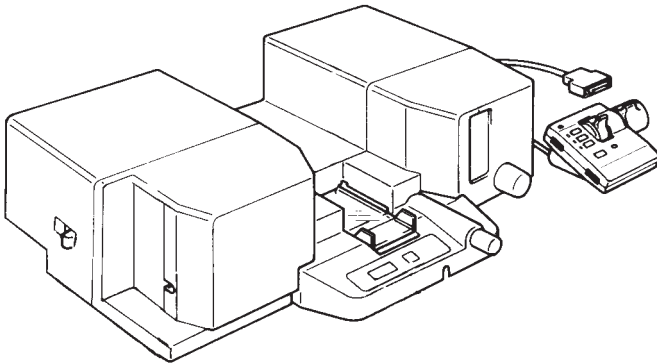




# ROLL FILM CARRIER 22A

## Operator's Manual



# SAFETY INFORMATION

This section contains detailed instructions on the operation and maintenance of this machine. To achieve optimum utility of this device, all operators should carefully read and follow the instructions in this manual. Please keep this manual in a handy place near the machine.

---



Please read the next section before using this device. It contains important information related to user safety and preventing equipment problems.

Make sure you observe all of the precautions listed in this manual.

---

\* Please note that some parts of the contents of this section may not correspond with the purchased product.

## ■ Warning and Precaution Symbols

 <b>WARNING:</b>	Ignoring this warning could cause serious injury or even death.
 <b>CAUTION:</b>	Ignoring this caution could cause injury or damage to property.

## ■ Meaning of Symbols



A triangle indicates a danger against which you should take precaution.



This symbol warns against cause burns.



A diagonal line indicates a prohibited course of action.



This symbol warns against dismantling the device.



A black circle indicates an imperative course of action.



This symbol indicates you must unplug the device.

# WARNING



- Do not modify this product, as a fire, electrical shock, or breakdown could result. If the product employs a laser, the laser beam source could cause blindness.
- Do not attempt to remove the covers and panels which have been fixed to the product. Some products have a high-voltage part or a laser beam source inside that could cause an electrical shock or blindness.



- Only use the power cord supplied in the package. If a power cord is not supplied, only use the power cord and plug that is specified in POWER CORD INSTRUCTION. Failure to use this cord could result in a fire or electrical shock.
- Use only the specified power source voltage. Failure to do that could result in a fire or electrical shock.
- Do not use a multiple outlet adapter to connect any other appliances or machines. Use of a power outlet for more than the marked current value could result in a fire or electrical shock.



Do not unplug and plug in the power cord with a wet hand, as an electrical shock could result.



Plug the power cord all the way into the power outlet. Failure to do this could result in a fire or electrical shock.



- Do not scratch, abrade, place a heavy object on, heat, twist, bend, pull on, or damage the power cord. Use of a damaged power cord (exposed core wire, broken wire, etc.) could result in a fire or breakdown. Should any of these conditions be found, immediately turn OFF the power switch, unplug the power cord from the power outlet, and then call your authorized service representative.
- In principle, do not use an extension cord. Use of an extension cord could cause a fire or electrical shock. Contact your authorized service representative if an extension cord is required.



Do not place a flower vase or other container that contains water, or metal clips or other small metallic objects on this product. Spilled water or metallic objects dropped inside the product could result in a fire, electrical shock, or breakdown.

Should a piece of metal, water, or any other similar foreign matter get inside the product, immediately turn OFF the power switch, unplug the power cord from the power outlet, and then call your authorized service representative.

# WARNING



- If this product becomes inordinately hot or emits smoke, or unusual odor or noise, immediately turn OFF the power switch, unplug the power cord from the power outlet, and then call your authorized service representative. If you keep on using it as is, a fire or electrical shock could result.
- If this product has been dropped or its cover damaged, immediately turn OFF the power switch, unplug the power cord from the power outlet, and then call your authorized service representative. If you keep on using it as is, a fire or electrical shock could result.



Do not throw the toner cartridge or toner into an open flame. The hot toner may scatter and cause burns or other damage.



Connect the power cord to an electrical outlet that is equipped with a grounding terminal.

