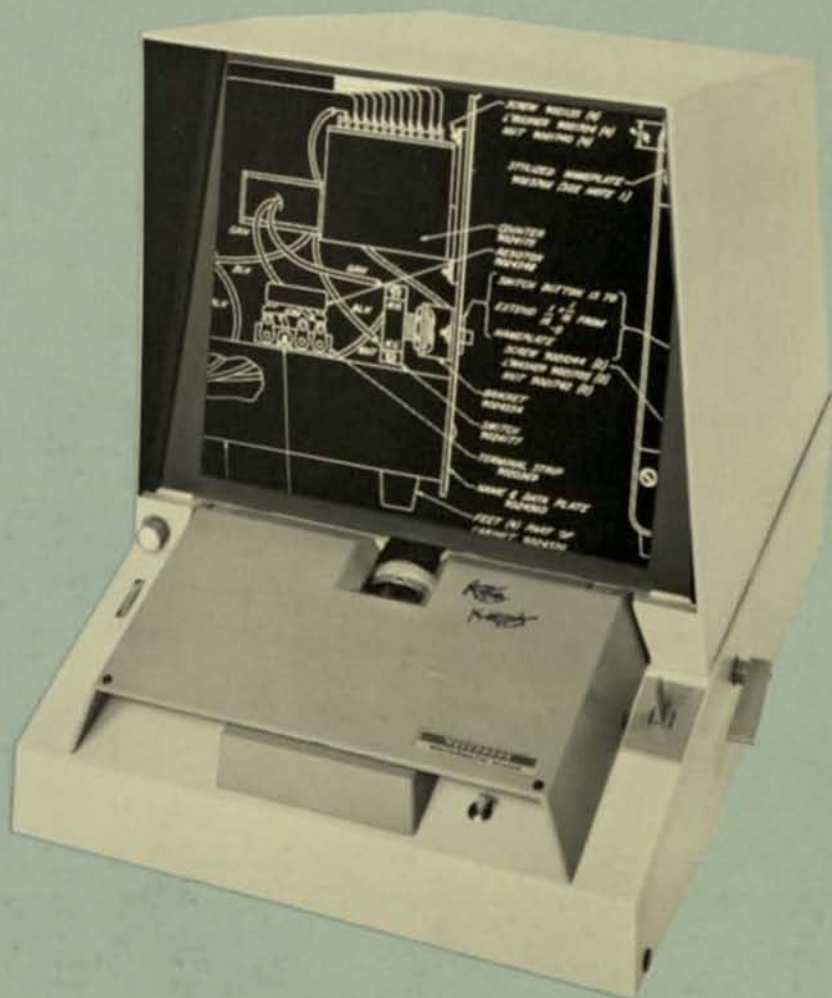


RECORDAK MOTORMATIC READER

Model MPG-TH



Getting Acquainted

Before operating the reader, become familiar with the operating controls and features which are pointed out in figures 1 and 2. Their function is described briefly in the list which follows. Note that the page containing figures 1 and 2 can be folded out for convenient reference.

- SCREEN.....Provides the surface upon which the microfilm images are projected for viewing.
- RETAINERS.....Secure the bottom edge of the screen.
- ROTATION KNOB..Rotates the screen image.
- FOCUS WHEEL.....Focuses the image sharply on the screen.
- LABEL.....Indicates the magnifying power of the lens being used.
- MECHANISM COVER.....Protects the film and film-transport mechanism.
- LAMPHOUSE COVER.....Covers the projection lamp and condenser lenses.
- POWER SWITCH.....Turns on the electrical power.
- CONTROL LEVER ..Controls direction and speed of film movement.
- SCANNING LEVER.....Moves the image on the screen for full-width viewing.
- TURRET.....Rotates to provide a choice of three magnifications.
- FRAMING WHEEL..Provides manual film movement for precise image location on the screen.
- TAKE-UP REEL.....Receives and winds up the film as it advances through the film track assembly.
- RETAINING KNOBS.....Hold the film guide rollers in place.
- THREADING ROLLER.....Compresses the supply reel flanges to start the end of the film into the film track assembly. Swings aside for film loading.
- SUPPLY SPINDLE...Holds 100-foot reels of 16mm or 35mm microfilm. Provides the drive for threading the film across to the take-up reel and for rewinding the film back onto the supply reel.
- THREADING LEVER.....Separates the leading end of the film from the reel to facilitate threading with short rolls of film or rolls of film in which the leading end clings to the body of the roll.

