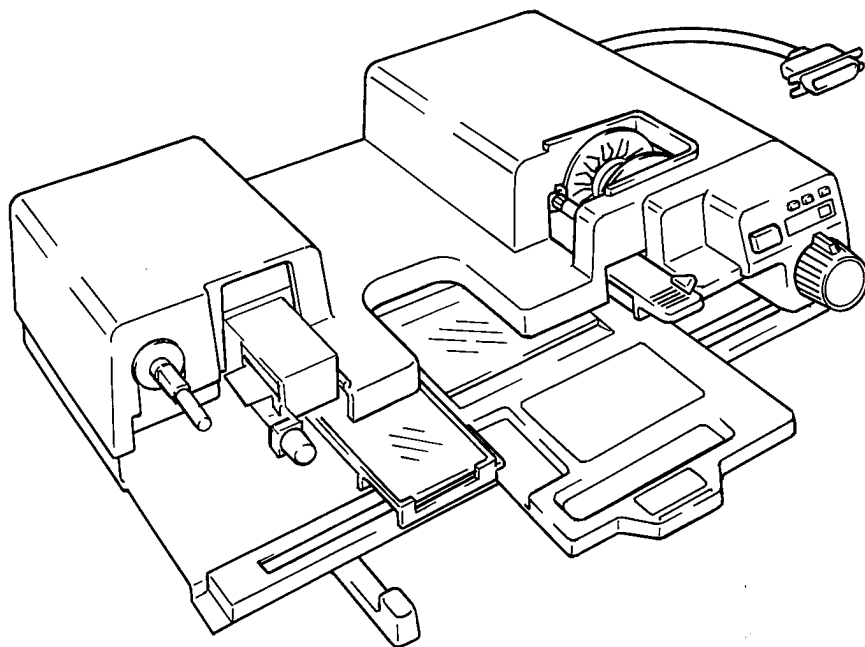


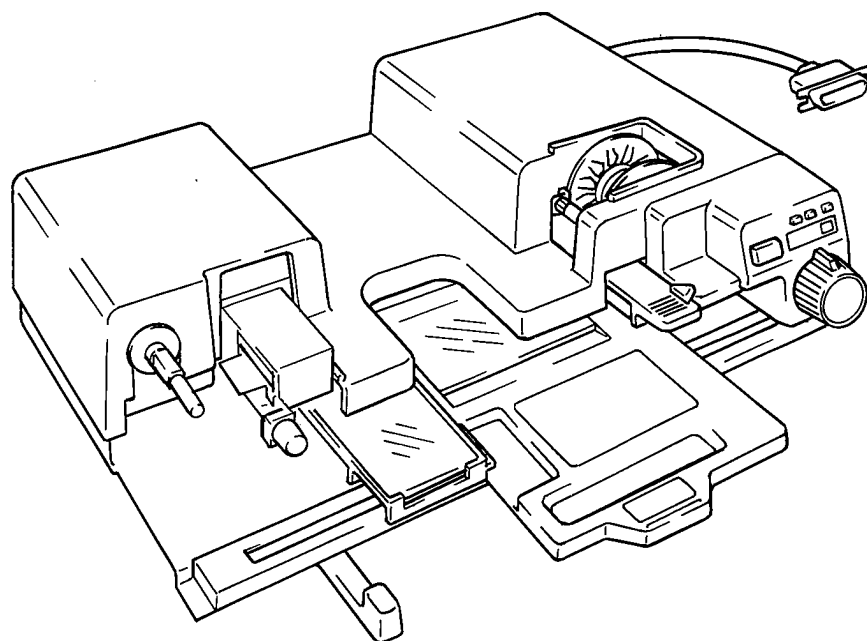
UC-2

Operator's Manual



Notes to Operators

Information in this booklet refers only to the operation of Universal Carrier-2. For further information regarding host machine, please refer to host machine Operator's Manual. Please read entire manual carefully before operating Universal Carrier-2.



■ The following safety rules should be observed. ■

The unit should be kept free from moisture, dirt, dust and exposure to heat and direct sunlight at all times.

WARNING

Warning: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The design and production of this unit conform to FCC regulations, and any changes or modifications must be registered with the FCC and are subject to FCC control. Any changes made by the purchaser of user without first contacting the manufacturer will be subject to penalty under FCC regulations.

For Key Operators Use

When you need to call for service, the Key Operator should be prepared to provide the following information:

1. Your Company Name, Address, Telephone No. Dept. No, Floor No, Machine Location etc.
2. Model name, Serial number, Condition or System(s) Indication on Display etc.

For your reference purpose.

Model Name	MINOLTA UC-2
Serial Number	
Installation Date	
Authorized Dealer's Name Tel. No. for Supply for Service	

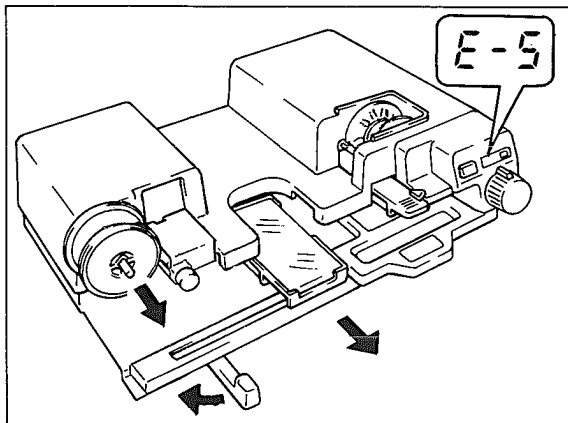
MESSAGES AND REMEDIAL ACTION

Display	Meaning	Action
SET	When the Roll Film Carrier is set into the Single Frame Feed mode.	_____
FICH	Fiche mode (Fiche Carrier is being used).	_____
roll	Standby state or Roll mode.	_____
E-1	The Fiche Carrier is slid out when roll film has been or is being loaded.	Slide the Fiche Carrier Table back into the correct position.
E-2	Film is not loaded properly.	Press the Clear Key to reset the error condition and load the film again by following the procedure given on p. 6.
E-3	The film Guide is in the Fiche mode (in the raised position) when in the Roll mode.	Slide the Fiche Carrier Table out and then back into the correct position.
E-4	An Open Reel is not mounted properly after the film loading operation.	Mount the Open Reel properly.
E-5	The trailing edge of the film has been reached or film has been completely taken up.	Turn the Speed Control Knob in the REVERSE direction or see p. 17.
U-1	The length of single frame feed has been set to a value which is too small.	Press once the Set Key and set a greater feed length.
U-2	The length of single frame feed has been set to a value which is too great.	Press once the Set Key and set a smaller feed length.

If any of the messages persists even after these procedures, call your Technical Representative.

WHEN A ROLL OF FILM IS COMPLETELY TAKEN UP

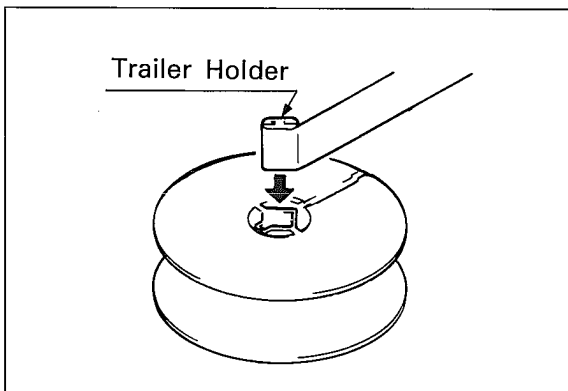
If the trailing edge of a roll of film is not secured to the Open Reel, the film is completely taken up by the Take-Up Reel and you can no longer rewind it. This results in the malfunction code "E-5" being shown on the Display.



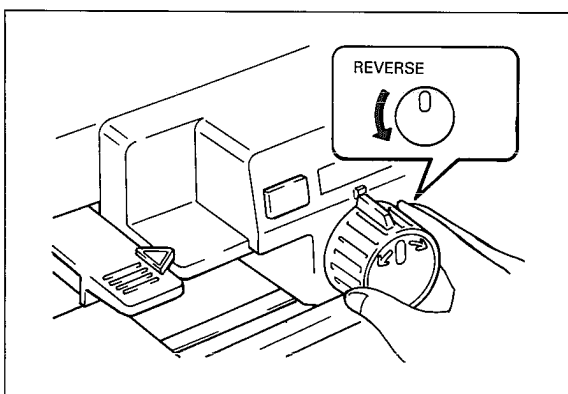
- ① Remove the Projection Lens from the UC-2. (See P. 6.)
- ② Slide the Image Vertical Positioning Lever all the way to the left to pop the UC-2 out to the front.

