



**Kodak
Pageant
250S**

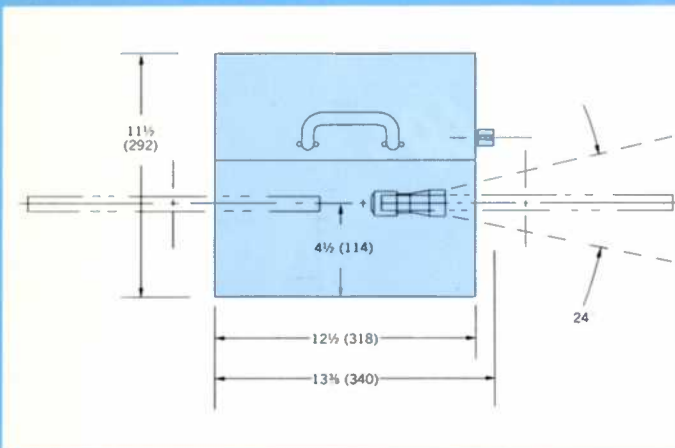
Sound Projector



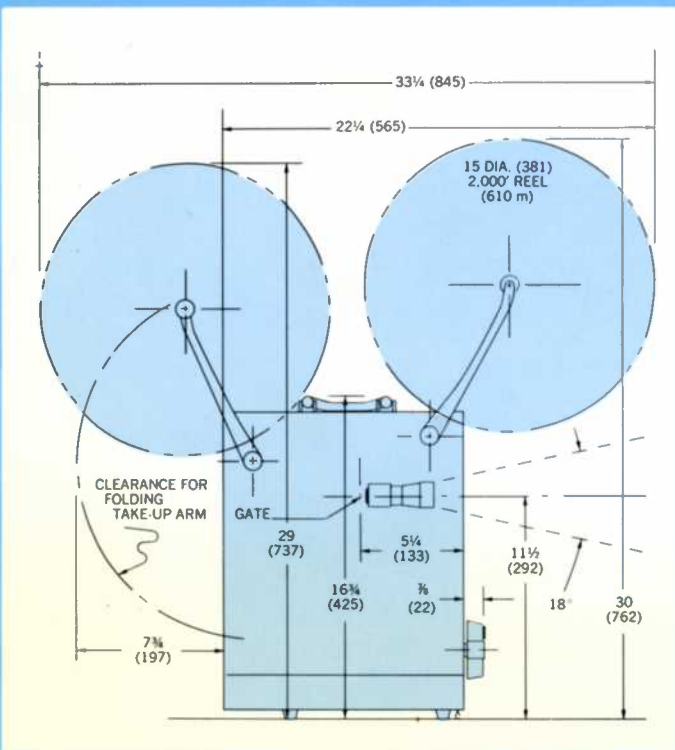
Specifications

Dimensions in inches (mm*)

TOP VIEW



SIDE VIEW



Approximate Weight; pounds (kg):

Projector packed in corrugated case for shipping—41 (18.6)
 Projector complete—38.5 (17.5)
 Speaker unit (Case cover)—6.5 (2.9)

Maximum 2 inches (51 mm), front control. Upward lens tilt, approximately 8 degrees maximum.

Power Service Required:

105- to 125-volt, 60 Hz.

Power Consumed by Projector and Amplifier on 120-Volt Power Line:

550 watts with a 200-watt projection lamp.

Projection Lens:

The lens supplied is a KODAK Projection EKTANAR Lens, 2-inch f/1.6.

Projection Lamp:

The lamp supplied is a 200-watt, 24-volt, ANSI Code EJL; 200-hour rating at low lamp setting, 100-hour rating at medium lamp setting, and 25-hour rating at high lamp setting.

Amplifier (completely transistorized)

Rated Continuous Average Sinewave Power:

25 watts minimum into an 8-ohm load (supplied speaker) at a total harmonic distortion of 5% maximum throughout a bandwidth of at least 50 Hz to 7 KHz.

NOTE: The preceding specification applies for an rms line voltage of 120 volts at 60 Hz.

Sensitivity:

740 μ V microphone channel.
 120 mV auxiliary channel.

Speaker:

6 x 9-inch (152 x 229 mm) oval, PM, 8-ohm voice coil.

Speaker Plug and Jack:

1/4 inch (6.3 mm) dia.

Exciter Lamp:

ANSI Code BSK; 6-volt, 1-amp T-5 bulb; single-contact, prefocused base.

Sound Pickup:

Silicon Solar Cell.

Accessories:

KODAK Microphone, Model PA-8.
 KODAK EKTALITE Projection Screen, Model 3 (40 x 40).

*For ease in reading, the metric conversion is given once per dimension.

This equipment has been carefully designed and manufactured to meet the requirements of Business, Industrial, Television, Educational, Governmental, Medical, and other institutional uses.

Before you start to use your new projector—learn these basic safety precautions. Keep them in mind whenever you handle or operate the equipment.

IMPORTANT SAFEGUARDS

1. Read and understand all instruction material that is provided with this projector.
2. Maintain close supervision when the projector is used by persons not fully acquainted with correct operating procedure.
3. Take special care to avoid burns that can result from touching hot parts. Allow the projector to cool before replacing a lamp or cleaning lenses.
4. Do not operate this projector with a damaged cord. If the unit has been dropped or damaged, have it examined by a qualified service representative before using it again.
5. Be careful to place the power cord where you or other persons will not trip over it.
6. If an extension cord is necessary, use a 3-wire grounding-type cord with a suitable current rating. Cords rated for less amperage than the projector may overheat.
7. Never yank the cord to pull the plug from the outlet. Grasp the plug and pull it to disconnect.
8. Do not disassemble this projector beyond the extent necessary to perform the routine maintenance procedures described in this manual. If further disassembly is required, take the projector to a qualified service representative, since incorrect reassembly can cause electric shock hazard.

SAVE THESE INSTRUCTIONS

IMPORTANT: If you modify this projector in any way, UL and CSA labels should be obliterated. All modified equipment should conform to electrical or other codes and to safety requirements.

Kodak Pageant 250S *Sound Projector*

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Setting Up

Place the projector on a firm table or other support of convenient height. Set up the projection screen. Be guided as to the relative location of the projector and screen by the information on pages 13 and 14. Unlatch the cover locks, tilt the cover away from the projector, and lift it off.