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FIGURE 1

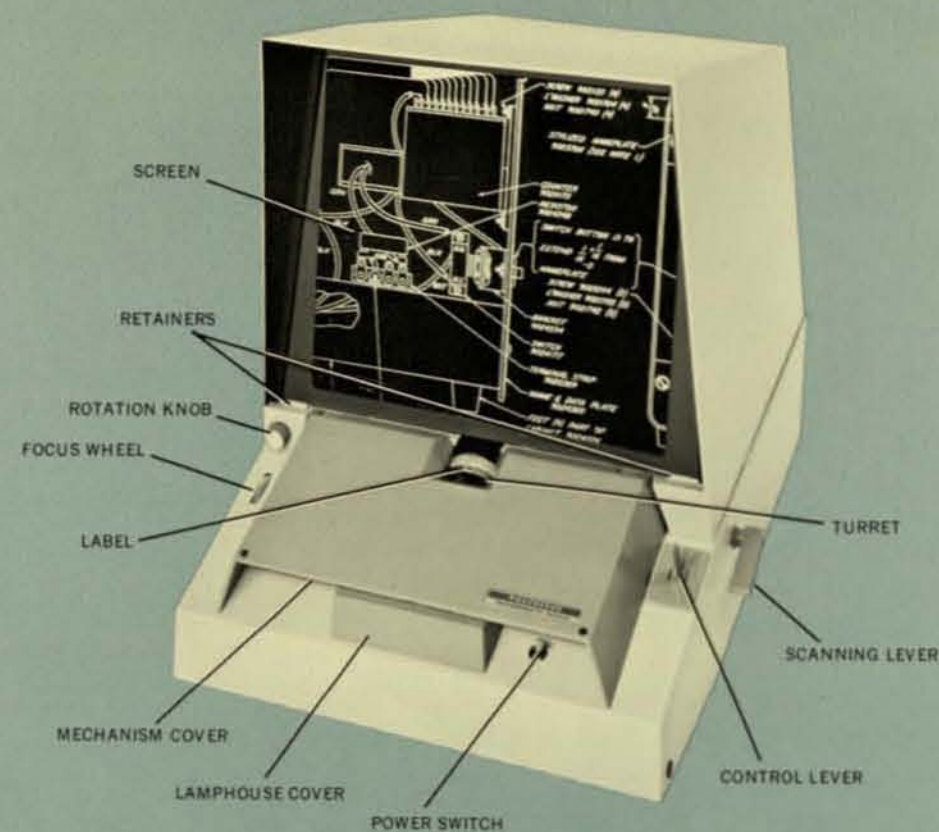
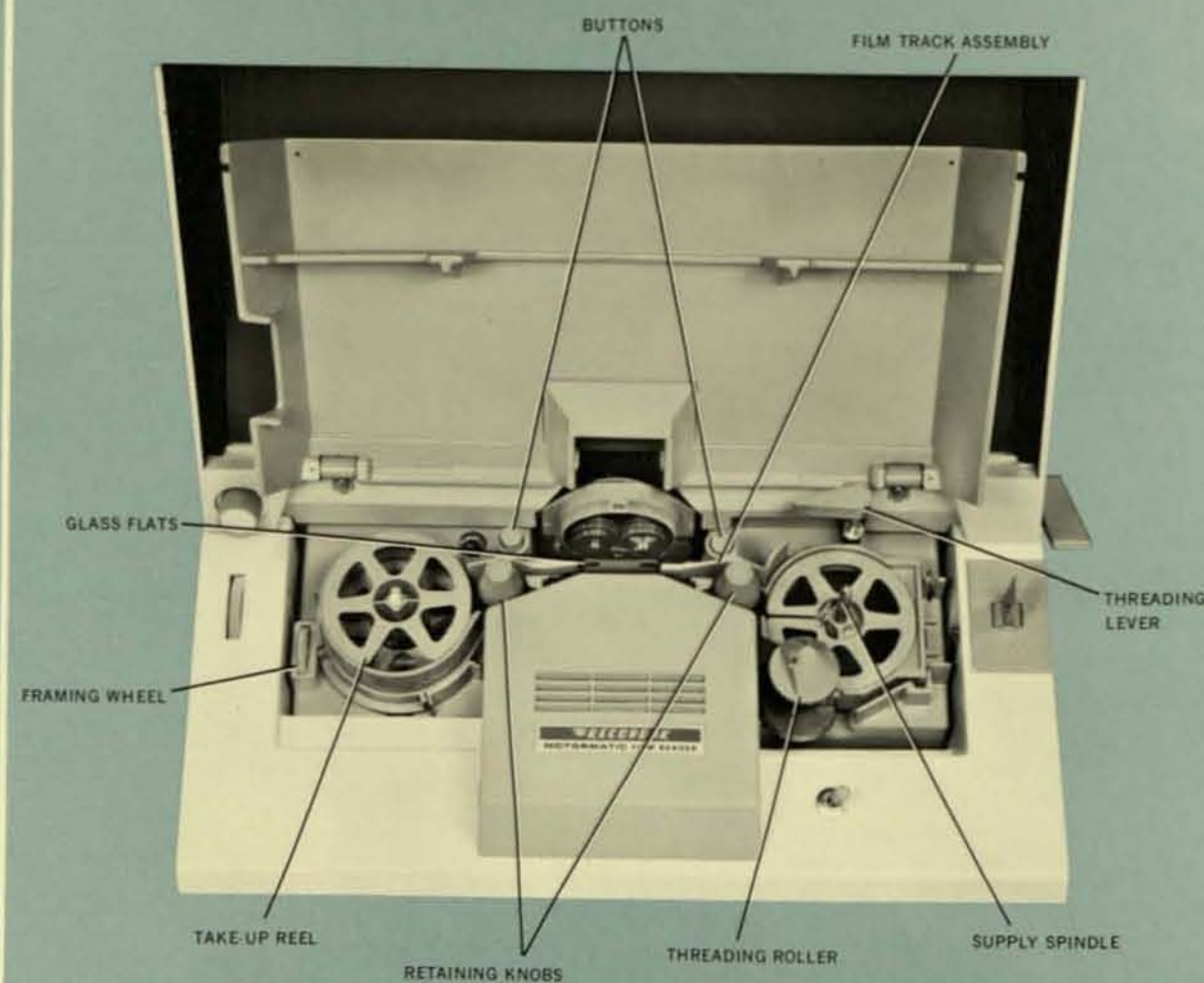


FIGURE 2



INTRODUCTION

The RECORDAK MOTORMATIC Reader, Model MPG-TH, is a variable-speed, motor-driven, microfilm reader with a three-lens turret which provides 29X, 34X, and 43X image magnification. It is a tabletop, lower-front operating unit with 270-degree image rotation which permits orientation to all four quadrants. Full 35mm-film-width scanning is also provided.

The reader will accept 16mm and 35mm silver, diazo, or vesicular film containing either positive or negative images. The film base may be either acetate or ESTAR, and film thickness may vary from .0025 inch to .006 inch.

The reader is self-threading when the film is on 16mm or 35mm, spoked or solid-flanged, plastic KODAK Return Reels loaded in RECORDAK THREAD-EASY Magazines. When THREAD-EASY Magazines are not used, a reel adapter extends the self-threading feature to film on 16mm or 35mm, spoked, plastic KODAK Return Reels (or equivalent) and to film on 16mm, solid-flanged, plastic KODAK Return Reels. Film may be threaded manually when it is on reels which are not compatible with the self-threading feature.

A threading lever facilitates film threading with short rolls of film or rolls of film in which the leading end clings to the body of the roll.

A hood reduces the incidence of room lighting on the screen, and a hinged cover provides mechanical protection for the film and the film-transport mechanism. This makes it possible to use the reader in service areas and other areas which were formerly considered unsuitable for microfilm viewing.

The RECORDAK MOTORMATIC Unit Record Adapter may be used with this reader to view microfiche, film jackets, or aperture cards. The adapter is operator-installed in place of the film track assembly.

A Multi-Voltage Transformer Kit is available which makes the reader operable on most common foreign power sources. When it is required, the kit is service-installed at the time of reader installation.

SITE REQUIREMENTS

Locate the reader in an area where strong, direct light will not strike the screen. Place the reader on a firm, level table, desk, or stand of convenient height.

The power source required is 120 volts ($\pm 10\%$), 50/60 Hz from a grounded outlet. If the outlet will not accept the 3-pronged plug on the power cord, the outlet should be replaced with a properly grounded, 3-pronged, polarized receptacle. The reader can be adapted for operation on other power-supply voltages (see ACCESSORIES).