# CAUTION



- Do not use flammable sprays, liquids, or gases near this product, as a fire could result.
- Do not leave a toner unit or drum unit in a place within easy reach of children. Licking or ingesting any of these things could injure your health.
- Do not let any object plug the ventilation holes of this product. Heat could accumulate inside the product, resulting in a fire or malfunction.
- Do not install this product at a site that is exposed to direct sunlight, or near an air conditioner or heating apparatus. The resultant temperature changes inside the product could cause a malfunction, fire, or electrical shock.
- Do not place the product in a dusty place, or a site exposed to soot or steam, near a kitchen table, bath, or a humidifier. A fire, electrical shock, or breakdown could result.
- Do not place this product on an unstable or tilted bench, or in a location subject to a lot of vibration and shock. It could drop or fall, causing personal injury or mechanical breakdown.
- After installing this product, mount it on a secure base. If the unit moves or falls, it may cause personal injury.
- Do not store toner units and PC drum units near a floppy disk or watch that are susceptible to magnetism. They could cause these products to malfunction.



The inside of this product has areas subject to high temperature, which may cause burns. When checking the inside of the unit for malfunctions such as a paper misfeed, do not touch the locations (around the fusing unit, etc.) which are indicated by a “CAUTION HOT” caution label.



Do not place any objects around the power plug as the power plug may be difficult to pull out when an emergency occurs.



# CAUTION



- Always use this product in a well ventilated location. Operating the product in a poorly ventilated room for an extended period of time could injure your health. Ventilate the room at regular intervals.
- Whenever moving this product, be sure to disconnect the power cord and other cables. Failure to do this could damage the cord or cable, resulting in a fire, electrical shock, or breakdown.
- When moving this product, always hold it by the locations specified in the User manual or other documents. If the unit falls it may cause severe personal injury. The product may also be damaged or malfunction.
- Remove the power plug from the outlet more than one time a year and clean the area between the plug terminals. Dust that accumulates between the plug terminals may cause a fire.
- When unplugging the power cord, be sure to hold onto the plug. Pulling on the power cord could damage the cord, resulting in a fire or electrical shock.

# Precautions for Routine



- Do not store toner units, PC drum units, and other supplies and consumables in a place subject to direct sunlight and high temperature and humidity, as poor image quality and malfunction could result.
- Do not attempt to replace the toner unit and PC drum unit in a place exposed to direct sunlight. If the PC drum is exposed to intense light, poor image quality could result.
- Do not unpack a toner unit or PC drum unit until the very time of use. Do not leave an unpacked unit standing. Install it immediately or poor image quality could result.
- Do not keep toner units and PC drum units in an upright position or upside down, as poor image quality could result.
- Do not throw or drop a toner unit or PC drum unit as poor image quality could result.
- Do not use this product in an area where ammonia or other gases or chemicals are present. Failure to do so may shorten the service life of the product, cause damage or decrease performance.
- Do not use this product in an environment with a temperature outside the range specified in the User manual, as a breakdown or malfunction could result.
- Do not attempt to feed stapled paper, carbon paper or aluminum foil through this product, as a malfunction or fire could result.



Do not touch or scratch the surface of the toner unit developing roller and the PC drum, as poor image quality could result.



Use the supplies and consumables recommended by the dealer. Use of any supply or consumable not recommended could result in poor image quality and breakdown.

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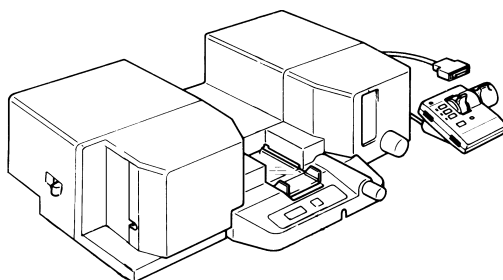
# Welcome

Thank you for choosing this product.

This operator's manual explains how to operate the unit and replenish its supplies. It also gives some troubleshooting tips as well as general precautions to be observed when operating the unit.

To ensure the best performance and effective use of your unit, read this manual carefully until you familiarize yourself thoroughly with the unit's operation and features.

Please keep this manual and use it as a quick and handy reference tool for immediately clarifying any questions that may arise.



Please follow the instructions given in this manual when handling the system and do not touch any part of the system the manual does not cover.

**NEVER** attempt to disassemble or remodel the system.

The contents of this manual are subject to change without notice.

No part of this manual may be quoted, reproduced, or translated into any other language.



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# 1 Notes to Operators

Information in this booklet refers only to the operation of Roll Film Carrier 22A. For further information regarding Microfilm Scanner's or Reader Printer's, please refer to Microfilm Scanner's or Reader Printer's Operator's Manual. Please read entire manual carefully before operating Roll Film Carrier 22A.