NOTE

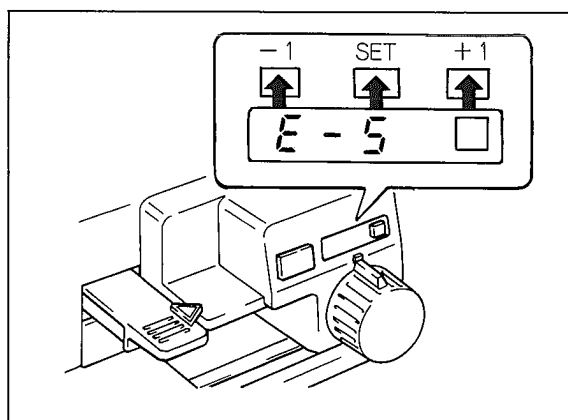
Check that the Lens Holder on the reader-printer is not in contact with the film.



- ③ Remove the Open Reel from the Reel Shaft. Using the Trailer Holder, secure the trailing edge of the film taken up by the Take-Up Reel onto the Open Reel as illustrated. Then, mount the Open Reel on the Reel Shaft again.



- ④ Turn the Speed Control Knob in the REVERSE direction to rewind the film. When the film is completely rewound onto the Supply Reel, turn the Speed Control Knob to the central position. Turn the reader-printer power OFF and, holding down the -1, +1, and Set Keys at once, turn power ON to reset the malfunction condition.



- ⑤ Turn the reader-printer power OFF and, holding down the -1, +1, and Set Keys at once, turn power ON to reset the malfunction condition.

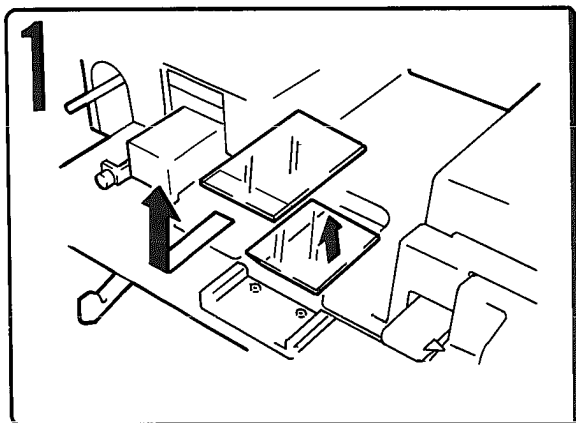
NOTE

This procedure is necessary to reset E-5.

DAILY MAINTENANCE

To ensure ease of reading and Optimum Print Quality, please clean the machine on a daily basis.

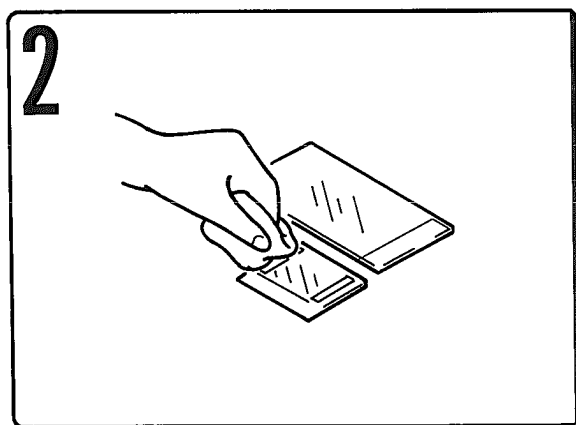
■ Cleaning of the Roll Carrier Glasses.



Remove the Upper and Lower Roll Carrier Glasses.

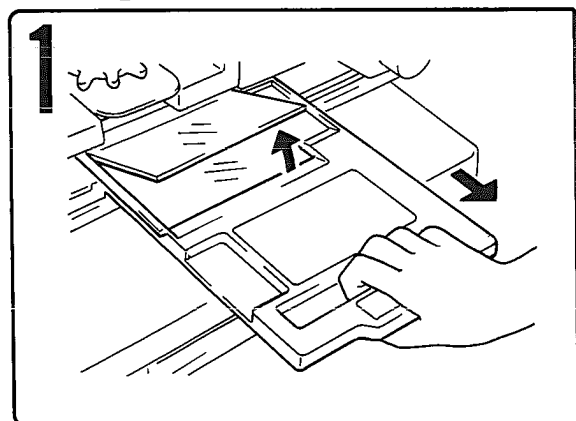
NOTE

*Before cleaning the Carrier Glasses, be sure to remove the Zoom Lens.
If the film has been fed out, be sure to rewind it completely.*

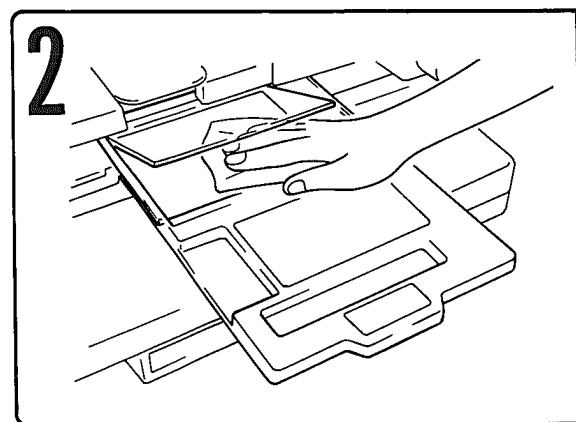


Wet a soft cloth with water and wipe it out well. Then wipe the Carrier Glasses. Finally, dry the Carrier Glasses by wiping them with a dry, soft cloth.

■ Cleaning of the Fiche Carrier Glasses.

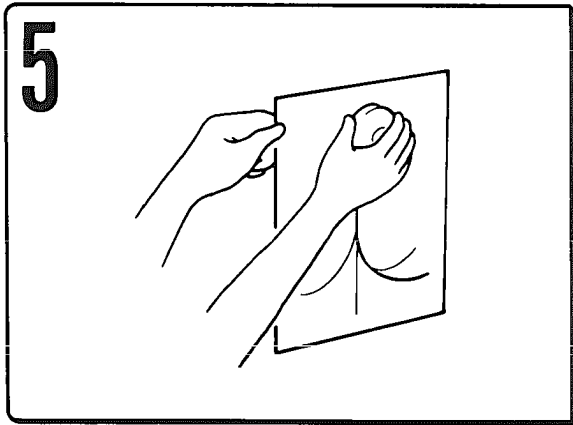


Take hold of the handle of the Carrier and pull it gently out as far as it will go. This causes the Upper Film Glass to swing up.



Wet a soft cloth with water and wipe it out well. Then wipe the Carrier Glasses. Finally, dry the Carrier Glasses by wiping them with a dry, soft cloth.

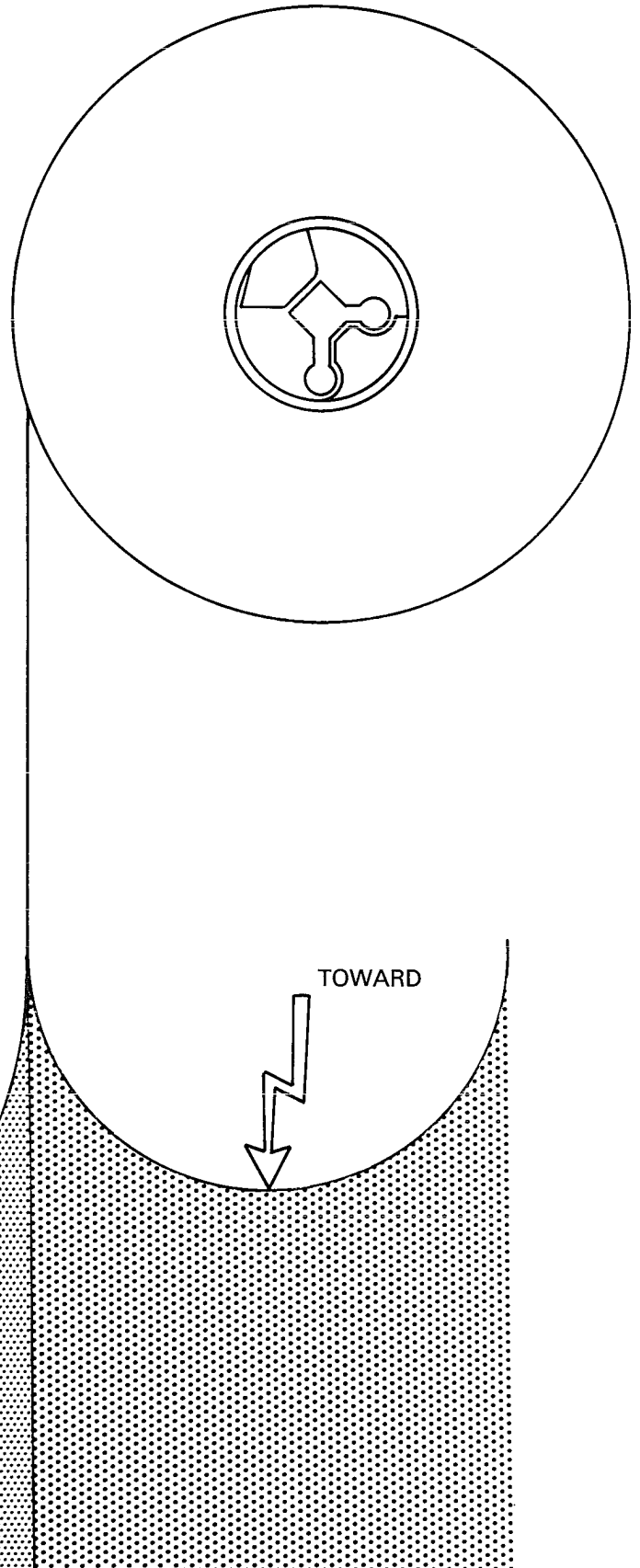
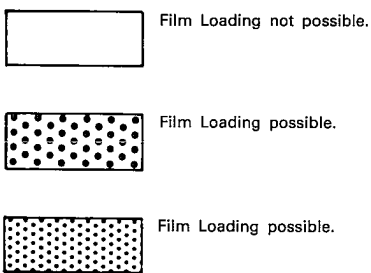
Effect of film curl on Film Loading



An excessively curled film leader may result in the Film Supply Reel failing to advance the film smoothly. By studying the illustration, check to see if the curl of your film is up to the specified allowance.