OPERATION

Getting Acquainted

Before operating the reader, become familiar with the operating controls and features which are pointed out in figures 1 and 2. Their function is described briefly in the list which follows. Note that the page containing figures 1 and 2 can be folded out for convenient reference.

- SCREEN.....Provides the surface upon which the microfilm images are projected for viewing.
- RETAINERSSecure the bottom edge of the screen.
- ROTATION KNOB ..Rotates the screen image.
- FOCUS WHEELFocuses the image sharply on the screen.
- LABELIndicates the magnifying power of the lens being used.
- MECHANISM COVER.....Protects the film and film-transport mechanism.
- LAMPHOUSE COVER.....Covers the projection lamp and condenser lenses.
- POWER SWITCH.....Turns on the electrical power.
- CONTROL LEVER ..Controls direction and speed of film movement.
- SCANNING LEVER.....Moves the image on the screen for full-width viewing.
- TURRETRotates to provide a choice of three magnifications.
- FRAMING WHEEL ..Provides manual film movement for precise image location on the screen.
- TAKE-UP REELReceives and winds up the film as it advances through the film track assembly.
- RETAINING KNOBS.....Hold the film guide rollers in place.
- THREADING ROLLER.....Compresses the supply reel flanges to start the end of the film into the film track assembly. Swings aside for film loading.
- SUPPLY SPINDLE...Holds 100-foot reels of 16mm or 35mm microfilm. Provides the drive for threading the film across to the take-up reel and for rewinding the film back onto the supply reel.
- THREADING LEVERSeparates the leading end of the film from the reel to facilitate threading with short rolls of film or rolls of film in which the leading end clings to the body of the roll.

FILM TRACK

ASSEMBLY.....Guides and supports the film as it moves between the supply and take-up reels.

GLASS FLATSHold the film in the focal plane. Open automatically before film movement starts and close automatically after film stops.

BUTTONS.....Release the film track assembly for removal.

Film Preparation

Film is self-threading when it is on spoked or solid-flanged, plastic KODAK RETURN REELS, figure 3, loaded in RECORDAK THREAD-EASY MAGAZINES. When the REEL ADAPTER, figure 4, is used, film not in magazines is self-threading if it is on spoked, plastic KODAK Return Reels (or equivalent), or on 16mm, solid-flanged plastic KODAK Return Reels. The trailing end of the film should be snubbed to the reel hub with a RECORDAK TRAILER HOLDER, figure 3, so that the film cannot pull out of the reel. Install the trailer holder as follows:

1. Form a loop about two inches from the trailing end of the film.
2. Insert the film through the loading slot in the reel so that the loop falls in the opening next to the hub.
3. Insert the trailer holder, tapered end first, into the loop to secure the end of the film to the reel.

When snubbing 35mm film to the reel, use two 16mm trailer holders, tapered ends in.

To load a reel of microfilm into a RECORDAK THREAD-EASY Magazine, proceed as follows:

1. Hold the MAGAZINE, figure 3, so its flat side is nearest you and the word "UP" is visible.
2. Place the reel of film, round spindle hole up, partially into the magazine as shown in figure 5.
3. Push forward and down on the reel to snap it into place. A properly installed reel is shown in figure 3.

Film Loading

When the film to be viewed is in RECORDAK THREAD-EASY Magazines, an individual magazine is loaded directly into the reader as follows:

1. Raise the MECHANISM COVER, figure 1.
2. Hold aside the THREADING ROLLER, figure 2.
3. With the round spindle hole up and the flat side of the magazine to the right, place the magazine all the way down on the SUPPLY SPINDLE as shown in figure 2.
4. Lower the mechanism cover.