## 1.1 The following safety rules should be observed

1. The unit should be kept free from moisture, dirt, dust and exposure to heat and direct sunlight at all times.
2. For best performance, it is recommended to use authorized supplies. Failure to do so may cause inferior results or damage the unit, in such case the warranty may be void.

### **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.

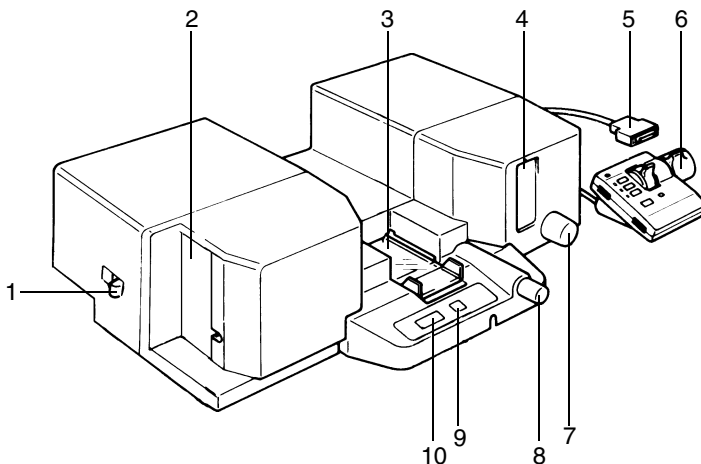
The design and production of this unit conform to FCC regulations, and any changes or modifications must be registered with the FCC and are subject to FCC control. Any changes made by the purchaser or user without first contacting the manufacturer will be subject to penalty under FCC regulations.

## 2 Specifications

Specifications	
Film Type:	16-mm Roll Cartridge Film (Leaderless Film) -ANSI Cartridge
Film Used:	16 mm Roll Film - Thickness 2.5 Mil (0.0635 mm) to 5 Mil (0.127 mm) - Length 2.5 Mil 225 ft (68.5 m) or less 5 Mil 110 ft (33.5 m) or less
Film Loading:	Automatic Loading
Film Rewinding Time:	ANSI Cartridge – Within 9 sec. / 100ft. (Approx 30.5 m)
Film Feeding:	By means of a Dial offering variable speeds
Film End Detection:	By Encoder, Generator and Microprocessor
Image Vertical Positioning:	Manual or Motor-driven
Image Rotation:	360° By Prism Lens
Power Requirement:	DC + 24V, DC – 24V 50/60HZ (Supplied from Microfilm Scanner or Reader Printer)
Power Consumption:	55W
Dimensions	520 (W) mm × 360 (D) mm × 145 (H) mm or 20-15/32" (W) × 14-13/16" (D) × 4-17/32" (H)
Weight	11.7 kg or 25 lbs. 26 oz
Options:	Odometer, Shutter Unit, Auto Vertical Scan Unit

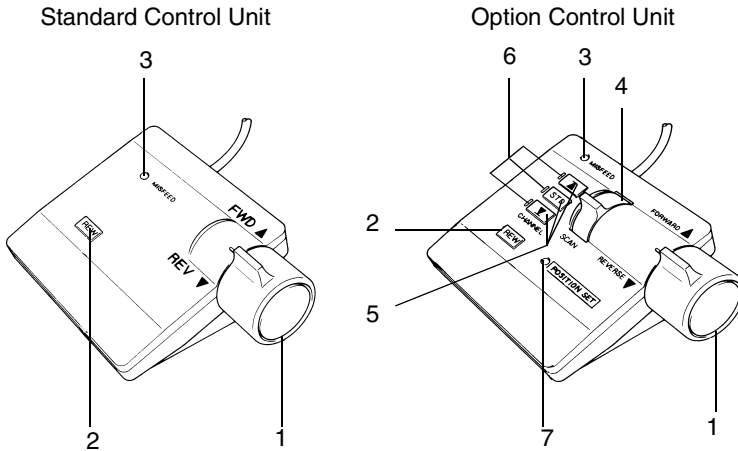
\* Specifications subject to change without notice.