Lift the SUPPLY REEL ARM (Figure 1) up as far as it will go. Lift up the TAKE-UP REEL ARM until the TAKE-UP BELT can be put on the take-up pulley. Do not twist the belts. *When projecting film on 50-foot (15.2 m) or 100-foot (30.5 m) reels or film on reels with cores smaller than two inches in diameter, remove the belt from the supply pulley. With these smaller reels, allow the belt to rest between the pulley and the arm. The belt should be replaced on the pulley when the projector is run in reverse or when film is being rewound. Be sure the diameter of the take-up reel is at least equal to the diameter of the supply reel.*

Remove the POWER CORD from its storage space. This projector is equipped with a 3-wire power cord and a 3-prong polarized plug for direct connection to a 105- to 125-volt, 60 Hz wall recep-

tacle of the grounding type. By using a suitable power cord adapter, it is possible to plug into a conventional wall receptacle. When you do this, connect the grounding wire attached to the 2-prong adapter to a suitable ground. For convenience it is suggested that—in those locations where the projector will be used frequently—the usual 2-prong receptacle be replaced with a 3-prong polarized receptacle, properly grounded.

If an extension power cord is used, be sure that it has adequate current-carrying capacity (No. 18 AWG wire or larger) to avoid overheating the cord and that it is as short as possible to prevent excessive voltage drop.

Position the speaker as close to the screen as possible. Uncoil enough speaker cable to connect the plug to the SPEAKER JACK (Figure 1) in the amplifier. The speaker should be placed at the ear level of the audience for proper sound distribution.

A phone extension cable can be used for a speaker extension cord, providing it is No. 18 AWG wire or larger and has a 1/4-inch phone plug and line receptacle at the ends.

CAUTION: A short in the cord or plugs might damage the amplifier.

Make sure that the REWIND TAB is in the position shown in Figure 1. Turn on the PROJECTOR POWER SWITCH. Then, turn on the motor and lamp by moving the MASTER CONTROL all the way forward to the front of the projector. Rotate the lens clockwise or counterclockwise until the margins of the lighted area on the screen are in focus.

Adjust the elevation by turning the ELEVATION CONTROL clockwise until the lighted area is centered on the screen.

While the projector is running forward, move the SPEED SELECTOR to SILENT or SOUND, depending upon the film being projected. To move the selector from SOUND to SILENT, push the lever to the left as far as it will go; to go from SILENT to SOUND, push the selector upward to release it—the selector will automatically move to the SOUND position.

Turn off the projection lamp and the motor. Turn the VOLUME CONTROL fully counterclockwise and the TONE CONTROL to NORMAL.

Make sure that the SOUND-INPUT SWITCH is at the FILM position.

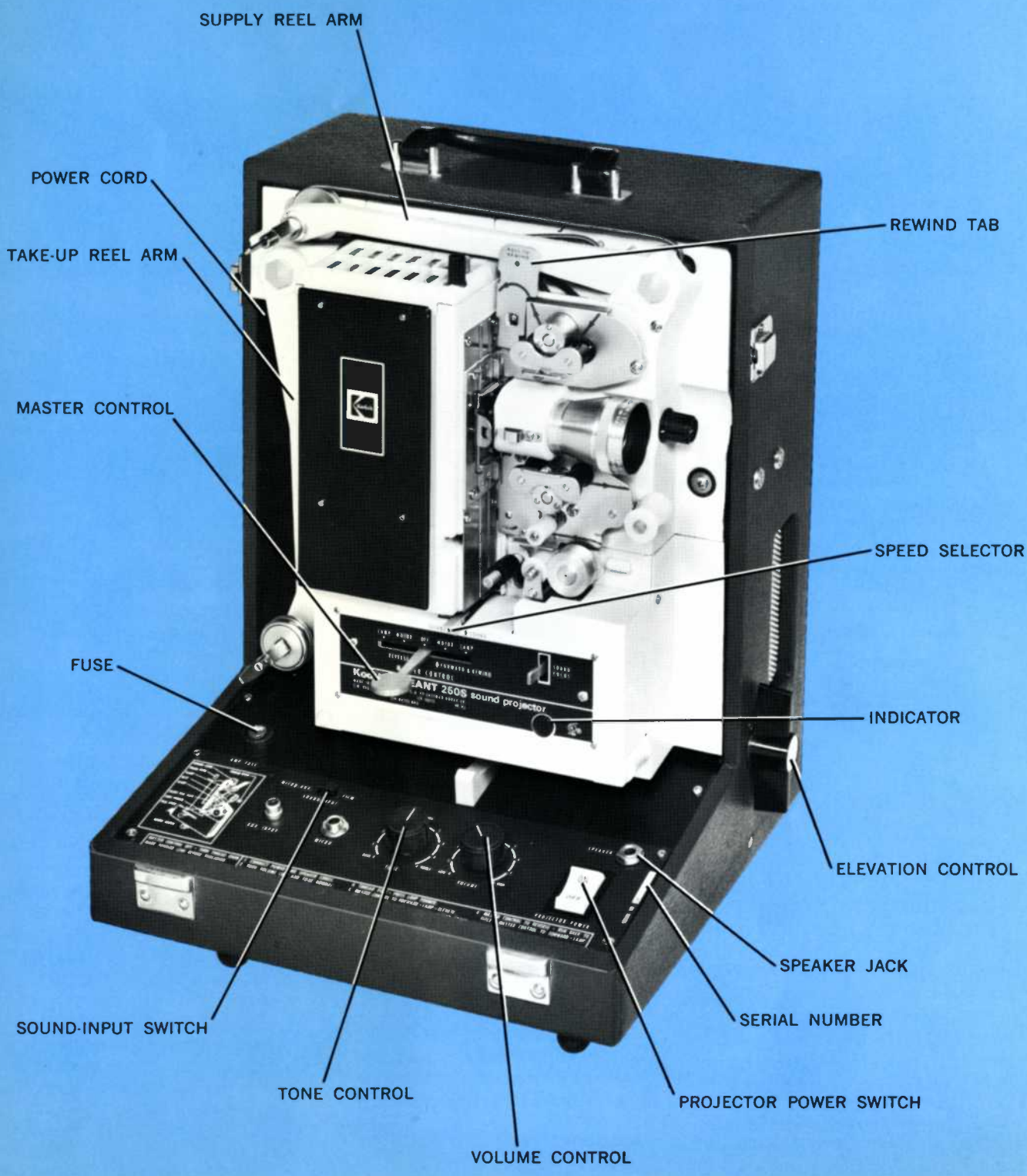


FIGURE 1

TAKE-UP SPINDLE AND LATCH

SUPPLY SPINDLE AND LATCH

Preparation for Threading

Place the reel of film on the **SUPPLY SPINDLE** (Figure 2) with the film feeding clockwise off the reel and the perforations toward you. Lock the reel onto the spindle with the **LATCH**. Place an empty reel on the **TAKE-UP SPINDLE** and lock it in place.