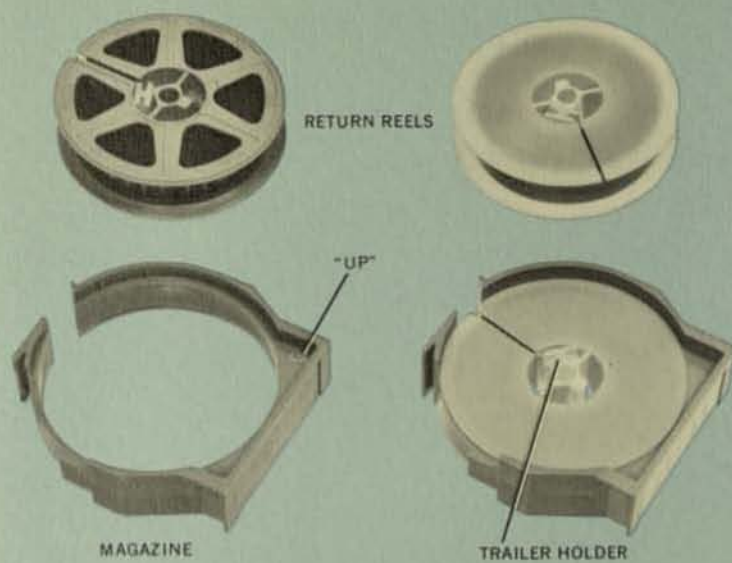


FIGURE 3

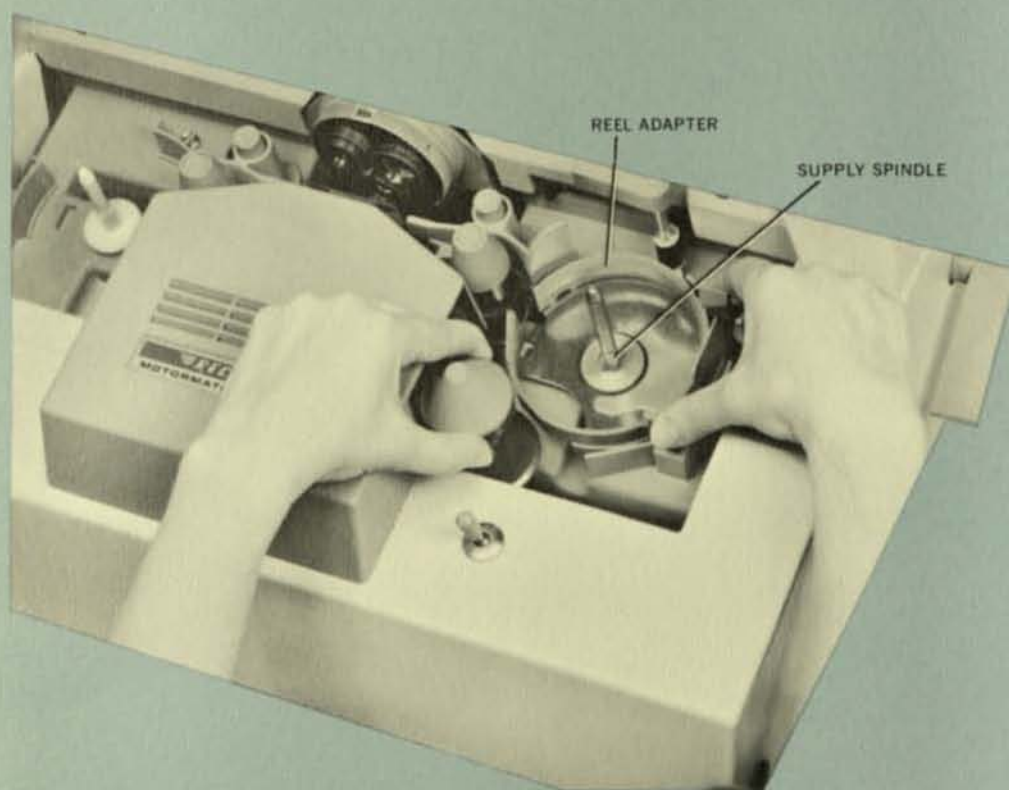


FIGURE 4

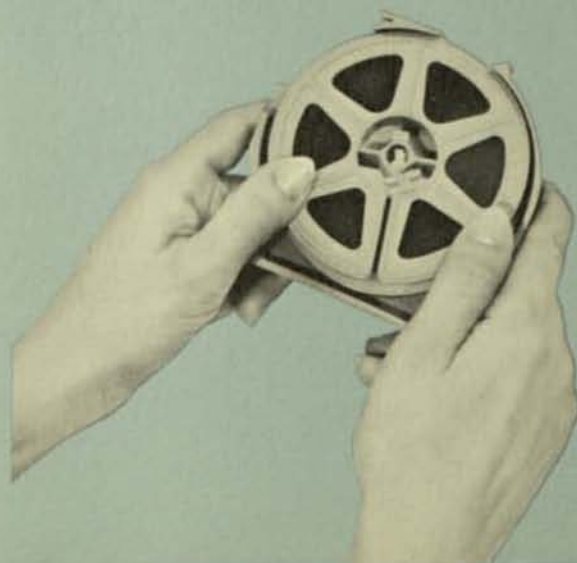


FIGURE 5

FIGURE 6

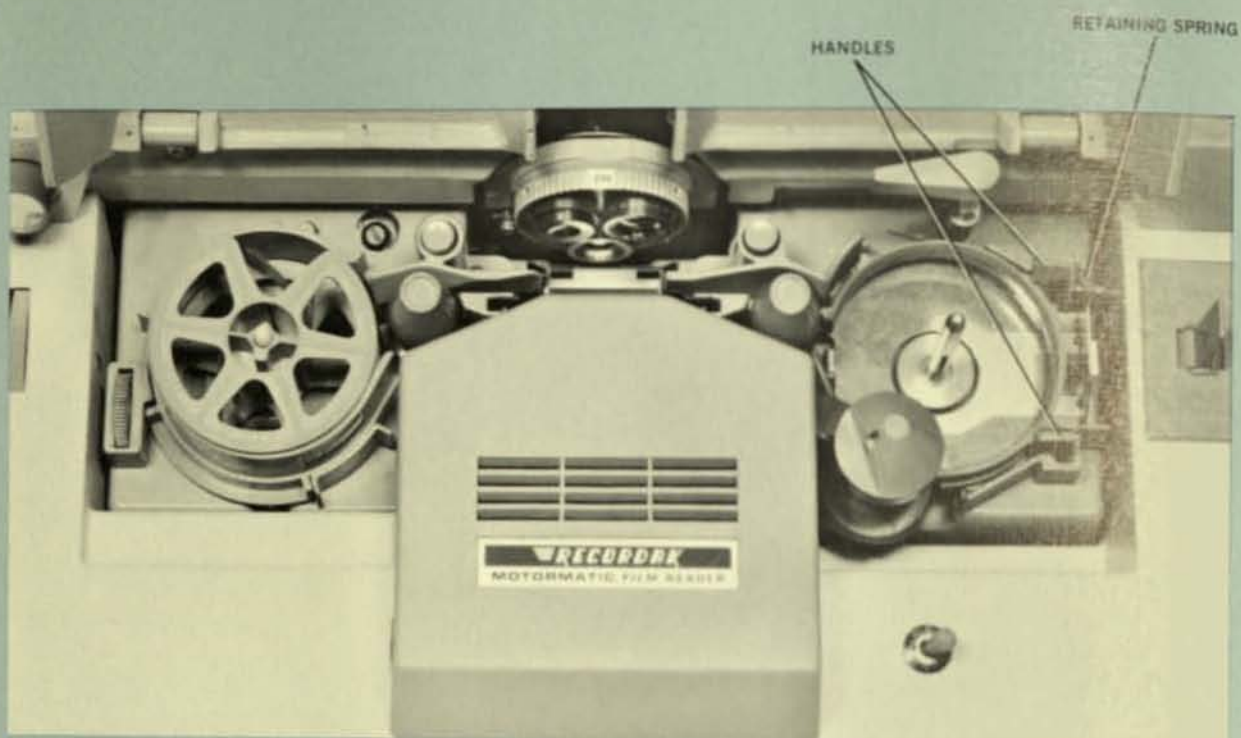
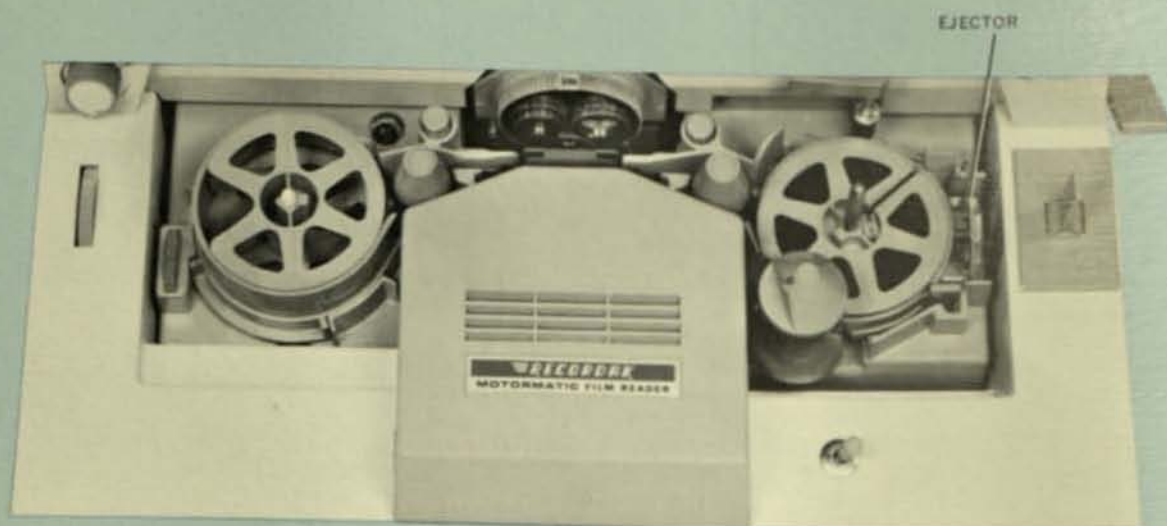