If the curl deviates from the allowance, correct it as follows:

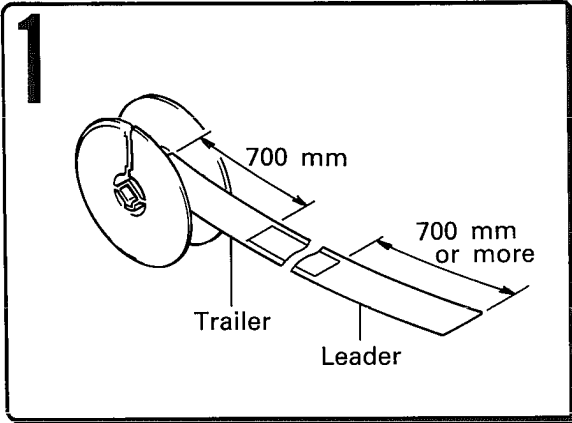
- Splice a leader film.
- Press the leader against the edge of a table and pull the leader to correct the curl.



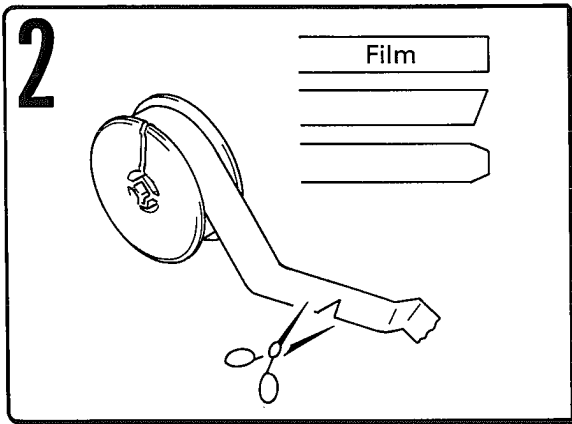
FILM MAINTENANCE

Use the following precautions when handling your own films.

■ Roll film

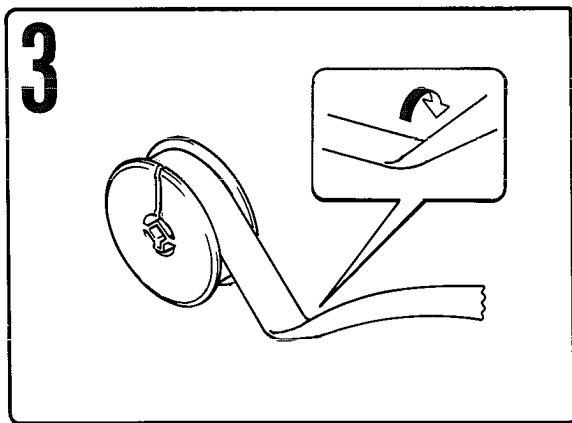


Allow a length of 700 mm or more for the film leader (the blank section of film at the beginning of a reel of tape) and the trailer (the blank section of film at the end).

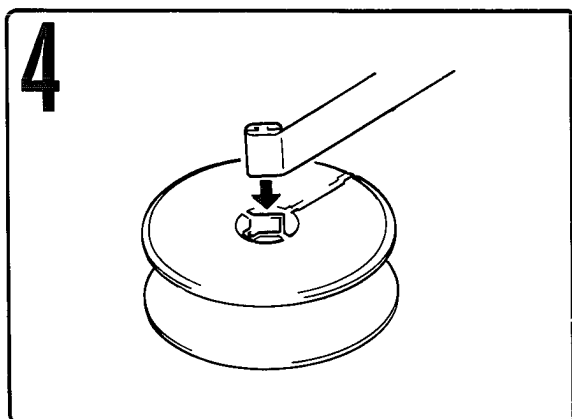


Keep the edge of the leader cut straight, especially when the edge is folded, to ensure that the film is unwound smoothly.

In this case, however, make sure that the leader is 700 mm or more long. If the length of the leader is less than 700 mm, splice a leader tape to the leader using black tape to ensure the specified length.



The film should not be twisted 89° or more in either direction when the approximately 300-mm-long leader is advanced out of the reel and held straight downward.



Be sure to secure the trailing edge of the film to the Core of the Reel.

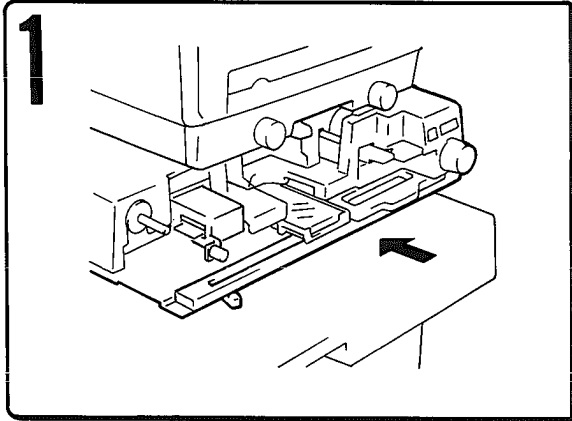
NOTE

If the trailing edge of the film is not secured to the Core, film is completely taken up and it appears "E-5" on the display.

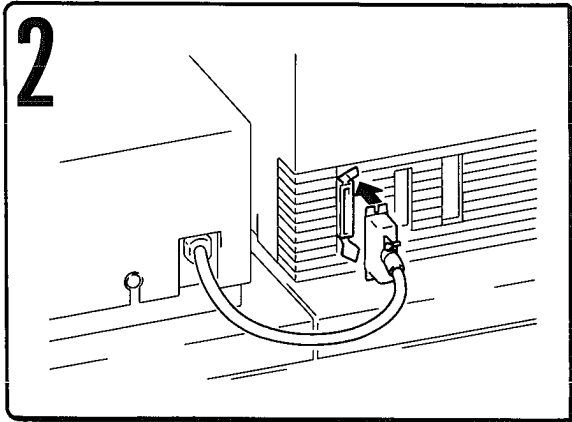
INSTALLATION

NOTE

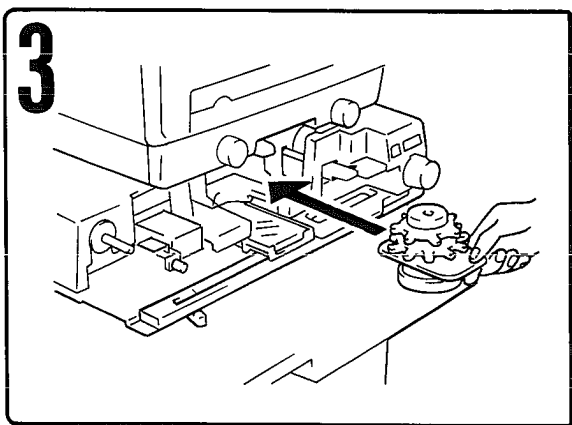
The Machine Power Switch should be turned OFF before installing the Universal Carrier-2.



Align two Guide Rails on the underside of the Universal Carrier-2 with the right and left edges of the Carrier Table. Then, slide the Carrier all the way into position along the side edges of the Carrier Table.



Plug the Cable Connector of the Carrier into the Socket in the machine dedicated to this Carrier.



Install the Lens Unit all the way into Position.

NOTE

Be sure to fit the Lens Support Ring to the Lens to be used. (See p. 4.)

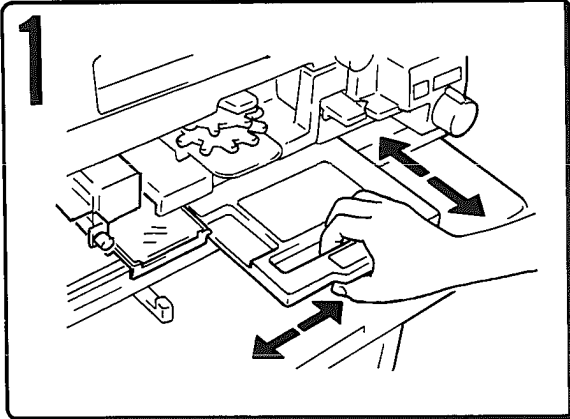
Removal

To remove the Carrier from the machine, reverse the order of installation.