### 3 Parts Identification



1. Reel Shaft Release Lever
2. Cartridge Port
3. Upper Glass
4. Window (Film Take-up)
5. Power Cord
6. Control Unit
7. Manual Film Advance Knob
8. Image Vertical Positioning Knob
9. Count Clear Key (Odometer... Option)
10. Display (Odometer... Option)

## 4 Explanation of the Control Unit



- |                                     |  |
|-------------------------------------|--|
| 1. Speed Control Knob:              | Turning this Knob in the FORWARD direction advances the roll film; turning it in the REVERSE direction rewinds the film. The greater the turning angle of the Knob the faster the scanning speed.  |
| 2. Rewind Key:                      | Depression of this Key rewinds the roll film.  |
| 3. Misfeed Indicator:               | Lights up red if the film leader is not properly unwound and taken up by the Take-Up Reel upon loading.  |
| 4. Image Vertical Positioning Knob: | Turning this Knob upward moves the image on the Screen slightly upward; turning in downward moves the image slightly downward.   |
| 5. Image Vertical Positioning Keys: | Depression of the  key moves the image on the Screen upward.<br>Depression of the  key moves the image downward.<br>When the <b>[STD]</b> key is depressed, the image returns to the central position. |
| 6. Vertical Position Indicators:    | Each indicator lights up to indicate that the corresponding Vertical Positioning Key has been depressed.   |
| 7. Vertical Position Set Key:       | Depression of this key stores the position of the image on the Screen in memory.   |

## 5 Operation

### 5.1 Loading the Roll Film Cartridge

Before starting the following procedures, make sure that the Speed Control Knob is in the STOP position.

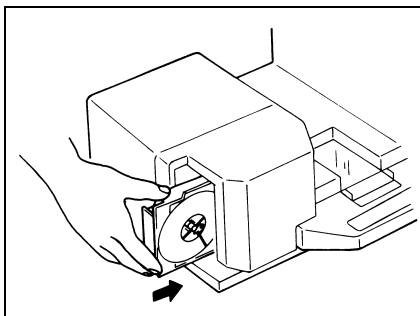


**If the Mars Controller is to be used, make the necessary Key entries for the target frame on the Controller before inserting the Cartridge.**

- 1 Insert the ANSI Cartridge into the Loading Port on the left of the machine.



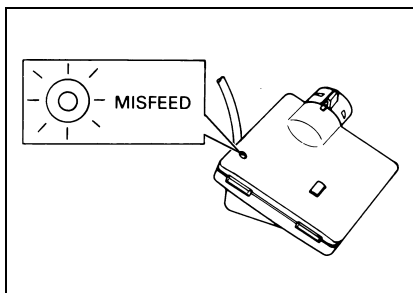
**Ensure the Cartridge is loaded in the correct direction.**



- 2 When the Cartridge is properly inserted into position, the film leader is automatically unwound and taken up by the Take-Up Reel.

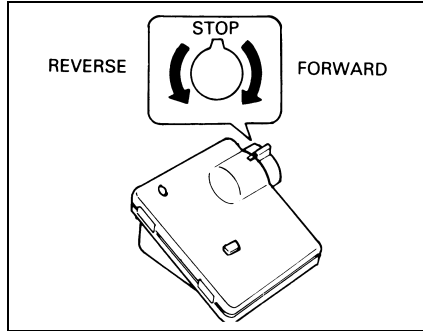


**The Misfeed indicator on the Control Unit lights up red if the film leader is not properly unwound. If the Indicator is on, remove the Cartridge from the Carrier and start the procedure over.**



## 5.2 Forward/reverse the Film

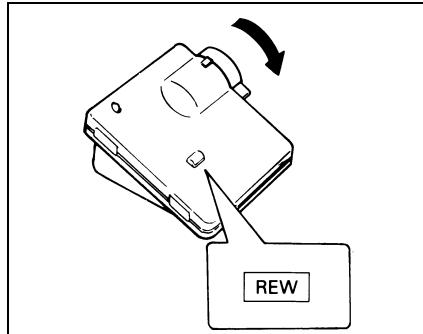
Turn the Speed control Knob clockwise or counterclockwise to step through the film in the forward or reverse direction until you reach the desired frame. The film scanning speed is determined by the turning angle of the Speed Control Knob. The greater the angle the faster the scanning speed.



**When the film is unwound to the trailer, turn the speed Control Knob back to the central position to stop unwinding the film. While the film is being forward or reverse direction, Prints can be made by depressing the Start Key.**

## 5.3 Rewinding the Film

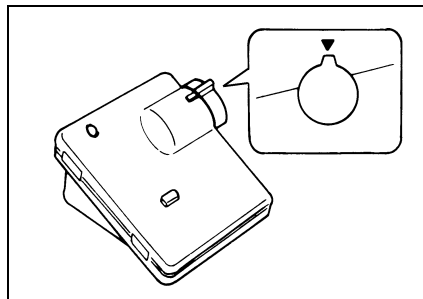
To rewind the film, depress the Rewind Button or turn the Speed Control Knob in the REVERSE direction.