FIGURE 7



When the film to be viewed is not in RECORDAK THREAD-EASY Magazines, the REEL ADAPTER, figure 4 must be installed in the reader first. To install the adapter and then load individual reels of film, proceed as follows:

1. Raise the mechanism cover.
2. Hold the threading roller aside.
3. Position the reel adapter over the SUPPLY SPINDLE as shown in figure 4. Push down on the adapter until it fits snugly in place. Figure 6 shows an adapter installed correctly.
4. Again hold aside the threading roller.
5. With the round spindle hole up, place the desired reel of film all the way down on the supply spindle. Figure 7 shows a properly loaded reel.
6. Lower the mechanism cover.

To remove the reel adapter, grasp the HANDLES, figure 6, and push slightly toward the RETAINING SPRING. Then, hold the threading roller aside and lift the adapter from the reader.

Viewing the Film

The CONTROL LEVER, figure 1, regulates both the direction and speed of film travel. Movement of the lever to the left advances film through the FILM TRACK ASSEMBLY, figure 2, to the TAKE-UP REEL, and movement of lever to the right rewinds the film back onto the supply reel. The film drive speed increases as the lever moves farther in either direction from its center or neutral position. Film drive is stopped by releasing the lever, allowing it to return automatically to neutral.

To view the film:

1. Turn on the POWER SWITCH, figure 1.
2. Rotate the TURRET to the desired magnification. A spring detent indicates the correct operating position for a lens, and a LABEL indicates its magnification.
3. Move the control lever to the left. The film will advance through the open GLASS FLATS, figure 2, and start winding onto the take-up reel. As soon as the first image appears on the SCREEN, figure 1, release the control lever. The film will stop and the glass flats will close.
If the film fails to advance when the control lever is moved to the left, see OPERATING HINTS.
4. Move the FOCUS WHEEL forward or backward to obtain a sharp image on the screen.
5. Turn the ROTATION KNOB as required to rotate the image to an upright position.
6. Adjust the SCANNING LEVER to center the image on the screen.

Once these initial adjustments have been made, only minor changes will be needed for further viewing.

7. Advance the film to the desired document image and release the control lever. If necessary, press down and move the **FRAMING WHEEL**, figure 2, forward or backward to center the image on the screen. *Do not touch the framing wheel while the film is in motion.*

Unloading Film

1. After viewing, move the control lever all the way to the right (rewind) and hold it there until all the film has been rewound onto the reel.
2. Raise the mechanism cover.
3. When using reels only, hold the threading roller aside and push the **EJECTOR**, figure 7, to the right to release the reel from the reel adapter. Lift the reel from the supply spindle.
4. When using **THREAD-EASY** Magazines, hold the threading roller aside and lift the magazine from the supply spindle.
5. Lower the cover.

OPERATING HINTS

1. More positive threading results if the control lever is moved to the right momentarily before moving it to the left to advance film.
2. If the film fails to advance, raise the mechanism cover and rotate the **THREADING LEVER**, figure 2, counterclockwise. This strips the leading edge of the film from the roll.

NOTE: Manual threading is possible when the film is on reels which are not compatible with the self-threading feature.

3. Be sure the film is wound tightly on the reels.
4. When scanning at slow speeds, adjust the focus so that the images are more easily read while the film is moving, then refocus when the desired image is located.
5. When viewing 16mm film containing code-line indexing, more accurate film tracking is provided if the top film guide rollers are reversed so that the distance between the flanges will accommodate only 16mm film. Unscrew each guide roller **RETAINING KNOB** and reverse each top guide roller on its shaft. *Be sure to change back before using 35mm film.*

OPERATIONAL MAINTENANCE

Cleaning the Cabinet

Wipe the cabinet and the surface of the screen occasionally with a soft, lintless cloth. Cover the reader with a Dust Cover (Part No. 888264) when it is not in use. Clean the screen more thoroughly when cleaning the optical system in the procedure which follows.

Cleaning the Optical System

At least once every three months check and, if necessary, clean the optical system as follows:

Mirror and Screen

1. Turn off the power switch.
2. Place two fingers under the bottom edge of the screen at the center. Lift the screen until it clears the RETAINERS, figure 1, then swing the bottom edge out and lower the screen until the top edge is clear. Carefully remove the screen and set it aside where it will not be damaged.
3. Dust the surface of the MIRROR, figure 8, with a soft, lintless cloth. If necessary, dampen the cloth with a little KODAK Lens Cleaner. *Do not scrub the mirror or use a cleaner containing an abrasive, grease, or wax.*
4. Clean the prism glass at the end of the PRISM BARREL in the same manner. Look into the mirror to see the glass.
5. Clean both sides of the screen in the same manner. Then, holding it by the edges, carefully place the top of the screen on its UPPER SUPPORT and slide it up until the bottom edge can be seated behind its retainers.

Projection Lenses and Condenser Lenses

1. Raise the mechanism cover.
2. Push down on the BUTTONS, figure 2, to release the FILM TRACK ASSEMBLY and then lift out the assembly.
3. Press in the sides of the LAMPHOUSE COVER, figure 1, to disengage it from the slots in the cabinet, and remove it.
4. Clean the exposed surfaces of the PROJECTION LENSES, figure 9, with a soft, lintless cloth, dampened with a little KODAK Lens Cleaner, if necessary.
5. Carefully remove the CONDENSER LENSES and HEAT-ABSORBING GLASS. Clean them with a soft, lintless cloth, dampened with a little KODAK Lens Cleaner, if necessary. Then reassemble them, *being sure that they are positioned as shown in the DIAGRAM.*
6. Replace the lamphouse cover.