NOTE

The Machine Power Switch should be turned OFF before removing the Universal Carrier-2.

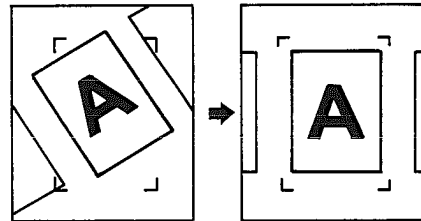
■ Positioning the Image on the Screen



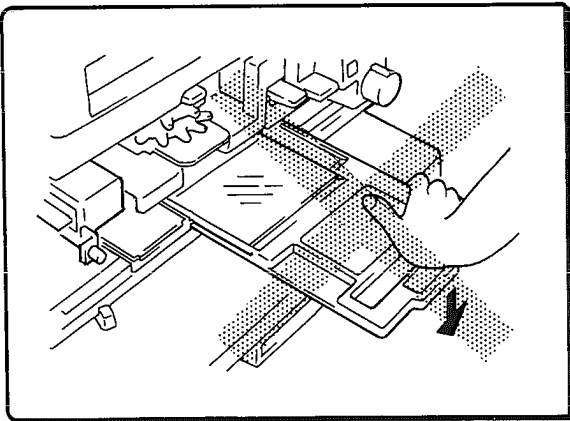
Holding onto the Fiche Carrier Handle, move the Fiche Carrier to the right and left, and to back and forth to position the film image on the Screen.



To rotate the image, turn the Image Rotation Knob.

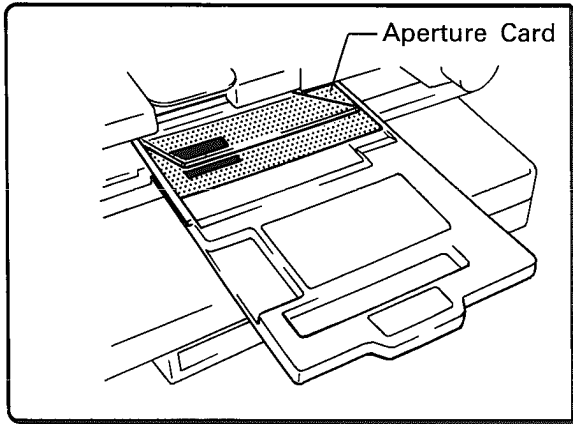


CAUTION



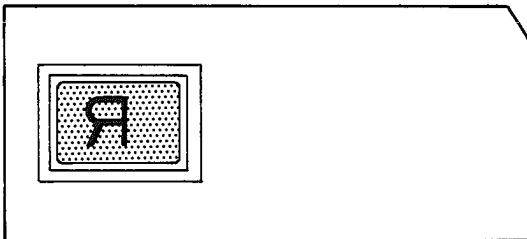
When the Fiche Carrier is slid all the way out of the Universal Carrier to the front, do not place a heavy object or lean on the Carrier table, as a malfunction could result.

■ Aperture Card



Where the Prism is installed
in the host machine

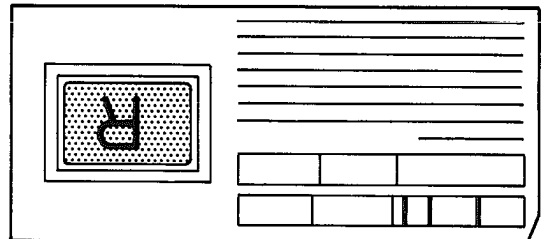
Place the Card face down with the film area on the left.



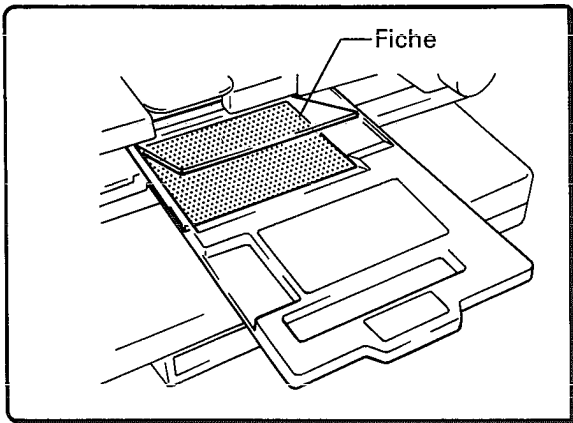
When you are using an Aperture Card, place it as shown on the left.

Where the Prism is not installed
in the host machine

Place the Card face up with the film area on the left.

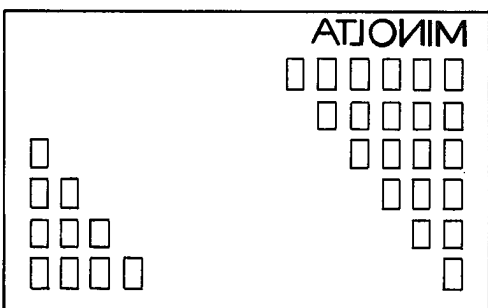


■ Fiche



Where the Prism is installed
in the host machine

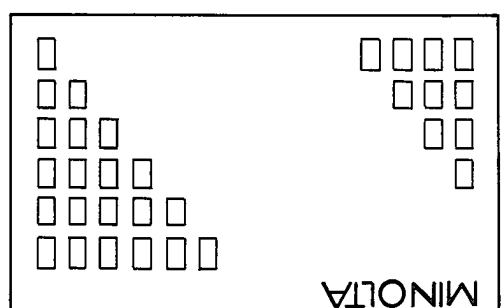
Place the film face down with the title in the rear.



When you are using fiche, place it as shown on the left.

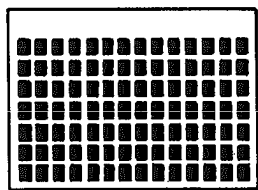
Where the Prism is not installed
in the host machine

Place the film face up with the title in the front.

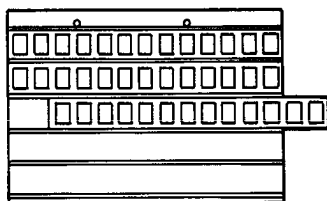


USING THE FICHE CARRIER

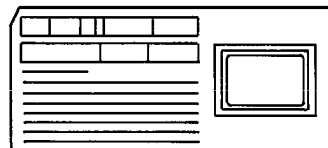
The microfiche, film jacket, and aperture card can be used on the Fiche Carrier.



Micro Fiche

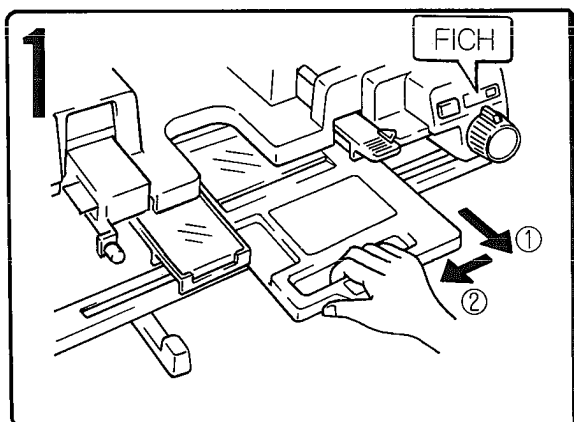


Film Jacket



Aperture Card

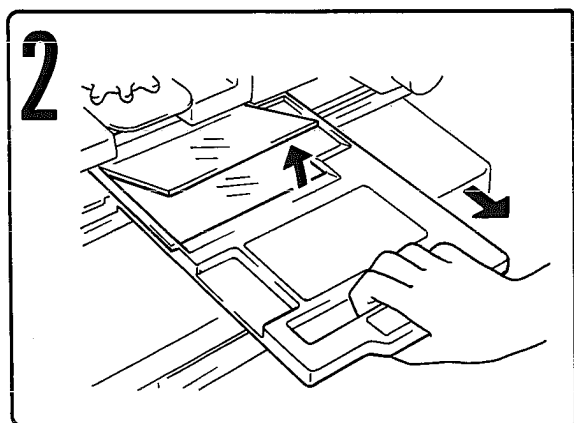
■ Loading the Film



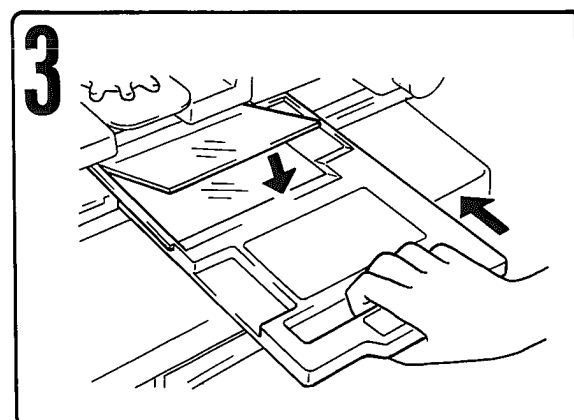
Take hold of the Fiche Carrier handle and pull the Fiche Carrier out to the front so that the Fiche Carrier Table becomes visible.