**When the film is completely rewound into the Cartridge, one beep sound to indicate that the film has been rewound.**

\* It is possible to disable the beeps, for which contact your Technical Service Representative.

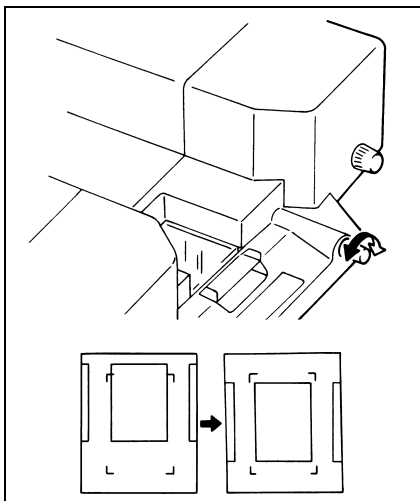
When the Speed Control Knob is used to rewind the film, be sure to turn it back to the central position as you reach the film leader.



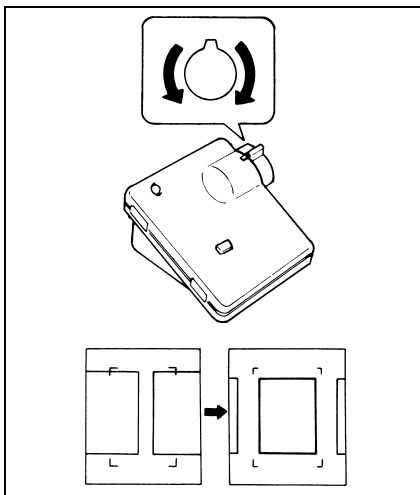
## 5.4 Positioning the Image on the Screen

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

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

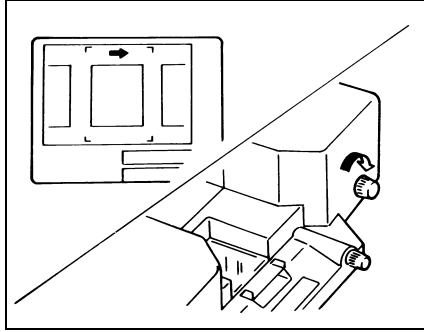


To move the image right and left, use the Speed Control Knob.

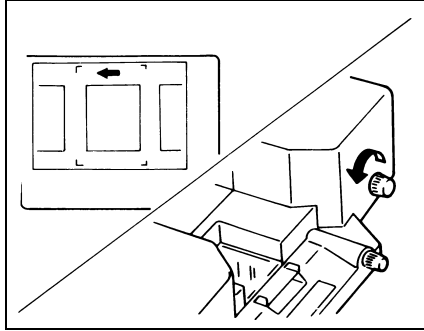




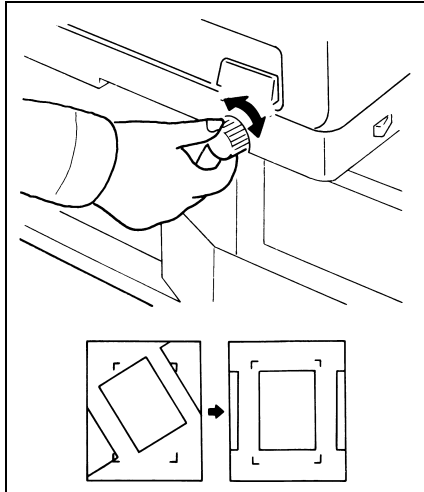
To advance the film manually, rotate the Manual Film Advance Knob and, turn it clockwise.



To reverse the film manually, Manual Film Advance Knob and, turn it counterclockwise.



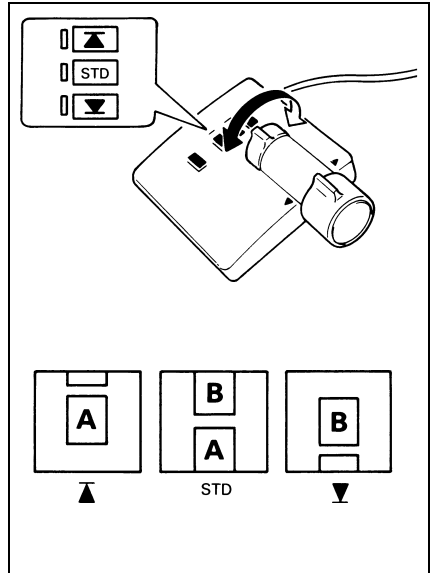
To rotate the image, turn the Prism Rotation Knob.