FIGURE 8

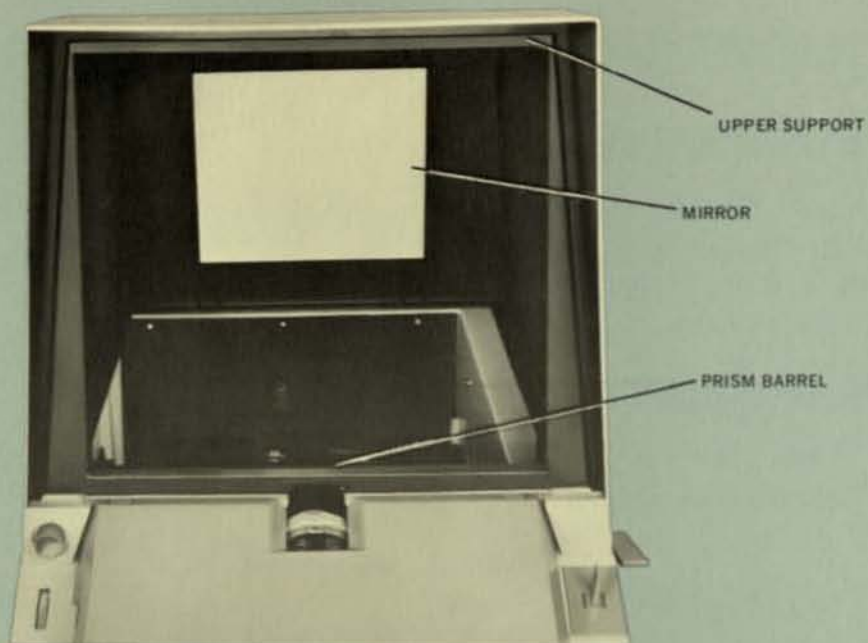


FIGURE 9

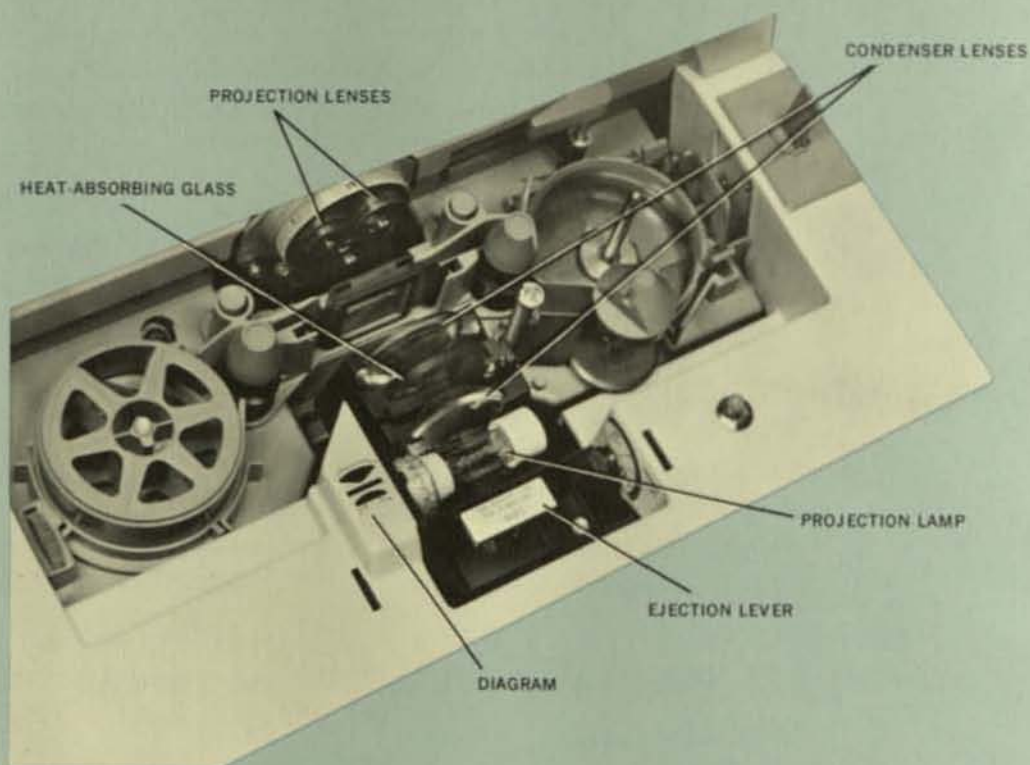
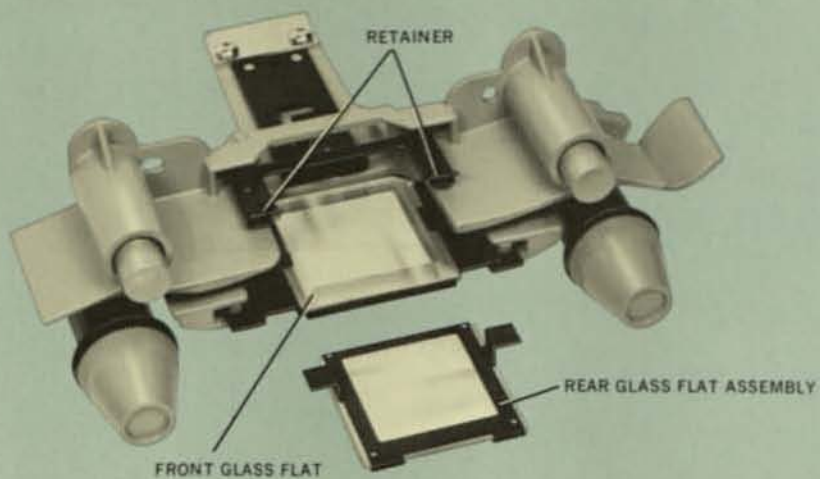


FIGURE 10



Glass Flats

1. Carefully withdraw the REAR GLASS FLAT ASSEMBLY, figure 10, from its RETAINER and set it aside.
2. Clean both sides of the FRONT GLASS FLAT with a soft, lintless cloth.
3. Clean both sides of the rear glass flat in the same manner and then carefully slide the assembly into its retainer. *Be sure to hold the retainer back against its spring to avoid scratching the glass flats.*
4. Be sure that the power switch is off and then replace the film track assembly. Push down on the buttons to lock it in place.