NOTE

*Before moving the Fiche Carrier, make sure that the host machine has been turned ON.
In addition, if roll film has been fed out, be sure to rewind it.
If Roll Film is on the Reel Shaft, the Fiche Carrier Table cannot be slid out. Be sure to remove Roll Film if you intend to use the Fiche Carrier.*



Take hold of the handle of the Carrier and pull it gently out as far as it will go. This causes the Upper Film Glass to swing up. Referring to "Loading the Film" on next page, load the film.



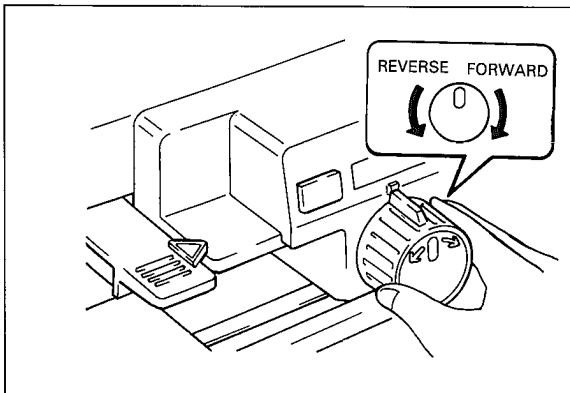
Take hold of the Carrier handle and slide the Carrier back gently until the Upper Film Glass is fully swung down.

SINGLE FRAME FEEDING

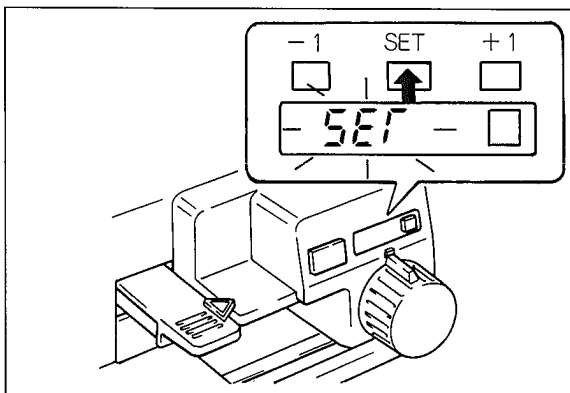
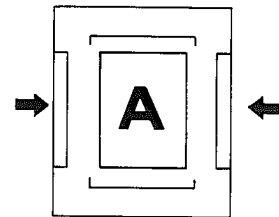
Once you set the length of single frame feed, you can then feed or reverse the roll film one frame using the +1 or -1 Key.

NOTE

The length of the single frame feeding is stored at the 16mm/35mm film separately.



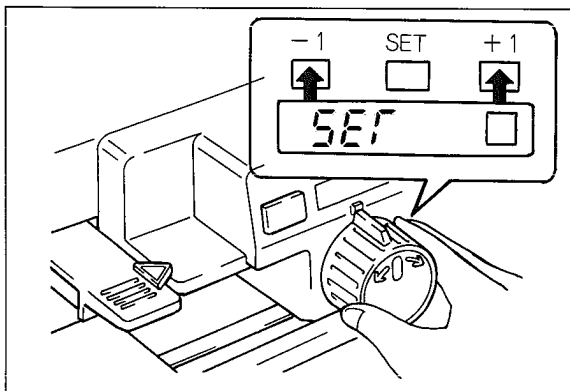
- ① Load the roll film
See p. 8 and 9.
- ② Turn the Speed Control Knob as necessary to position a frame at the center on the Screen.



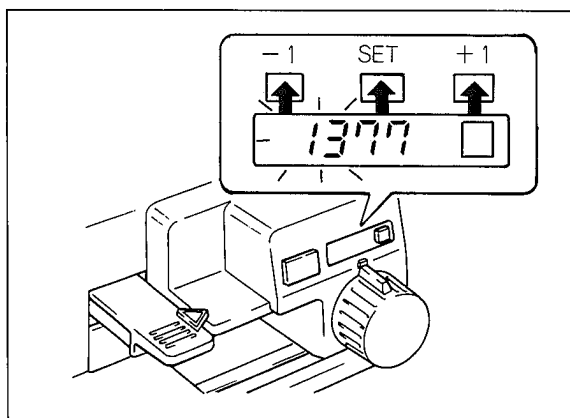
- ③ Press the Set Key.
The message "SET" starts blinking on the Display. (Now, set the length of feed for single frame feeding using the following steps.)

NOTE

The Display normally shows the Odometer count. It can, however, be used as a frame counter by changing the setting of an internal switch of UC-2. Consult your Technical Representative for this setting.

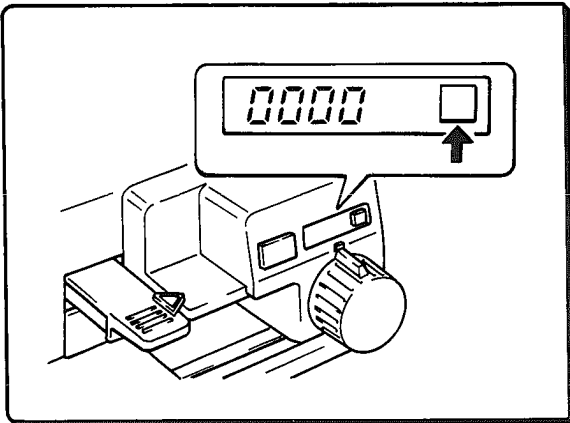


- ④ Hold down the + 1 Key or - 1 Key, or turn the Speed Control Knob as necessary to advance the film one frame ahead or reverse it one frame back and bring the new frame at the center on the Screen.



- ⑤ Press the Set Key.
The message "SET" disappears from, and instead, the Odometer count reappears on, the Display. This completes the setting.
- ⑥ The fine adjustment of the length of the single frame feeding.
 - 1.) Press the Set key continuously for more than 3 sec.
 - 2.) Indicated a 4 digit number on the display.
 - 3.) Press the + 1 key or - 1 key as necessary to increase the number or decrease it and adjust the new length of the single frame feeding. (one count approx. 0.025mm)
 - 4.) Press the Set key.

■ Odometer

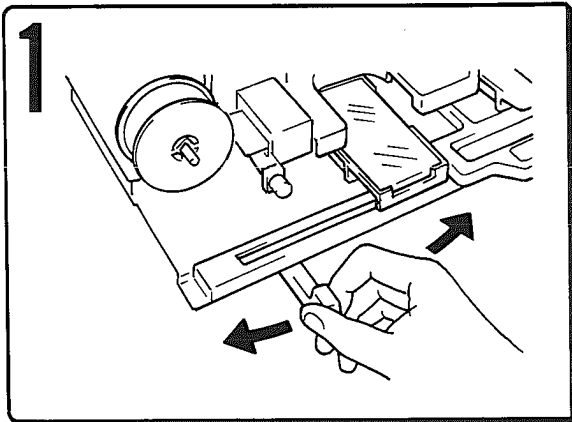


The Counter is incremented when the film is unwound and decremented when the film is rewound.

Indicated the amount of film that has been advanced in a 4-digit number. A count of the Odometer is equivalent to approximately 1/2 inch or 1/10 ft. in film length.

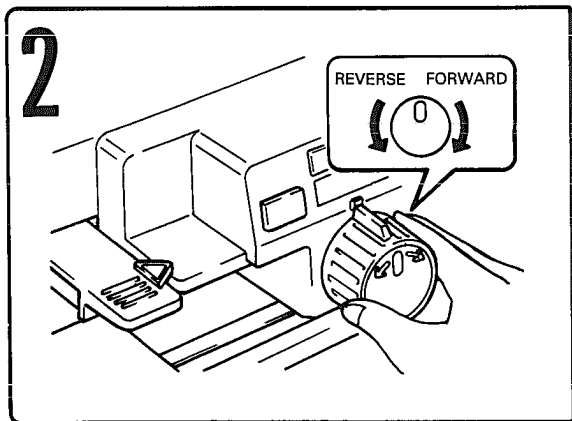
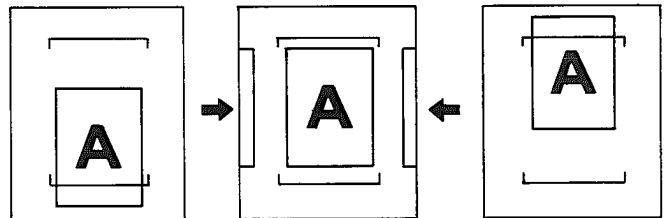
Depression the "Clear" Key resets the Odometer to "0".