Make sure that the rewind tab is latched in the vertical position.

See that the speed selector is properly set for the film to be projected.

Open the supply and take-up sprocket **CLAMPS**.

Open the **GATE** by pushing forward on the tab until it latches.

Turn the **THREAD KNOB** until the white line on the knob is toward you. With the knob in this position, the pull-down claw will be withdrawn from the film channel.

Threading for Sound or Silent Pictures

Draw off about five feet (1.5 m) of leader. Grasp the leader near the supply reel and insert it between the upper sprocket and clamp; engage the perforations with the sprocket teeth and close the clamp. (See Figure 3.)

Place the leader between the top and bottom **EDGE GUIDES** of the film channel. Close the gate by pressing on the **GATE LATCH**. Form the upper loop to the red dot on the rewind tab. (See Figure 3A.)

Thread the leader under the **LOOP-FORMING ROLLER**. The leader should just touch the roller (not as shown in Figure 3).

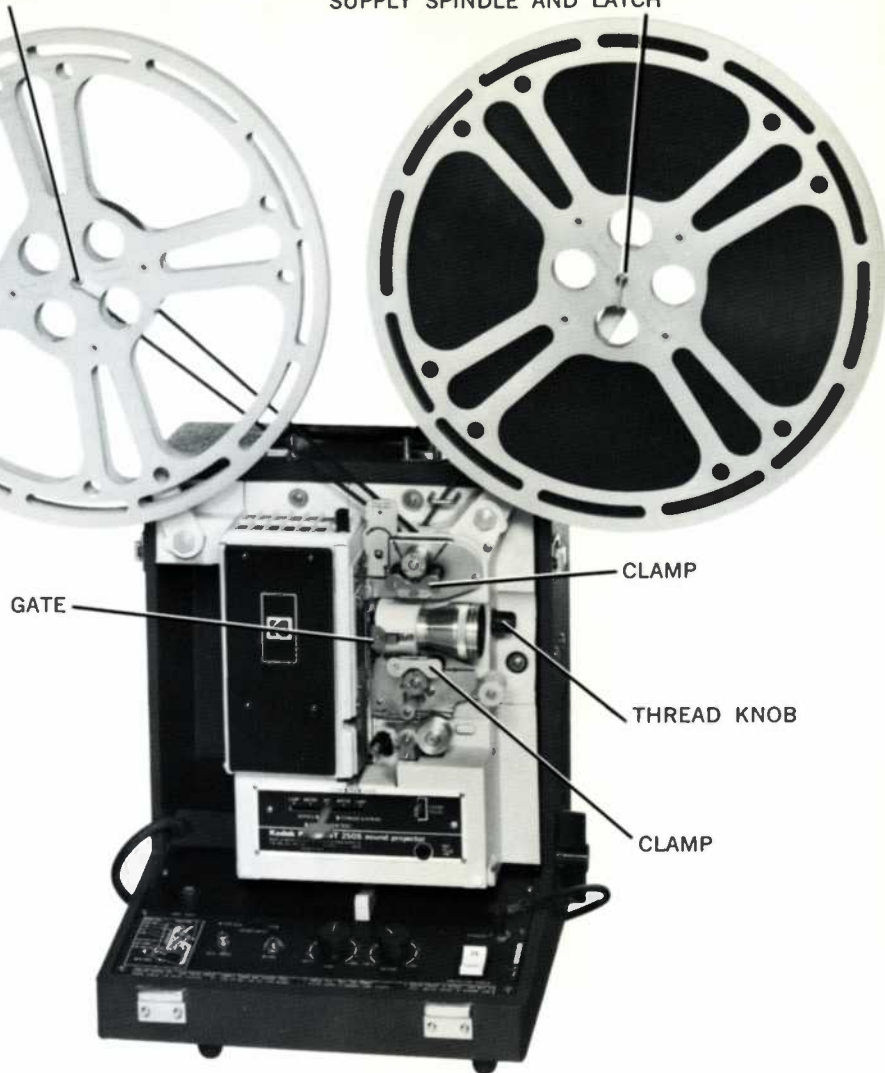


FIGURE 2

Pull back the sound drum **PRESSURE ROLLER** and place the leader over the roller and under the **SOUND DRUM**. Release the roller, making sure that the leader is between the flanges.

Pass the leader behind the **DAMPER ROLLER** and between the take-up sprocket and clamp. Engage the perforations with the sprocket teeth and close the clamp. Make sure that the leader is against the damper roller.

Press down the loop-forming roller as far as it will go and then release it. This action will correctly position the upper and lower loops. Turn the thread knob to engage the pull-down claw in the leader perforations. Figure 3 shows the positions of the clamps, gate, and leader after the loop-forming roller has been pressed down and released.

Bring the leader over the **SNUBBER ROLLER** and under the two rollers on the bottom of the **MASTER CONTROL COVER**. (See Figure 14.) Insert the end of the leader into the slot in the core of the take-up reel. Take up the slack between the lower sprocket and the take-up reel.

For sound projection only: Move the sound-input switch to **FILM**. Turn on the projector by pressing the projector power switch.

For silent projection only: While the projector is running, set the speed selector at **SILENT**.

NOTE: Project at **SILENT** speed; rewind at **SOUND** speed, for faster rewind.