Replacing the Projection Lamp

The projection lamp used in the RECORDAK MOTORMATIC Reader, Model MPG-TH, is a 500-watt, 120-volt, quartz-halogen-type lamp. New lamps, Part No. 183740, may be ordered from Eastman Kodak Company, Central Parts Services, 800 Lee Road, Rochester, New York 14650.

To prevent overheating, the PROJECTION LAMP, figure 9, is automatically turned off if the blower motor should fail. Before replacing the lamp, turn on the power switch and place your hand over the grill on the left side of the reader to be sure that the blower motor is running. If it is not running, call your Kodak Equipment Services Representative. If it is running and the lamp does not light, replace the lamp as follows:

1. Turn off the power switch.
2. Raise the mechanism cover and remove the lamphouse cover.
3. Allow time for the lamp to cool, then press the lamp EJECTION LEVER to push the lamp out of its socket.
4. Being careful not to touch the glass with your fingers, remove the wrapper. Hold the lamp at the end opposite its base and install it in the lamp socket.
5. Replace the lamphouse cover.

ACCESSORIES

29X Lens	Product No. 16524
34X Lens	Product No. 16525
43X Lens	Product No. 16526
RECORDAK MOTORMATIC Unit Record Adapter	Product No. 16512
RECORDAK MOTORMATIC Multi-Voltage Transformer Kit	Product No. 16527

Lenses

The turret will accept any one or all three of the lenses which are service-installed.

RECORDAK MOTORMATIC Unit Record Adapter

This accessory is easily installed in place of the film track assembly to provide a means for viewing images on microfiche, film jackets, or aperture cards up to 4 1/8 inches by 7 3/8 inches in size.

Installation

1. Remove the screen.
2. Remove the mechanism cover. A screw and nut fastens each COVER HINGE, figure 11, to the screen frame.
3. Lift off the TAKE-UP REEL and take-up reel HOUSING. Remove the REEL ADAPTER, or magazine if installed.
4. Push down on the BUTTONS to release the film track assembly and then lift out the assembly.
5. Install the UNIT RECORD ADAPTER, figure 12, in place of the film track assembly, as shown in figure 13. Push down on the buttons to lock the adapter in position.

Applying the Number Strip

1. Turn on the power switch.
2. Grasp the HANDLE, figure 13, of the film carrier, pull it up as far as it will go, then push back slightly to open the glass flats, as shown in figure 14.
3. Insert a typical MICROFICHE, figure 14, between the flats so that the images are right-reading on the screen. Be sure that the right side of the microfiche is aligned with the right edge of the flats and that the microfiche rests on the bottom of the carrier.
4. Push down on the handle of the film carrier to close the glass flats. Then, slide the carrier all the way to the left and adjust as necessary to center the first image of a row on the screen.
5. Carefully remove the proper number strip from the index strip which is supplied with the Unit Record Adapter. *The number strips are only applicable to microfiche having NMA, DoD, or COSATI formats.*
6. Pull off the backing and apply the NUMBER STRIP, figure 13, to the top edge of the adapter so that the number "1" is in line with the right edge of the film carrier.

Operation

1. Grasp the film carrier handle and pull up to open the glass flats.
2. Select the desired microfiche, film jacket, or aperture card, and note the location of the image to be viewed.
3. Insert the microfiche, film jacket, or aperture card between the glass flats so that the images are right-reading on the screen and so that it rests on the bottom of the carrier in line with the right edge of the flats.