■ Positioning the Image on the Screen

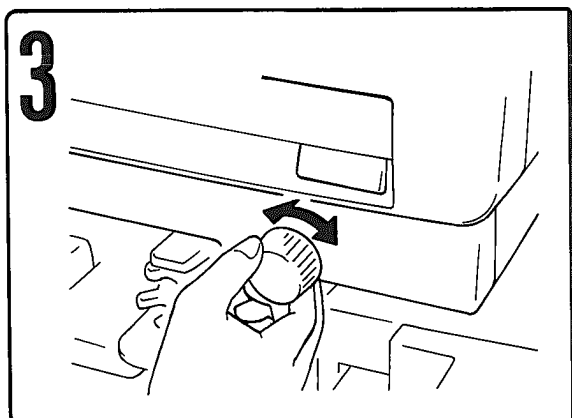
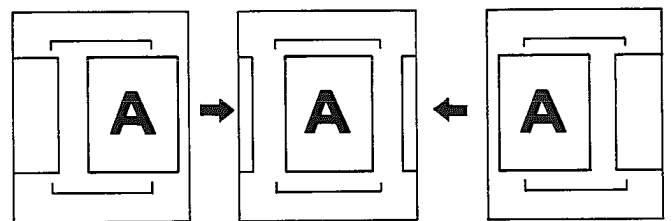


To move the image up and down, turn the Image Vertical Positioning Knob.

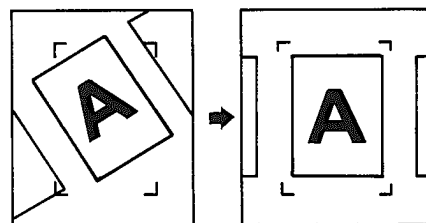
- Turn Knob clockwise to move the image up.
- Turn Knob counterclockwise to move the image down.

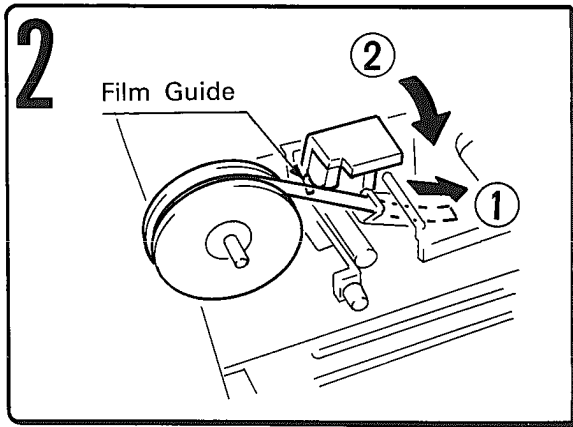


To move the image right and left, use the Speed Control Dial.



To rotate the image, turn the Image Rotation Knob.

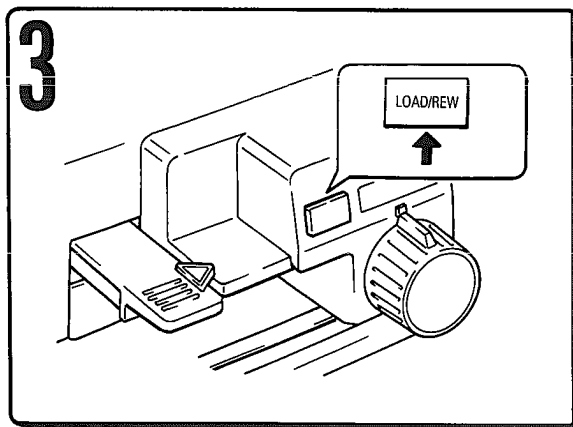




Manually Feed the Film Leading Edge into the Film Guide (Green).
Then Lower and Set the Take-up Roll into home position.

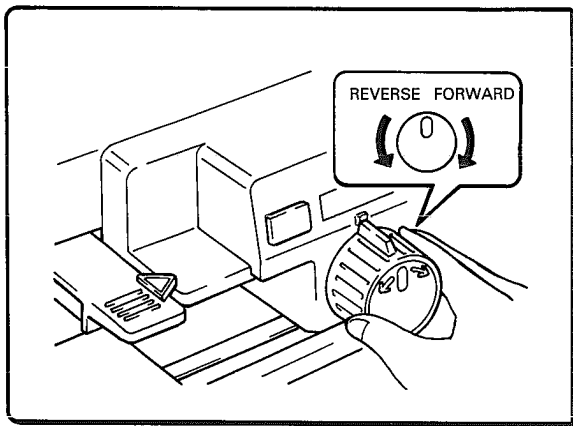
NOTE

When mounting the open-reel roll film onto the Supply Reel Shaft, the Film Guide effectively prevents the film from automatically unwinding.



Depress the LOAD/REW Key.
When the LOAD/REW Key is depressed, the film leader is automatically unwound and taken up by the Take-Up Reel, which takes approximately 3 sec.

■ **Feeding the Film**

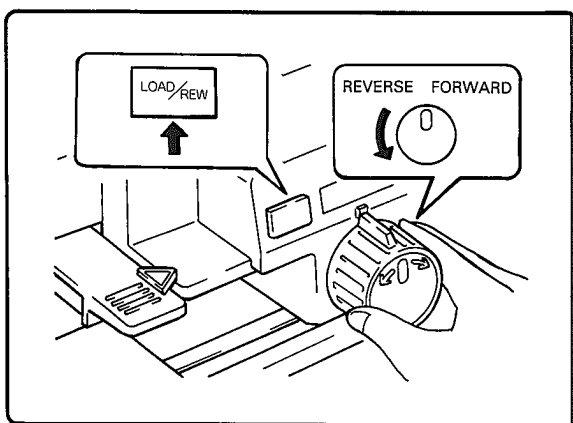


Turn the Speed Control Knob clockwise or counter-clockwise to step through the film in the forward or reverse direction until you reach the desired frame. The film scanning speed is determined by the turning angle of the Speed Control Knob.

NOTE

When the film is unwound to the trailer, turn the Speed Control Knob back to the central position.

■ **Rewinding the Film**



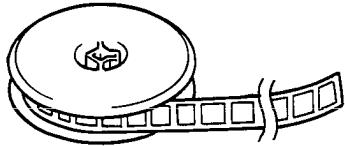
To rewind the film depress the LOAD/REW key or turn the Speed Control Knob in the REVERSE direction.

NOTE

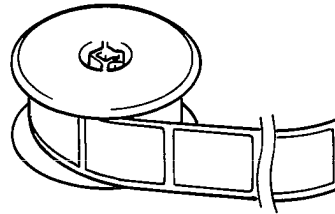
Be sure to turn the Speed Control Knob back to the central position "0" as you reach the film leader when you are using the Speed Control Knob.

USING THE ROLL CARRIER

For use with an open-reel roll film in both 16 mm and 35 mm widths. The film width can be selected at the touch of a lever.



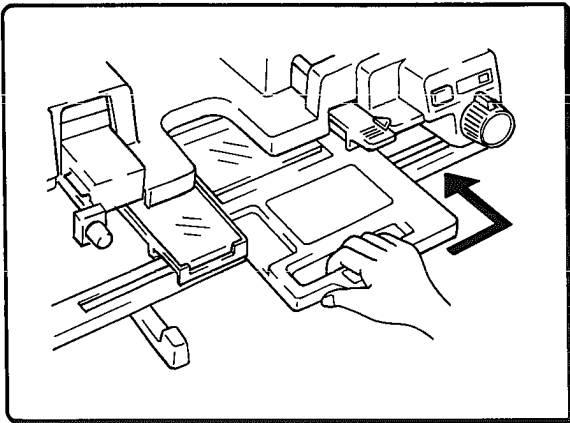
16 mm Open Reel Roll Film



35 mm Open Reel Roll Film

NOTE

The host machine requires the prism unit, please equip the prism unit if not.

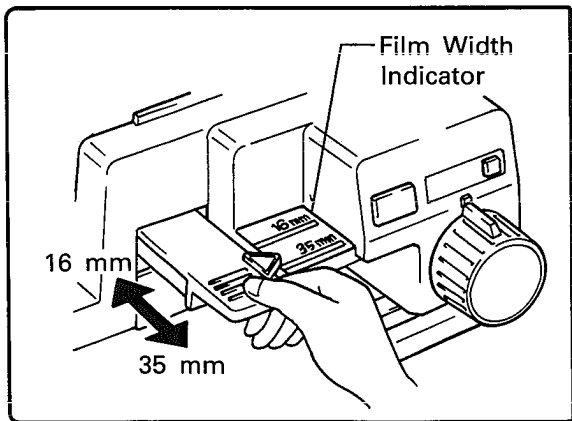


If the Fiche Carrier is out, be sure to store it into position.

NOTE

Before moving the Fiche Carrier, make sure that the host machine has been turned ON.