REWIND TAB

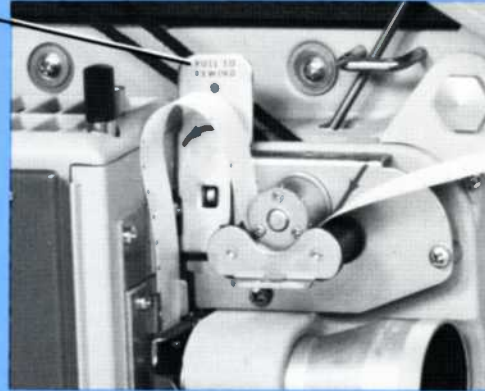


FIGURE 3A

EDGE GUIDES

DAMPER ROLLER

LOOP-FORMING ROLLER

GATE LATCH

SNUBBER ROLLER

SOUND DRUM

PRESSURE ROLLER

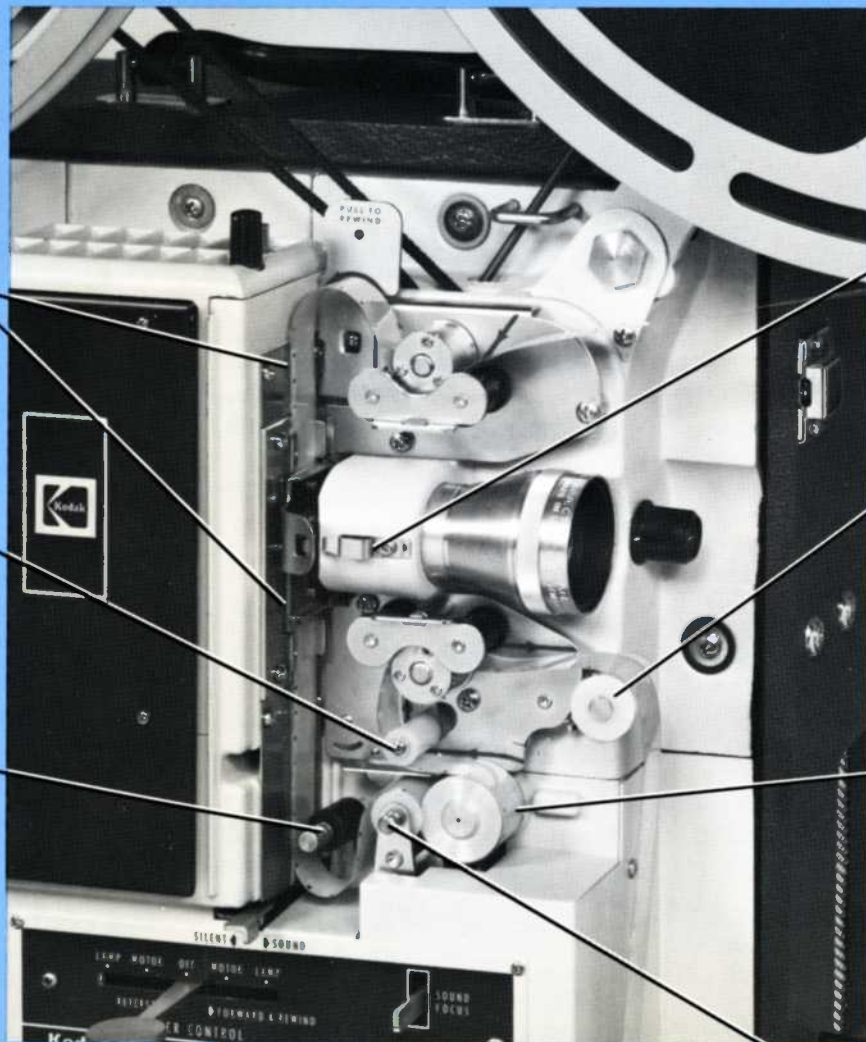


FIGURE 3

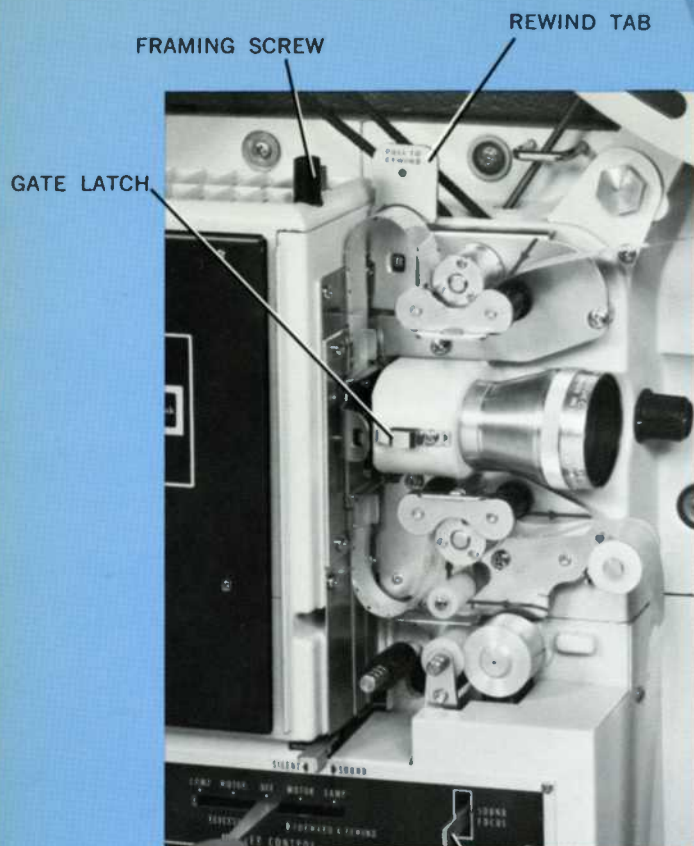


FIGURE 4

SOUND FOCUS LEVER

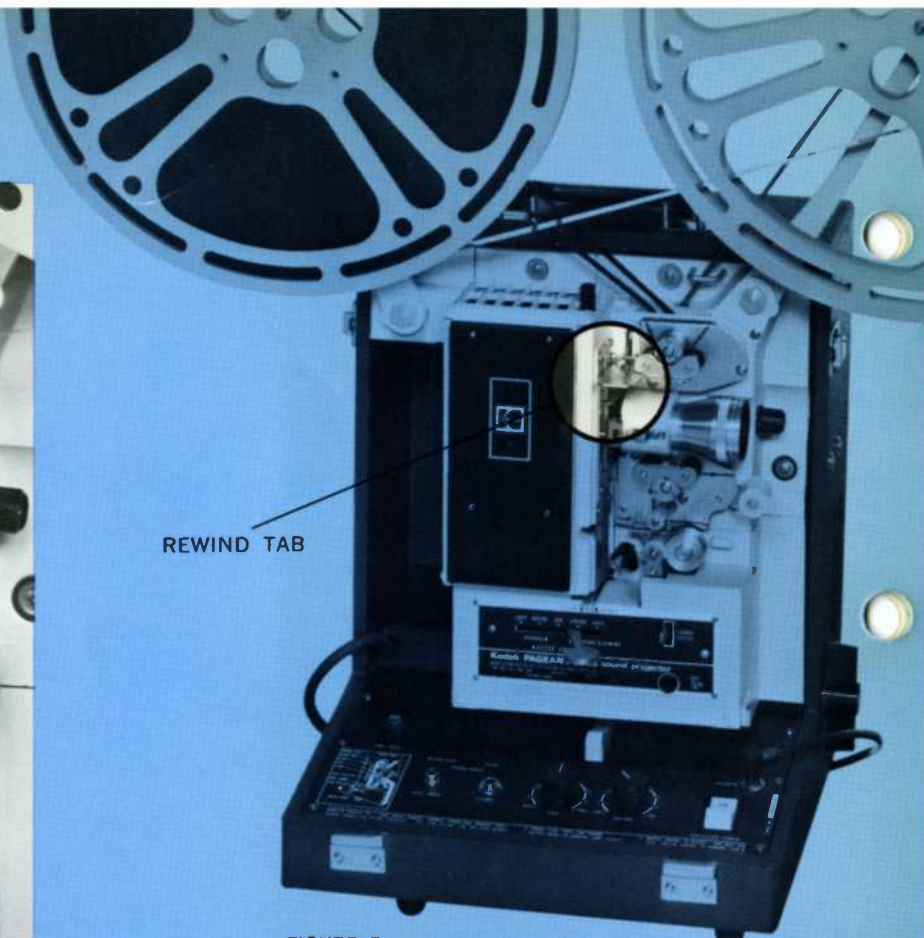


FIGURE 5

REWIND TAB

Alternate Threading for Silent Pictures

Draw off about five feet of leader. Insert the leader between the upper sprocket and clamp, engage the perforations with the sprocket teeth, and close the clamp. (See Figure 4.)

Place the leader between the top and bottom edge guides of the channel. Form the upper loop as shown and close the gate by pressing on the gate latch.

Form the lower loop as shown and thread the leader between the lower sprocket and clamp. Engage the perforations with the sprocket teeth and close the clamp.

Turn the thread knob to engage the pulldown claw in the leader perforations.

Pass the leader over the snubber roller and under the two rollers on the bottom of the master control cover. Insert the end of the leader into the slot in the core of the take-up reel. Take up the slack between the lower sprocket and the take-up reel.

While the projector is running forward, set the speed selector at SILENT. Be sure to turn the motor off momentarily after changing from SOUND to SILENT speeds unless the shutter has been locked in the 3-blade position as shown in Figure 8. (See KODAK SUPER-40 Shutter, page 10.)

NOTE: Project at SILENT speed; rewind at SOUND speed, for faster rewind.