## 5.5 Auto Vertical Scan Unit (Option)

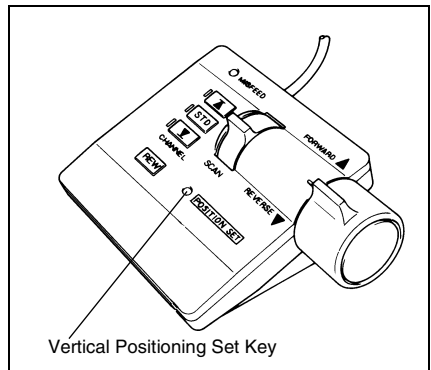
To move the image on the Screen up and down, use the Image Vertical Positioning Knob and Image Vertical Positioning Keys on the Control Unit. These controls are especially convenient when a film in duo-format or duplex are used.

- Image Vertical Positioning Keys  
Cause the image to move up (▲) or down (▼) from the standard (STD) position.
- Image Vertical Positioning Knob  
Used to move the image up or down slightly.



### How to use the Vertical Positioning Set Key

The position of the image as adjusted with the Image Vertical Positioning Keys and/or Image Vertical Positioning Knob can be stored in memory. Once the position is stored in memory, you have only to depress the corresponding Image Vertical Positioning Key: when the Key is depressed, the image is moved to the exact position stored in memory.

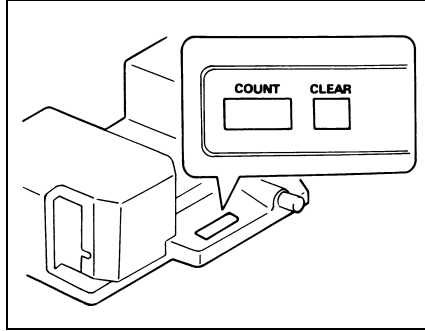


**The image position stored in memory does not change until memory is updated.**

## 5.6 Odometer (Option)

The optional Odometer can be used for image retrieval. When a Cartridge is loaded in position, the Odometer is reset to "0000."

To reset the Odometer during a retrieval sequence, depress the CLEAR Button.



Depending on the setting, an Odometer count is equivalent in film length to either:

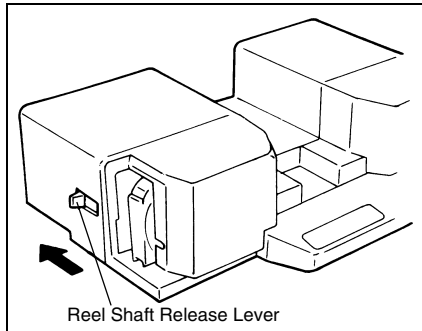
12.7 mm (1/2 inch) or 30.5 mm (1/10 feet).



**For this setting, consult your Tech. Service Rep. The Odometer has been factory-set to 12.7 mm (1/2 inch) for one count.**

## 5.7 Reel Shaft Release Lever

After the film has been rewind, the Film Reel Shaft is not pulled back out of the Cartridge Film. Therefore, the Cartridge Film cannot be slid out of Roll Film Carrier. If this should occur, push the Reel Shaft Release Lever toward the rear side of Roll Film Carrier.



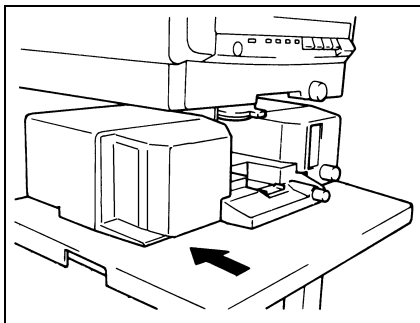
## 6 Installation



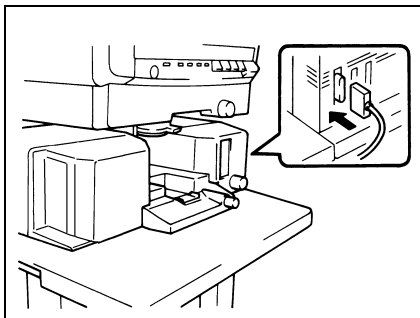
### NOTE

- The Machine Power Switch should be turned OFF before installing the Roll Film Carrier 22A.