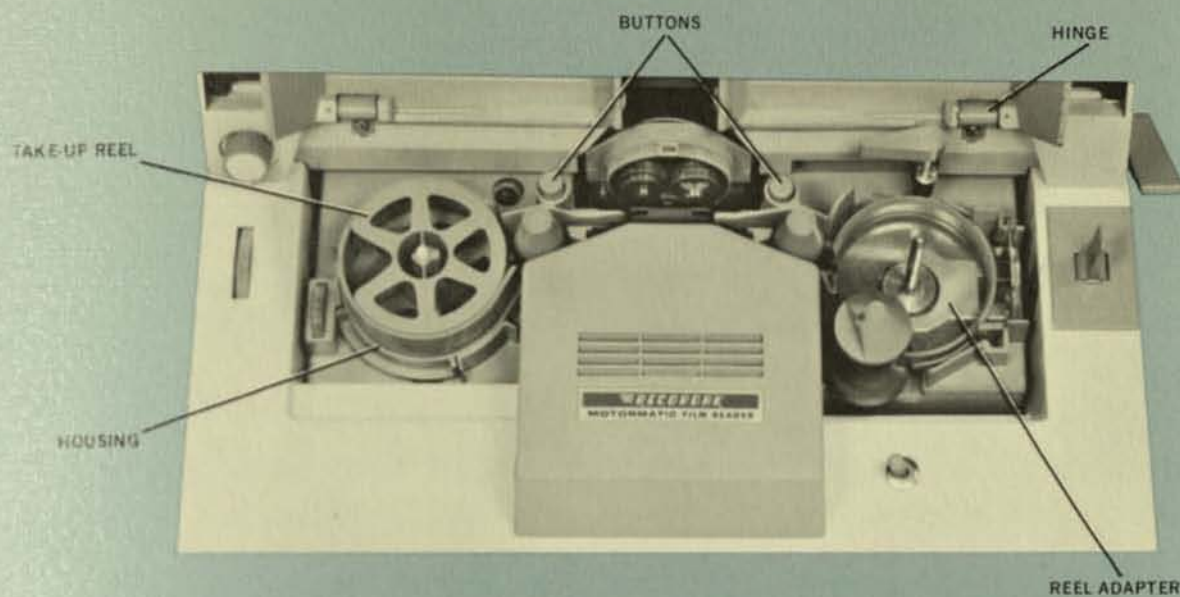


FIGURE 11

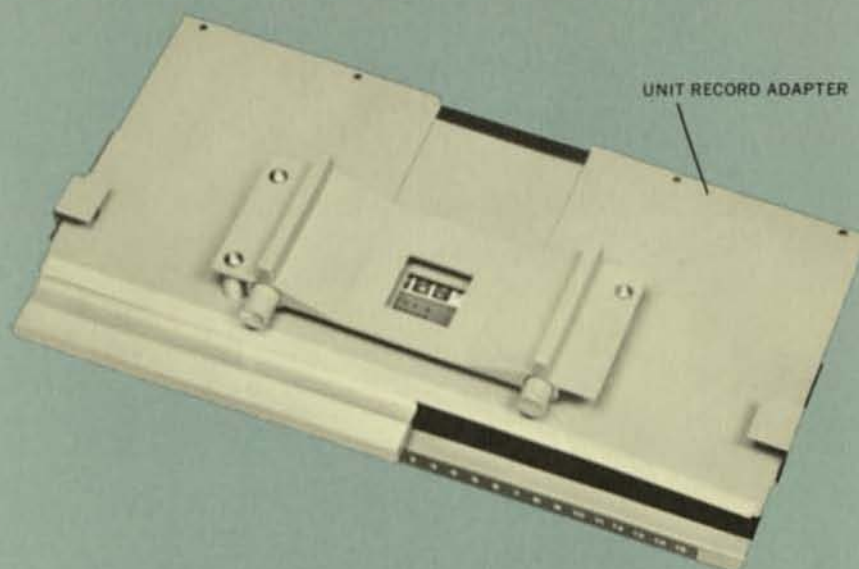


FIGURE 12

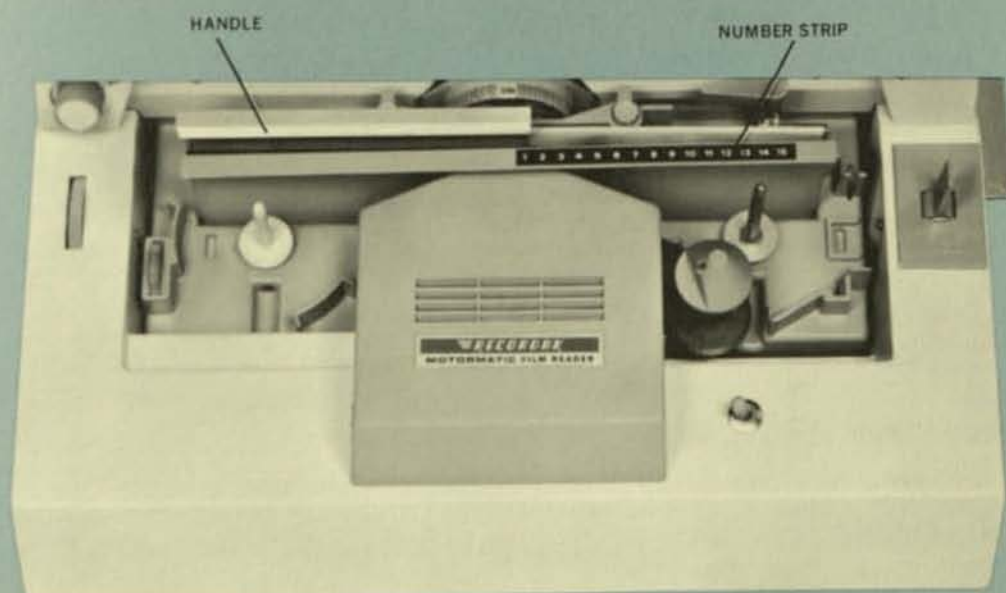


FIGURE 13



FIGURE 14

4. Push down on the handle and adjust the carrier as necessary to find the image. When using microfilm, once the image row has been located, align the right edge of the carrier with the appropriate number on the strip to find the image.

Care

Periodically, depending on use, remove the Unit Record Adapter and carefully clean the glass flats with a soft, lintless cloth. If necessary, dampen the cloth with a little KODAK Lens Cleaner.

RECORDAK MOTORMATIC Multi-Voltage Transformer Kit

This accessory permits any of the Model MPG series of MOTORMATIC Readers to be operated on 50 or 60 Hz power-supply voltages between 100 and 268. The accessory is usable with the reader only and not when the reader is used in conjunction with the print module.

SUPPLIES

Product No.

RECORDAK THREAD-EASY Magazine 16	03846
RECORDAK THREAD-EASY Magazine 35	03835
RECORDAK THREAD-EASY Magazine Labels, 16mm	02280
RECORDAK THREAD-EASY Magazine Labels, 35mm	02281
RECORDAK Trailer Holder, Model 16	03847
KODAMATIC Index Scale Kit	08141

Replacement Parts

Part Name	Part No.
Projection Lamp.	183740
Front Glass Flat.	884570
Rear Glass Flat Assembly	884640
Screen	887294
Take-Up Reel Assembly.	885951
Dust Cover	888264

NEW EQUIPMENT WARRANTY

RECORDAK MOTORMATIC Reader, Model MPG-TH

Kodak extends this warranty to the first user of a RECORDAK MOTORMATIC Reader, Model MPG-TH.

1. *Parts Replacement and Service Labor:* The following Parts Replacement and Service Labor provisions will apply to equipment located in the U.S. from the date of installation or 180 days after date of billing, whichever occurs first.

Parts Replacement: For a period of one year parts determined by Kodak to be defective in manufacture will be repaired or replaced at no charge.

Service Labor: For a period of three months Kodak will at no charge provide service labor on the user's premises during Kodak's normal working hours to install parts repaired or replaced under the Parts Replacement provision and to repair equipment determined by Kodak to be defective in manufacture. In certain areas of Alaska and Hawaii where on-premises warranty service is not available, parts or equipment which are defective in manufacture may be returned to Kodak for repair or replacement. Transportation and packaging costs are to be paid by the user.

2. *Movement of Equipment:* Kodak is to be notified at the time equipment is relocated to a different address.
3. *Other Conditions:* The user will be charged for parts and service labor during the warranty period to replace lamps and other glass items not defective in manufacture; or if the equipment problem is caused by: user's failure to follow Kodak's care, cleaning, maintenance and operating instructions; accident, abuse, misuse, or relocation of the equipment; materials used or operations performed for which the equipment was not designed; the installation of modifications, attachments or accessories, or repairs and adjustments by other than a Kodak-authorized service representative.

In no event shall Kodak be liable for consequential or special damages. Kodak's liability on any claim for loss or damage arising out of the sale, resale, or use of the equipment, whether or not induced by Kodak, shall in no event exceed the selling price of this equipment, or part thereof, which gives rise to the claim.

No other warranty, express or implied, shall be applicable to this equipment.

EASTMAN KODAK COMPANY MARKETING CENTER LOCATIONS

...for RECORDAK microfilming products and services

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Atlanta, Georgia	Los Angeles, California
Baltimore, Maryland	Memphis, Tennessee
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Kansas City, Missouri	Washington, D. C.
Lake Success, L. I., New York	

Kodak Microfilm Processing Laboratories Also At:

Birmingham, Alabama	Salt Lake City, Utah
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Phoenix, Arizona	

Underground Security Processing Facilities

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