Check Setup and Run the Show

Turn the thread knob clockwise a few times to check the threading. The pull-down claw must engage the perforations and the sprockets must feed the film.

The loops must be maintained in their correct sizes. The leader should be taut between the supply reel and the upper sprocket.

Move the master control to MOTOR (FORWARD) and see that the film is running through properly; then move the master control to LAMP.

Focus the image on the screen by rotating the lens.

Turn the FRAMING SCREW (Figure 4) to eliminate any blank strip on the edge of the next picture that shows at the top or bottom of the screen image.

Adjust the volume control to provide comfortable listening for the audience. Focus the sound optics to get the best quality of sound reproduction by moving the SOUND FOCUS LEVER up or down.

See that the film is being taken up properly.

For sound projection only: Check the lower loop. If necessary, depress and release the loop-forming roller. This can be done with the projector running.

To operate the projector in reverse, move the master control to REVERSE MOTOR or to REVERSE LAMP. (Turn the sound volume to a minimum to avoid reverse sound.)

After the last frame of sound film has been projected, turn down the volume. This will eliminate the sounds that occur when the end of the film is feeding through the projector.

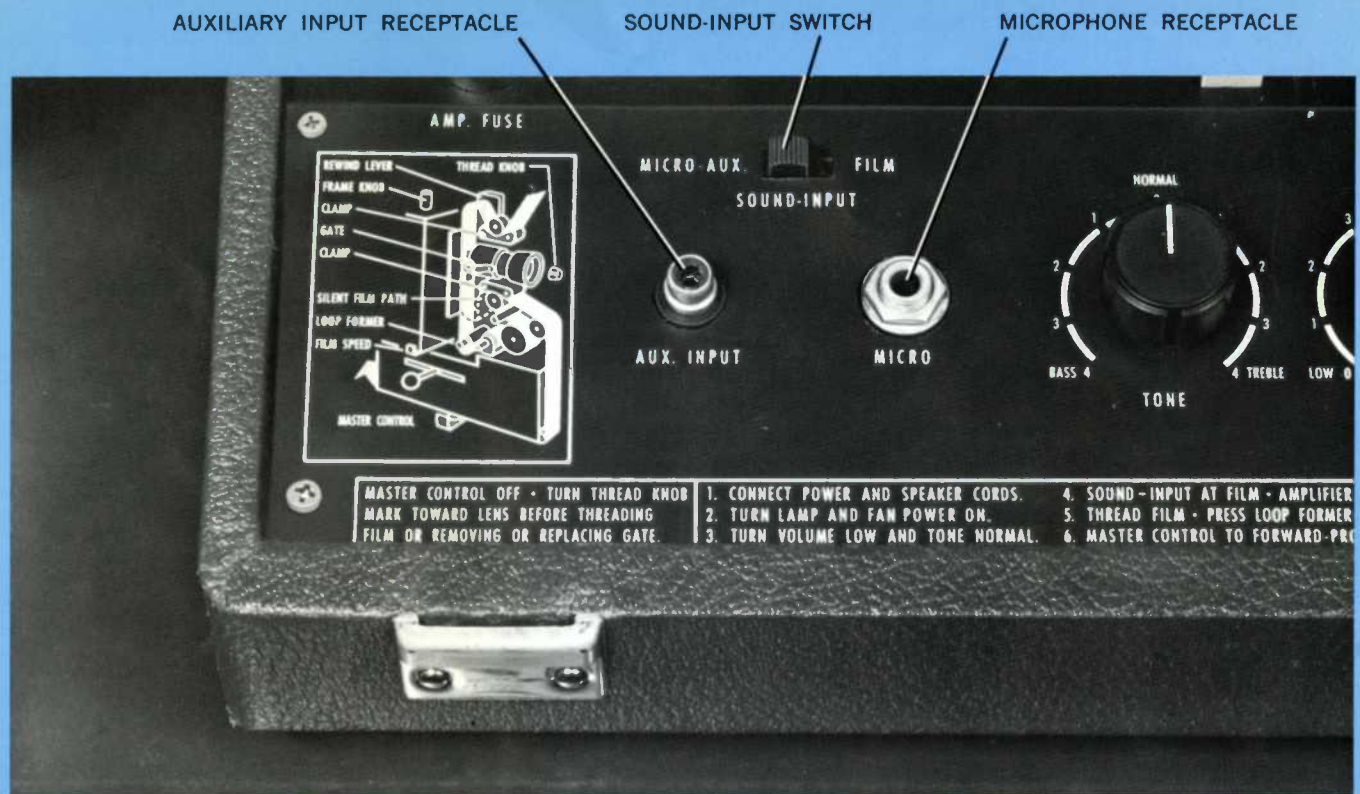


FIGURE 6

Rewinding

To rewind the film, attach its end to the supply reel and move the reel by hand a few turns counterclockwise to bind the film. (See Figure 5.)