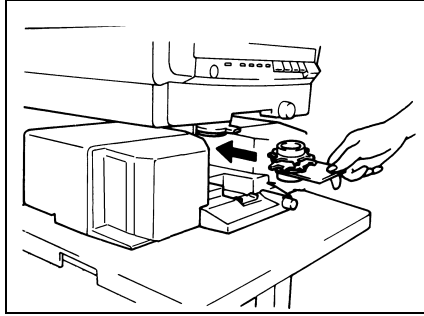
- 1** Align two Guide Rails on the underside of the Roll Film Carrier 22A with the right and left edges of the Carrier Table. Then, slide the Carrier all the way into position along the side edges of the Carrier Table.



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



- 3** Install the Lens Unit all the way into Position.



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



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**NOTE**

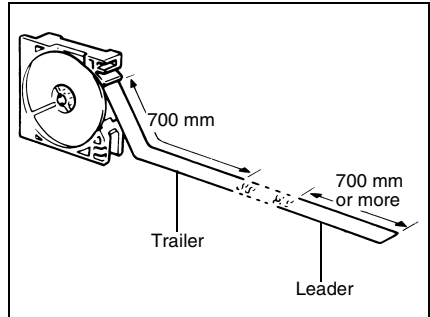
- The Machine Power Switch should be turned OFF before removing the Roll Film Carrier 22A.
-

## 7 Maintaining Your Films

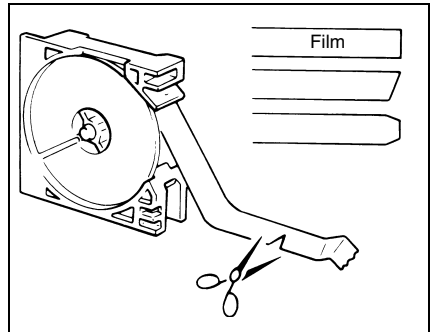
Use the following precautions when handling your own films.

### 7.1 ANSI Cartridge

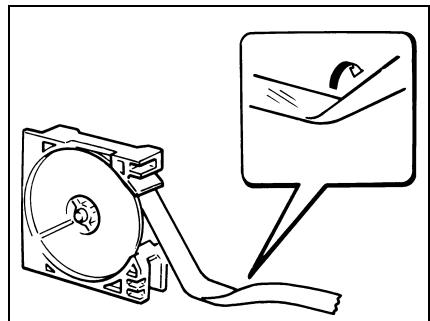
- 1 Allow a length of 700mm or more for the film leader (the blank section of film at the beginning of a reel of tape) and the trailer (the blank section of film at the end).



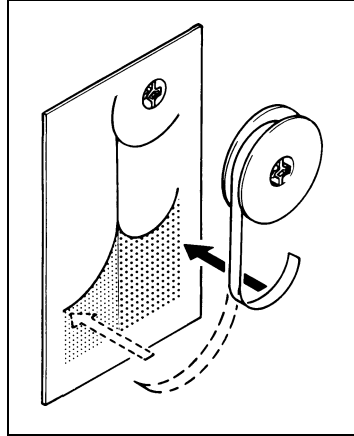
- 2 Keep the edge of the leader cut straight, especially when the edge is folded, to ensure that the film is unwound smoothly. In this case, however, make sure that the leader is 700mm or more long. If the length of the leader is less than 700mm, splice a leader tape to the leader using black tape to ensure the specified length.



- 3 The film should not be twisted 90° or more in either direction when the approximately 300-mm-long leader is advanced out of the reel and held straight downward.



