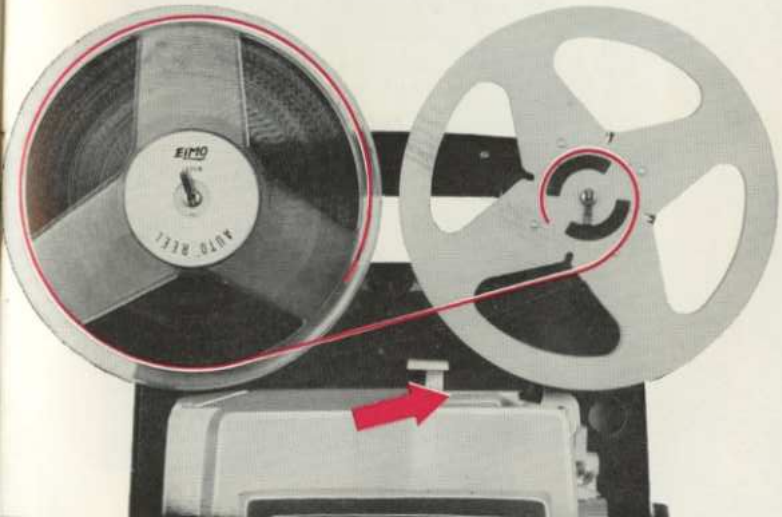
Single frames can be projected by turning the motor switch to the "STILL" position during projection of the film. As this projector is equipped with efficient cooling devices prolonged single frame projection is possible. If the projector stops with the shutter closed or partially closed, and the picture is not visible on the screen, just turn the threading knob until the picture is visible. Re-focus the lens if necessary for still picture projection.



Rewinding

Insert the film end into the slot of the core of the empty feed reel. Turn the speed adjustment knob to the fast running position. Push the reverse pushbutton and at the same time turn the motor switch to "Run." The film is then rewound at high speed.





Replacing the lamp

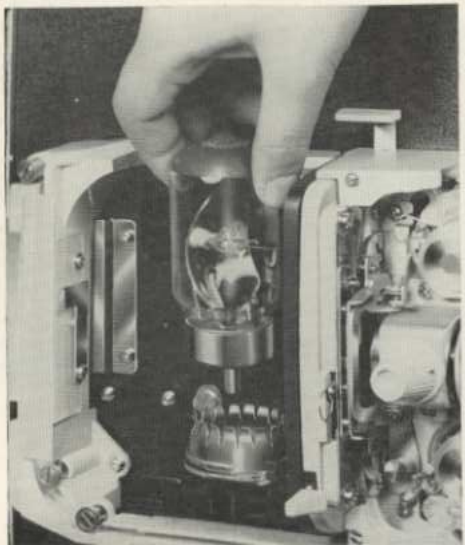
Before replacing the lamp, disconnect the projector from the power supply and open the lamphouse cover.

Depress the lamphouse holding spring and pull the lamphouse outwards.

Remove the lamp, first making sure it is cool, by pulling it straight upwards out of its socket.

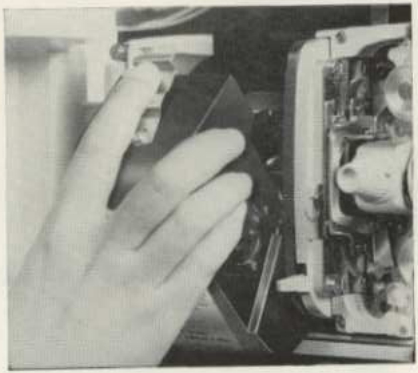
Insert the new lamp with the concave surface of the reflector away from the lens. The key in the spigot on the lamp base prevents the lamp from being incorrectly placed. Push the lamp straight downwards into place without using excessive force.

Replace the lamphouse cover by first engaging the lower hook with the projector body below the lamp.



Note that the hook must not be placed between the plastic film guide and the body but over the edge of the body.