Make sure that the film is not twisted between the reels.

Lower the rewind tab to its horizontal position; the tab will block the film channel.

Move the master control to the MOTOR (FORWARD & REWIND) position.

Set the speed selector at SOUND; this is necessary for full-speed rewinding.

After all the film has been rewound, latch the rewind tab in the vertical position and move the master control to OFF.

After the Show

Following the projection and rewinding of all reels of film that were shown:

Turn off the projector.

Unplug the power cord and fold it into its storage space.

Raise the take-up arm slightly and remove the belt from the take-up pulley, guiding the arm to its storage position. Swing the supply arm downward as far as it will go.

Lower the projector by turning the elevation control counterclockwise as far as it will go.

Unplug the speaker cable and wind it around its storage hooks.

Replace and fasten the projector cover.

Microphone • Phonograph • Tape Recorder

The projector can be used as a PA system or to provide accompaniment for silent films.

Before you use either the microphone or auxiliary input on the projector, move the sound-input switch to MICRO-AUX (Figure 6).

Microphone—Insert the microphone plug into the MICROPHONE RECEPTACLE. Make sure the plug is in all the way. The microphone volume is regulated by the volume control. Adjust the tone control to the desired position.

Phonograph or Tape Recorder—Connect your record player (or tape recorder) by inserting its output plug in the AUXILIARY INPUT RECEPTACLE. The plug must be in all the way. The output volume is dependent upon the adjustment of the volume control on the projector. A comfortable operating level for this input is 500 mV.

NOTE: The auxiliary input circuit of the projector is high impedance to match crystal or ceramic phonographic pickups; it will also accept the output of a preamplifier, which must be used if the phonograph pickup is of the magnetic type.

The microphone input is designed for use with a low-impedance dynamic microphone.

Sound Optics

The sound track can be on either surface of the film, depending upon what type of film is being used. Therefore, focusing the beam of light from the **EXCITER LAMP** (Figure 18) is extremely important; it is accomplished by moving the sound focus lever. This helps you obtain the maximum crispness of sound.

Figure 7 illustrates the proper position of the beam for each of the two types of film: one threaded with the emulsion side on top and away from the sound optics (A) and the other with the emulsion side on the bottom and toward the sound optics (B).

KODAK SUPER-40 Shutter

The Model 250S Projector is equipped with the **SUPER-40 Shutter** (Figure 8), which provides 40 percent more screen illumination in the 2-blade position than it does in the 3-blade position.

Action of the SUPER-40 Shutter

At the 3-blade position (for silent speed), there are fifty-four light interruptions per second. This position is maintained by spring tension. The tension counteracts the centrifugal force exerted by a weight that is linked to the two movable blades.

When the speed selector is moved to **SOUND**, the additional centrifugal force that results from the faster speed of the shutter overcomes the spring tension. The movable blades rotate on their axis and overlap in a position opposite the fixed blade. Now the shutter will operate in the 2-blade position with 40 percent more screen illumination.

Sound Speed—If the **SUPER-40 Shutter** in the 2-blade position provides too much illumination, it can be locked in the 3-blade position. When the projector is operated at **SOUND** speed, the shutter will automatically shift (*if not locked*) from the 3-blade position to the 2-blade position.

Silent Speed—The **SUPER-40 Shutter** will remain in the 3-blade position if the projector is started in **SILENT** speed. If the projector is started in **SOUND** speed and then shifted to **SILENT** speed, the shutter cannot return to the 3-blade position unless the motor is stopped momentarily.