■ Selecting the Film Width 16/35 mm

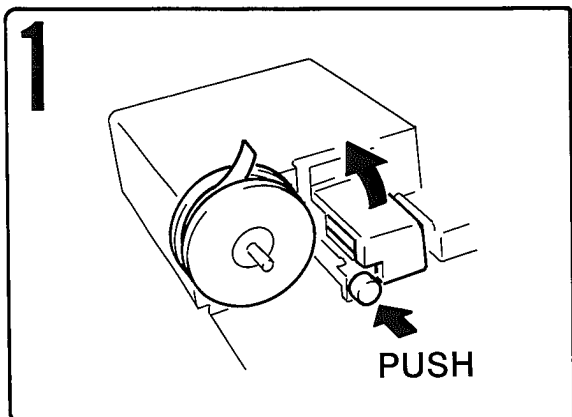


Select the film width, 16 mm or 35 mm.
16 mm Push the Film Width Select Lever in.
35 mm Push the Film Width Select Lever out.

NOTE

Be sure to select the film width according to the film being used.

■ Loading the Roll Film



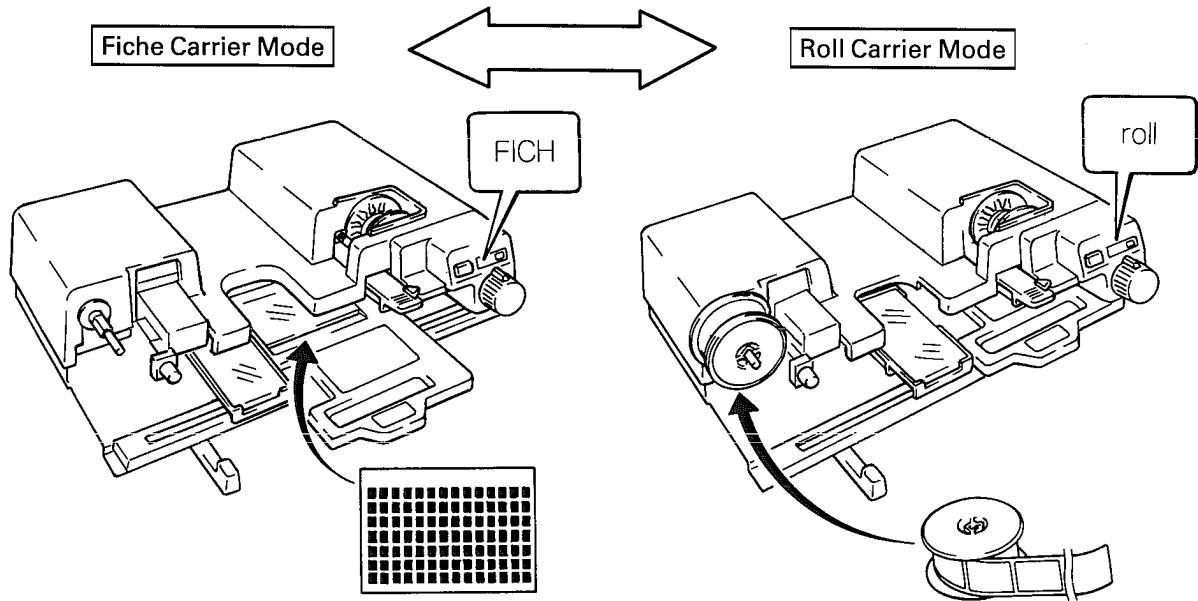
Mount the 16 mm or 35 mm open-reel roll film onto the Supply Reel Shaft as illustrated.
Then push the button and raise the Take-Up Roll portion.

NOTE

The film could not be correctly rewound if the open reel roll film is mounted in the opposite direction.

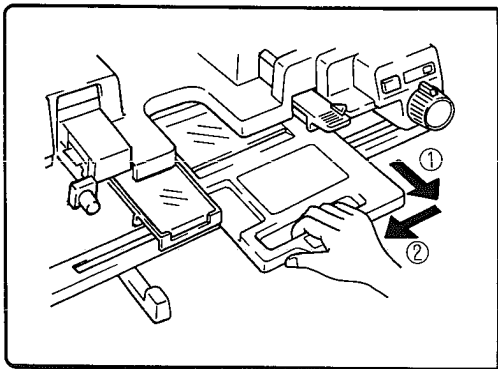
SELECTING THE OPERATING MODE

Universal Carrier-2 can be operated either in the Fiche Carrier Mode, in which the user uses sheet film such as microfiche, or in the Roll Carrier Mode, in which the user uses open-reel film.



To select the mode, use the following procedure.

■ Changing the mode from Roll Carrier to Fiche Carrier

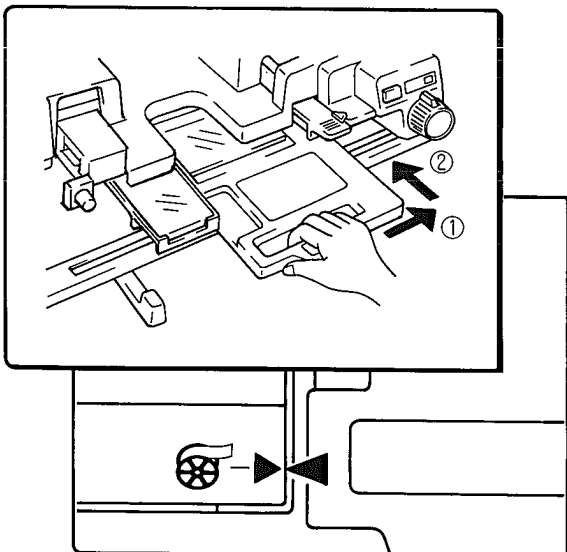


Take hold of the Fiche Carrier handle and pull the Fiche Carrier out to the front.
It appears "FICH" on the display.

NOTE

*Before moving the Fiche Carrier, make sure that the host machine has been turned ON.
If Roll Film is on the Reel Shaft, the Fiche Carrier Table cannot be slid out. Be sure to remove Roll Film if you intend to use the Fiche Carrier.*

■ Changing the mode from Fiche Carrier to Roll Carrier



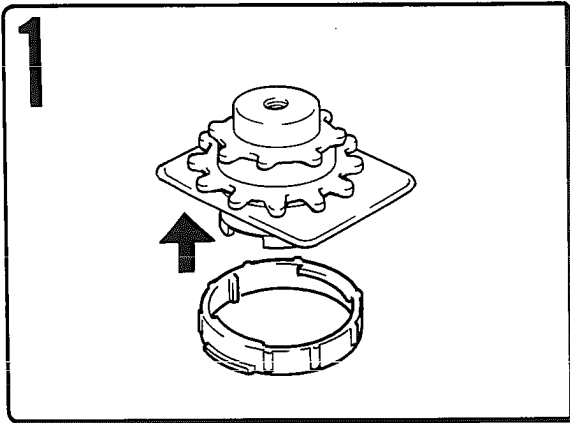
Take hold of the Fiche Carrier handle and slide the Fiche Carrier all the way to the right.
Then, push the Fiche Carrier to the rear until it is stored completely.
It appears "roll" on the display.

NOTE

*Before moving the Fiche Carrier, make sure that the host machine has been turned ON.
Slide the Fiche Carrier all the way in until the arrow on the Fiche Carrier handle is aligned with the arrow on the Roll Carrier Glass.*

INSTALLING THE LENS

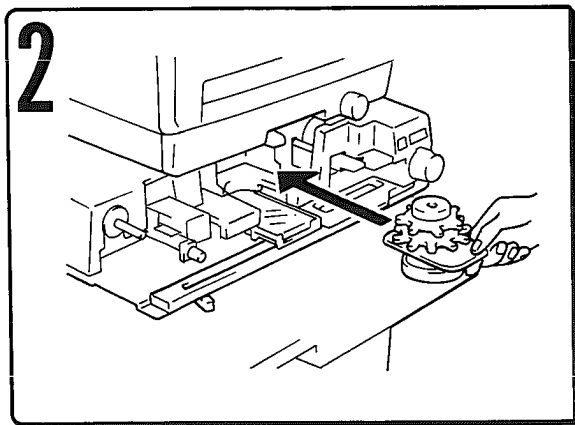
Universal Carrier-2 comes with a Lens Support Ring. This Ring, when fitted to the underside of the Projection Lens, helps make the operation of the Fiche Carrier Table easy in the Fiche Carrier Mode. In the Roll Carrier Mode, the Ring fitted to the Lens presents no functional problem at all.



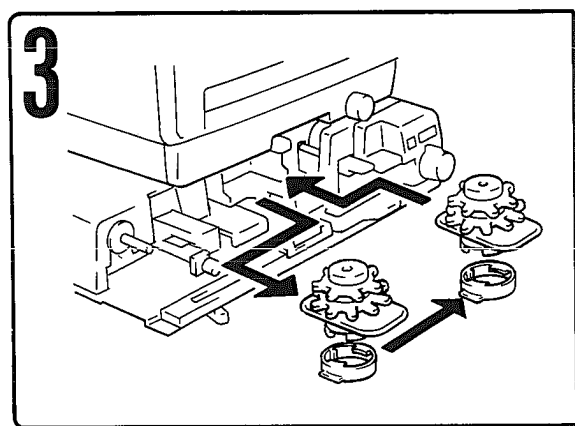
Fit the Lens Support Ring to the underside of the Lens to be used.