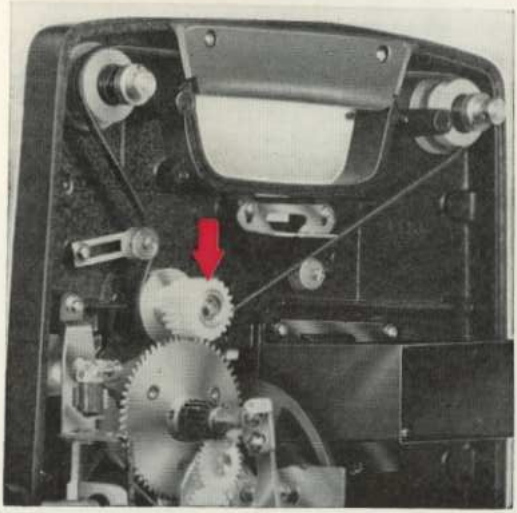
Then push the top of the housing in until the spring snaps into place.

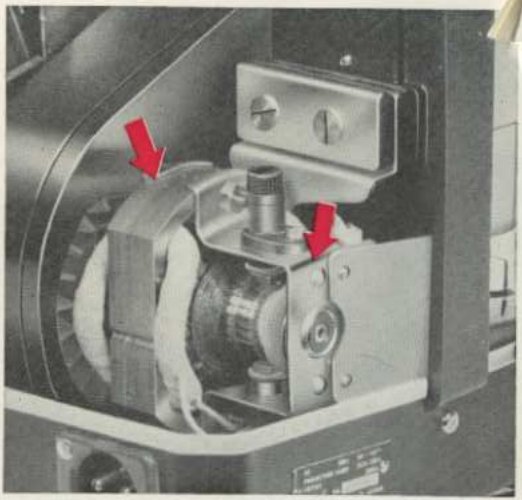


Lubrication

Only occasional lubrication is needed to keep the projector in good order and to ensure a long working life.

Disconnect the projector from the power supply. Undo the rear cover retaining screw and remove the rear cover. Only lubricate those parts indicated by arrows on the pictures below. Only a few drops of thin machine oil are required. Do not lubricate or contaminate any other parts with oil.





Cleaning

Whilst in a general way the projector should be kept clean and dust free 3 components need special attention.

The film gate consists of 2 parts (pressure plate and aperture gate) through which the film passes and is precisely machined to prevent film damage and it must be kept free of dust and other debris arising from wear of the film.

Pressure plate

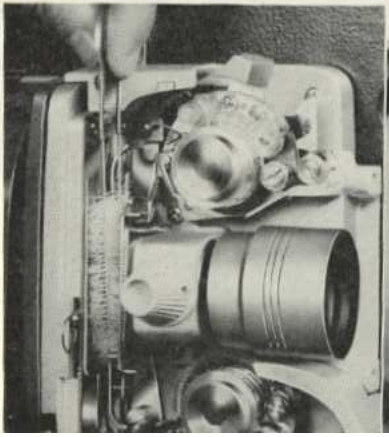
Open the pressure plate holder by hinging it fully to the right and then push it upwards to remove it. Wipe it gently with a soft cloth and replace it.

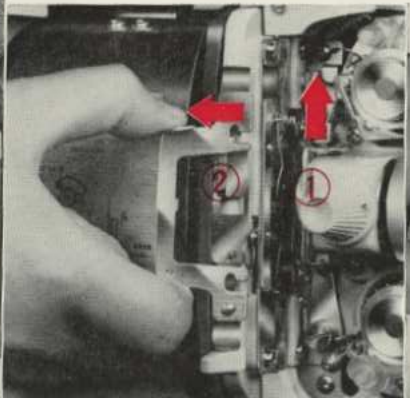
Aperture plate

With the pressure plate removed- look into the gate and operate the threading knob so that the transport claws are retracted. Clean the aperture plate with a clean soft brush using it in a vertical direction only.

Projection lens

Remove the lens by pulling it forwards and wipe front and rear surface gently with a soft cloth or soft brush. Avoid excessive rubbing of the glass and do not touch it with the fingers.





Trouble Shooting

1. Projector does not operate

Check - voltage tapping not adrift.
belt is not broken.
connections from power to projector.

2. Film not transported

Check - sprocket shaft pushed home.
set for correct film.
indication lamp is on.
end of film correctly cut.
film path is unobstructed.

3. Film not taken up automatically

Check - first film perforation is not damaged.
film is not curled.

4. No image on the screen

Check - projection lamp properly seated.
projection lamp not blown.
lamp switch is on.

5. Image jitters and unusual noises

Check - loops not lost (depress loop restorer).
film properly spliced.
perforations not damaged.

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