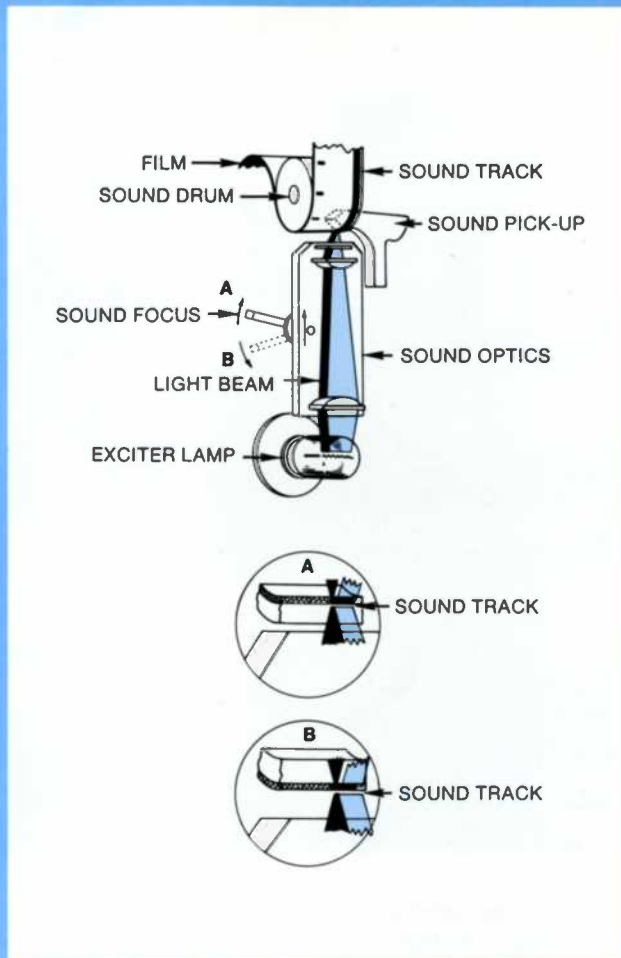


FIGURE 7

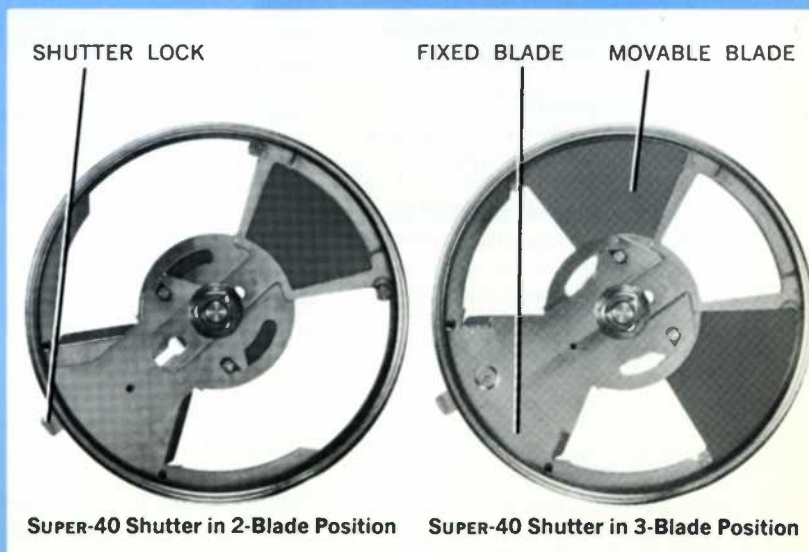


FIGURE 8

Locking the SUPER-40 Shutter in the 3-Blade Position

Stop the projector; loosen the **SCREW** on the **LAMPHOUSE COVER** (Figure 9); remove the cover. Turn the thread knob until the **SHUTTER LOCK** (Figure 10) is visible. Hold the thread knob to prevent rotation of the shutter and, using a screwdriver or similar object, push the shutter lock *down* as far as it will go. Replace the lamphouse cover and tighten the screw. To unlock the shutter, proceed as above, except that the shutter lock must be moved *up* as far as it will go.

NOTE: If a small image is projected—especially in a darkened room—the 2-blade shutter operation may cause noticeable flicker, even at **SOUND** speed. Locking the shutter in the 3-blade position will usually eliminate the flicker by reducing the illumination somewhat and increasing the light interruptions to seventy-two per second.

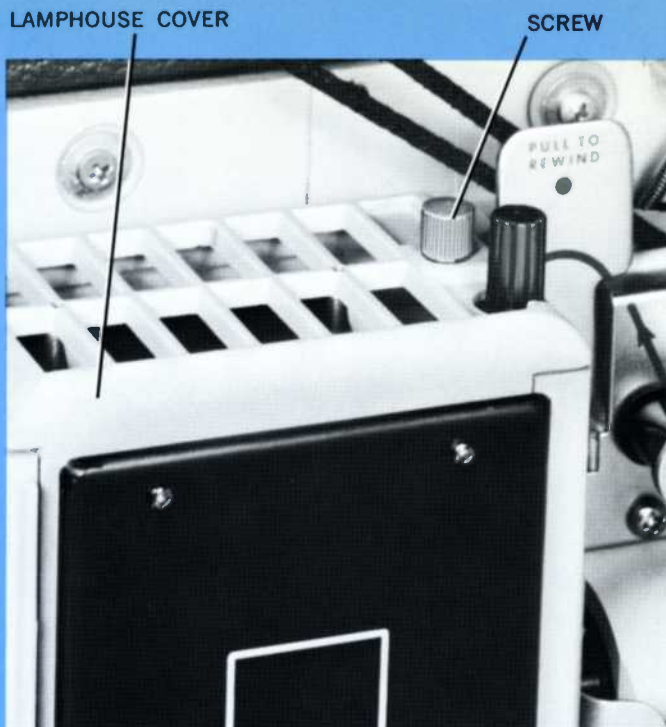


FIGURE 9

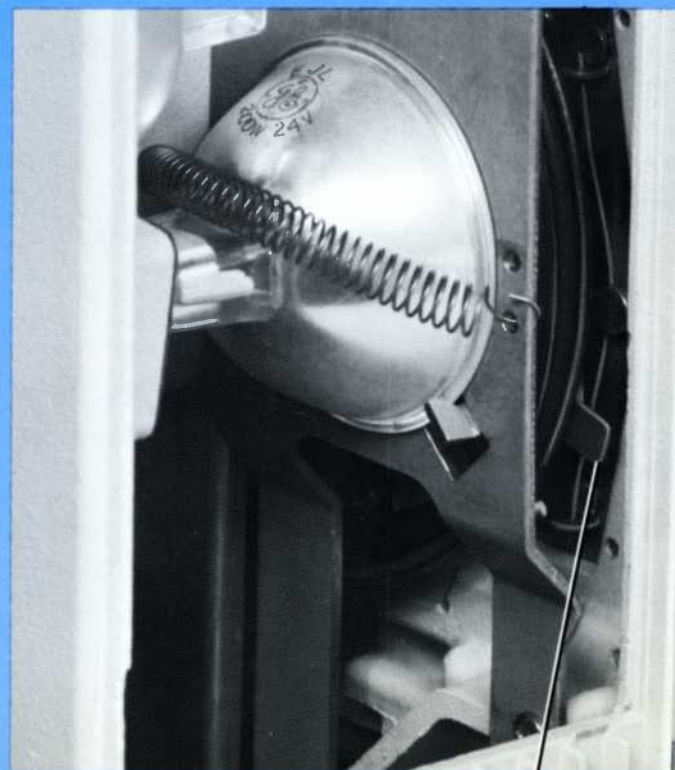


FIGURE 10

SHUTTER LOCK

Operating Tips

The perforations in the film should be toward you as film comes off the bottom of the supply reel. If they are not, the film has not been rewound or was twisted while being rewound.

- **If the gate is left open**, the projected picture will be out of focus.
- **If the picture is unsteady**, check the upper and lower loops; these must be maintained. The lower loop should not touch the master control cover or the loop-forming roller. The sprocket teeth must show through the film perforations. Make sure that the gate and the sprocket clamps are closed.
- **If loss of lower loop occurs:** *threaded for sound or silent pictures, page 6*—quickly press down the loop-forming roller as far as it will go while the projector is running and then release the roller; *threaded for silent projection, alternate method, page 8*—stop the motor immediately and re-form the loops.
- **If the projector is stopped during the projecting of a reel of sound film**, turn the thread knob several revolutions clockwise to take up any slack between the lower sprocket and the sound drum.
- **If there is no sound, be certain that:**
 - Speaker cord is connected.
 - The fuse is not blown.
 - Sound track is overriding edge of sound drum properly and film is between the flanges of sound drum pressure roller.
 - Exciter lamp is not burned out and is seated on all three studs.
 - Sound-input switch is set at proper position.
- **If the sound quality is not up to par, be certain that:**
 - Speed selector is at proper position.
 - Film is snug around sound drum and drum is clean.
 - Volume is not too high and tone control is correctly adjusted.
 - Sound focus lever is adjusted for correct sound optics focus.
 - Film sound track is of good quality and clean.
 - Sound optics unit has been properly seated after cleaning.

Screen • Lamp • Lens Combinations

Proper selection of screen, lamp, and lens for your particular setup is important. The screen image should be of adequate size and brilliance for comfortable viewing. With the wide variety of lenses available for your PAGEANT Projector, you can tailor your equipment to meet this requirement.