NOTE

Be careful of the mounting direction of the Lens Support Ring while referring to the illustration.



Slide the Projection Lens along the Lens Guide all the way into the Carrier.



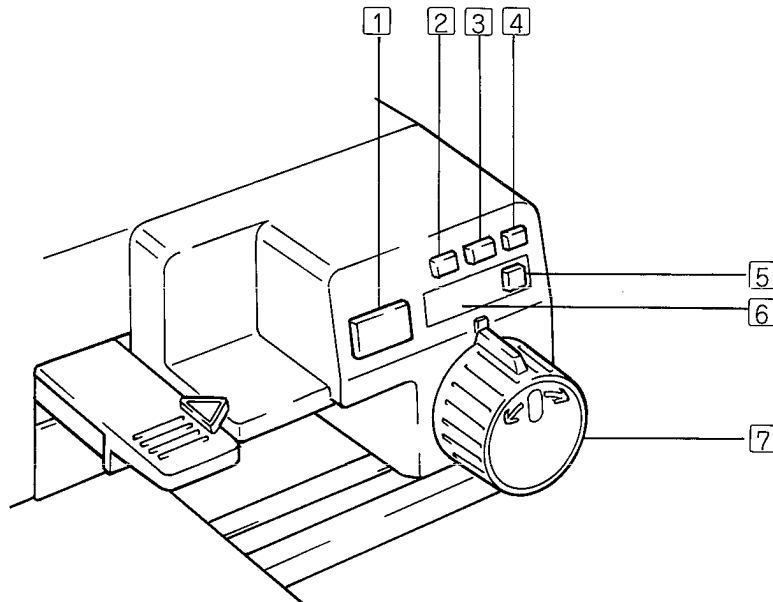
When replacing the Projection Lens, do not forget to remove the Lens Support Ring from the old Lens and fit it to the new Lens.

NOTE

The Lens Support Ring is also available as an option. If you have two or more Projection Lenses, it is advisable that you buy the Lens Support Rings as many as the number of Projection Lenses. This will save time and energy in reinstalling the Lens Support Ring when a Lens is replaced with another one.

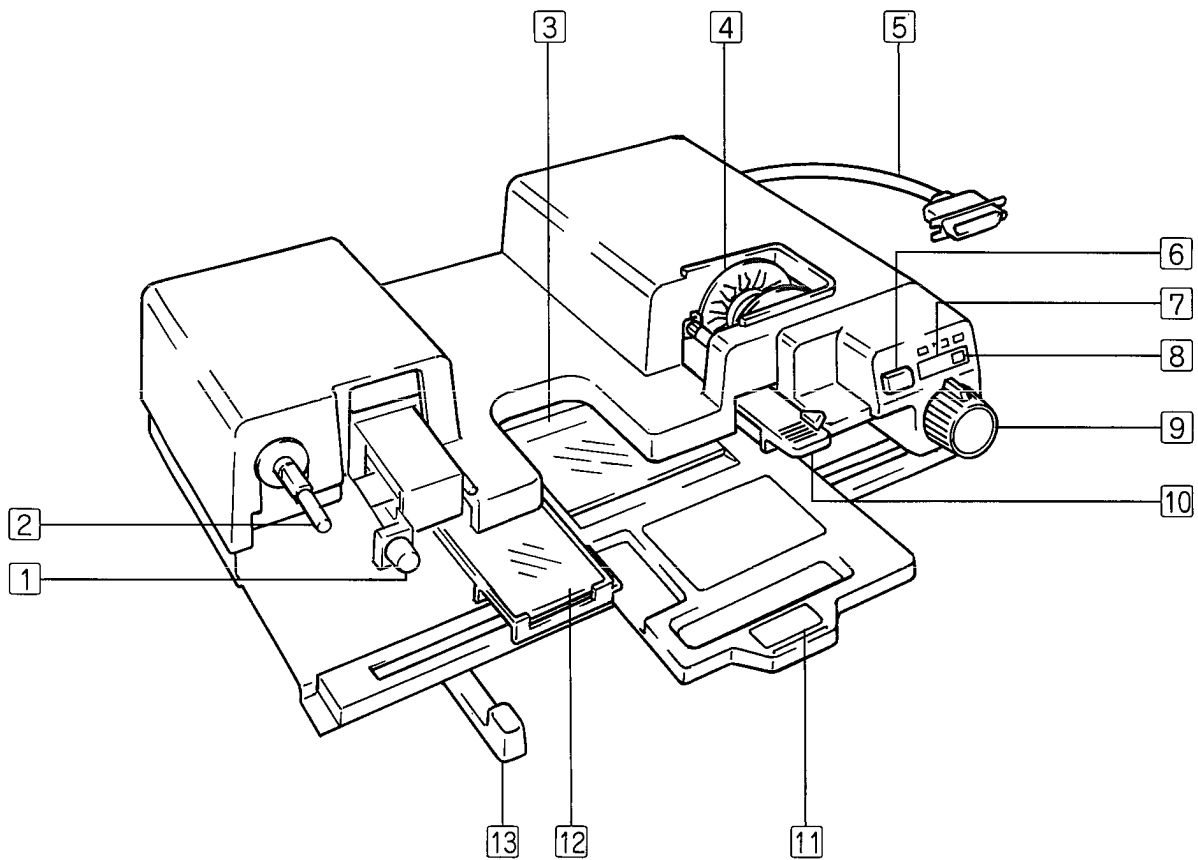
EXPLANATION OF THE CONTROL PANEL

The control panel can be used only in the Roll Carrier Mode. (Except for display)



- ① **Loading/Rewind Key:** Depression of this Key will cause film leader to be unwound and taken-up by the take-up reel where loaded into position for starting. Depression of this key will be start to rewind after the take-up reel has been wound.
- ② **-1 Key:** Press this key to rewind the film one frame on the Screen. Used to setting the length of the single frame feeding.
- ③ **Set Key:** Press this key to set a length of feed in single frame feeding. Used to setting the length of the single frame feeding.
- ④ **+1 Key:** Press this key to advance the film one frame on the Screen. Used to setting the length of the single frame feeding.
- ⑤ **Clear Key:** Depression of this Key resets the Odometer to "0" and error message.
- ⑥ **Display:** Indicates the amount of film that has been advanced in a 4-digit number. A count of the Odometer is equivalent to approximately 1/2 inch or 1/10 ft or 1/2" in film length. Indicates the number of frames.
- ⑦ **Speed Control Knob:** Turning this Knob in the FORWARD direction advances the Roll Film; turning it in the REVERSE direction rewinds the film. The advancing and rewinding speed is determined by the turning angle of this Knob: the greater the angle the faster the speed. Used to setting the length of the single frame feeding.

PARTS IDENTIFICATION



- 1 Take-Up Roll Release Button
- 2 Reel Shaft
- 3 Fiche Carrier Glass
- 4 Take-Up Reel
- 5 Connecting Cord
- 6 Loading/Rewind Key
- 7 Display

- 8 Clear Key
- 9 Speed Control Knob
- 10 16/35 mm Film Width Select Lever
- 11 Fiche Carrier handle
- 12 Roll Carrier Glass
- 13 Image Vertical Positioning Lever

SPECIFICATIONS

- **Film Type** : 16 mm Open Reel Roll Film, 35 mm Open Reel Roll Film, Microfiche, Aperture Card, Jacket
- **Film Used** : Roll Film
 - Thickness 2.5 Mil (0.0635 mm) to 5 Mil (0.127 mm)
 - Length 2.5 Mil 50 ft (15.2 m) to 215 ft (65.6 m)
5 Mil 25 ft (7.6 m) to 100 ft (30.5 m)
- **Film Loading** : Semi-Automatic Loading
- **Film Loading Time** : Within 3 sec.
- **Film Rewinding Time** : Within 14 sec./100 ft. (Approx. 30.5 m)
- **Film Feeding** : Manual Dial
- **Display** : 4 digit display, Odometer (one count approx. 1/2 inch or 1/10 ft.) single frame feeding.
- **Single frame feeding** : Advanced between certain film length, by +1 or -1 key.
- **Film End Detection** : Encoder and Microprocessor
- **Image Vertical Positioning** : Manual
- **Image Rotation** : 360° By Prism Lens
- **Power Requierments** : DC 24V, 12V (Supplied from host machine)
- **Power Consumption** : 30W
- **Dimensions** : 532 (W) mm × 347 to 556 (D) mm × 156 (H) mm or
20-16/17" (W) × 13-5/8" to 21-7/8" (D) × 6-1/8" (H)
- **Weight** : 10.7 kg or 23.5 lbs
- **Accessory** : Lens Support Ring (I)
- **Options** : Lens Support Ring

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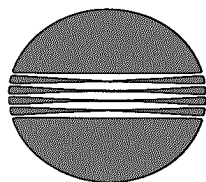
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