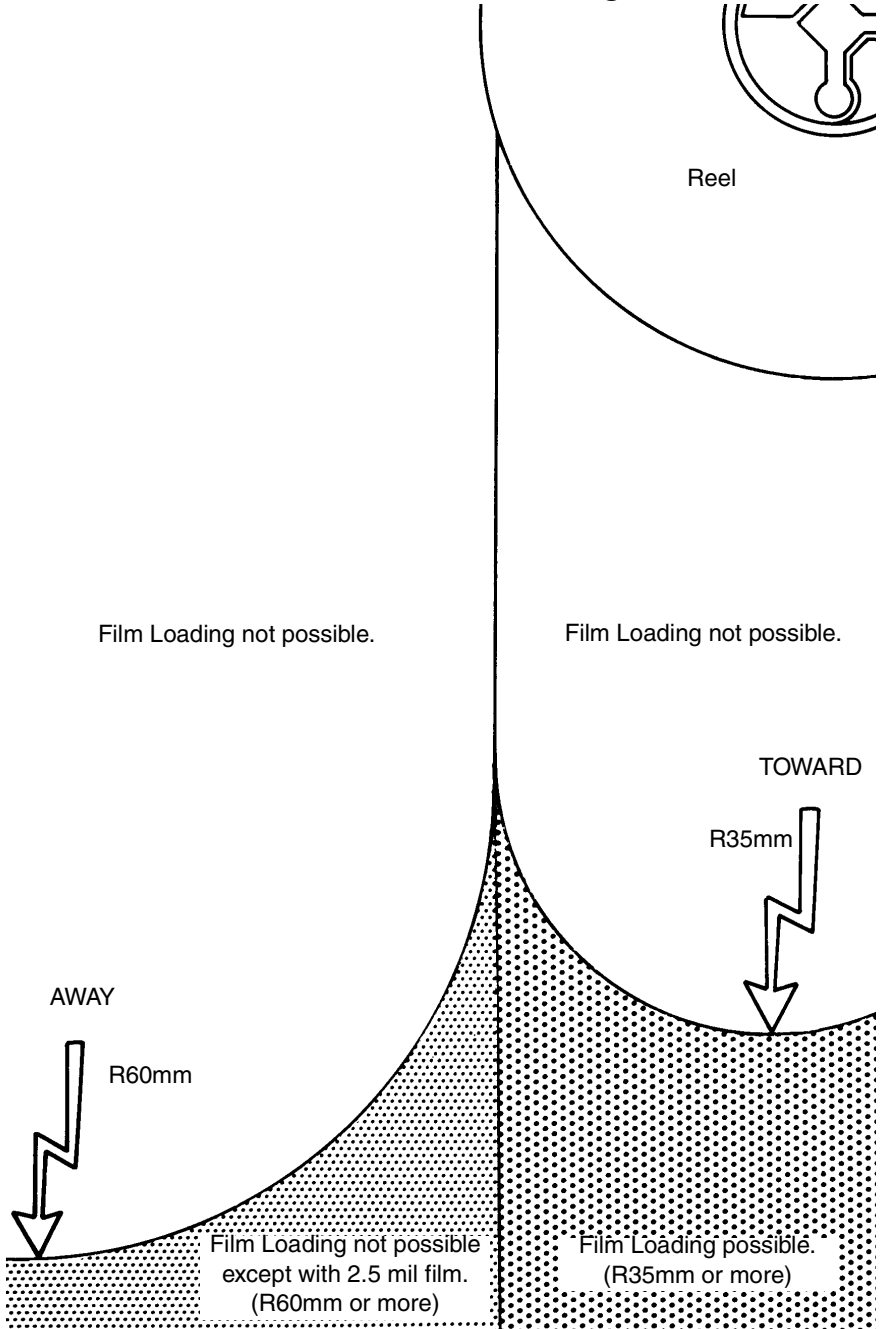
- 4 An excessively curled film leader results in the Film Supply Reel failing to advance the film smoothly. By studying the illustration on the right, check to see if the curl of your film is up to the specified allowance.



**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.

## 7.2 Effect of film curl on Film Loading





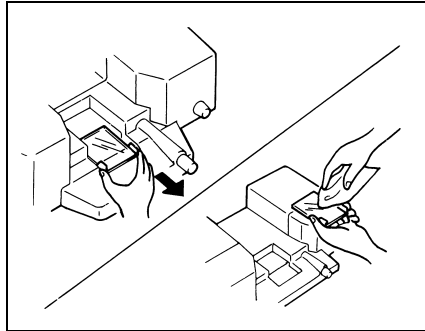
## 8 Daily Maintenance

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



**The Projection lens should be removed before cleaning the Carrier Glasses.**

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



## 9 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. Name, Floor NO., Machine Location etc.
2. Model name, Serial number, Condition or System(s) Indication on Display etc.

For your reference purpose.

Model Name	ROLL FILM CARRIER 22A Serial No. _____
Installation Date	
Authorized Dealer's Name	
TEL. No.	
Address	

The information contained in this manual is subject to change without notice to incorporate improvements made on the product or products the manual covers.