The chart shows the relation between projection distances and screen sizes for each of the currently available lenses. It is best to use a lens that provides a screen image of a height that is not less than one-eighth of the distance from the screen to the back row of seats. If the image is smaller than this, the viewers in the back rows will not be able to see the fine detail in the pictures.

Make sure that the screen image is neither too bright nor too dark. If it is too bright, flicker may become objectionable; if too dark, detail will be lost in the shadow areas of the pictures.

Shown in the table are the maximum image widths or heights for adequate illumination on matte screens and on lenticular or beaded screens with the lamp set on HI. These maximum widths or heights are for good projection conditions in a darkened room; they will have to be somewhat less if there is much stray light in the room.

Projection Lamp Setting	Maximum Image Width or Height in Inches (Meters) in a Darkened Room*							
	Shutter in 3-Blade Position				Shutter in 2-Blade Position			
	Matte Screen		Lenticular or Beaded Screen		Matte Screen		Lenticular or Beaded Screen	
	W	H	W	H	W	H	W	H
LO	60 (1.5)	45 (1.1)	85 (2.1)	64 (1.6)	70 (1.8)	53 (1.3)	100 (2.5)	75 (1.9)
MED	70 (1.8)	53 (1.3)	100 (2.5)	75 (1.9)	80 (2.0)	60 (1.5)	120 (3.0)	90 (2.3)
HI	75 (1.9)	56 (1.4)	110 (2.8)	83 (2.1)	90 (2.3)	68 (1.7)	130 (3.3)	98 (2.5)

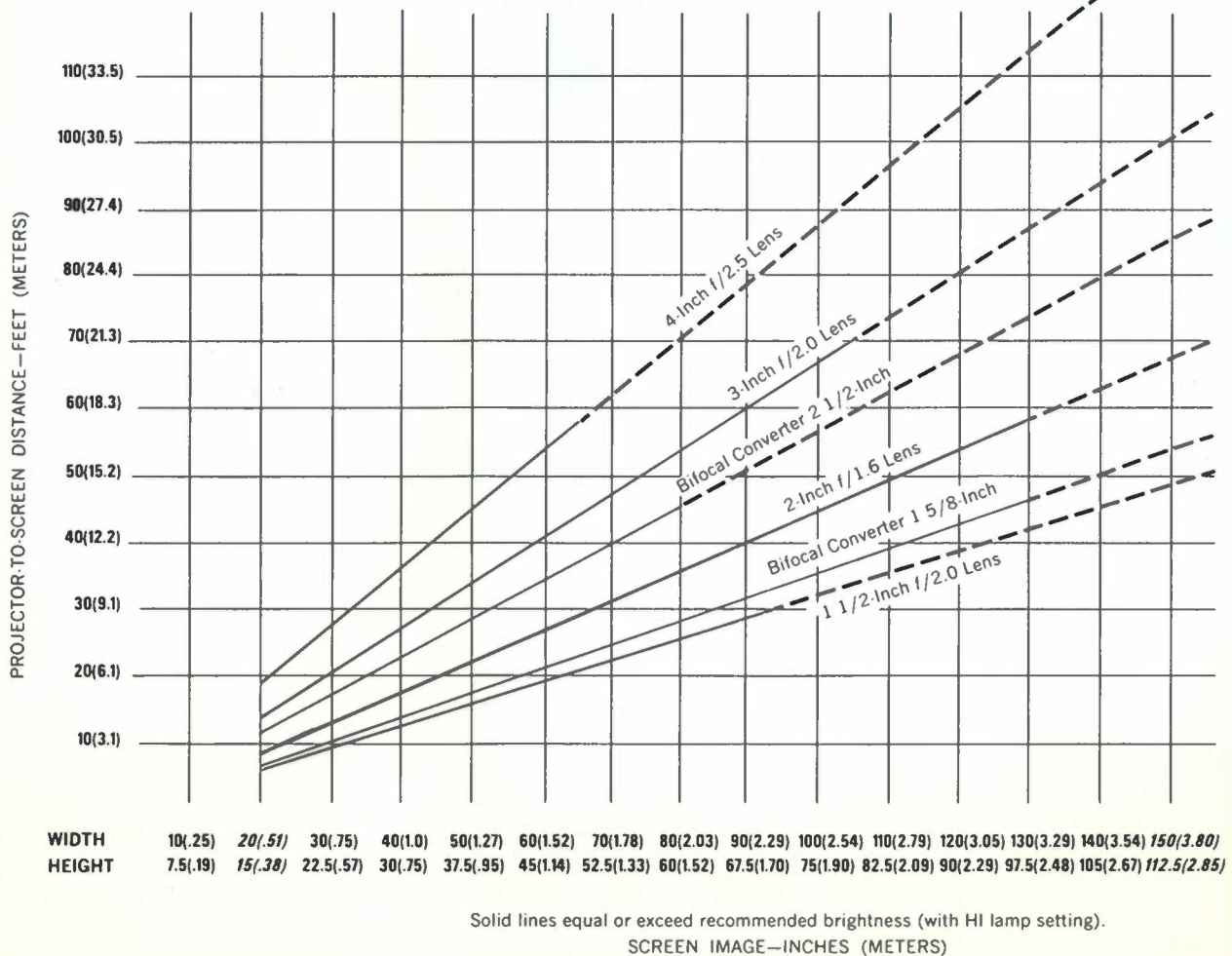
*With 2-inch lens alone or with CINE-KODAK Bifocal Converter.

Three-Position Lamp-Brightness Control Switch:

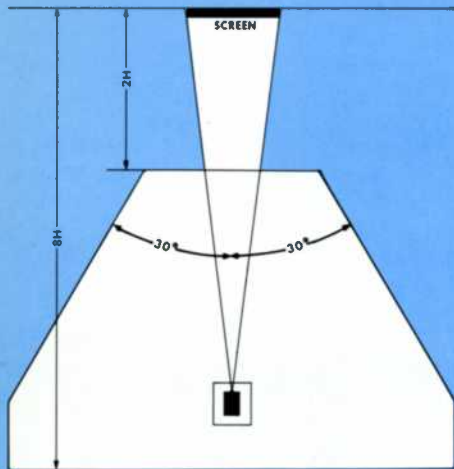
You can select one of three available lamp brightness settings: LO, MED, or HI. Use a screwdriver or similar tool to rotate

the lamp control switch to the desired position. *Be sure to turn off the lamp and motor during this procedure.* The switch is accessible when the lamp is

removed. See the section on Replacing Projection Lamp and Cleaning Projection Lens for a lamp removal procedure.



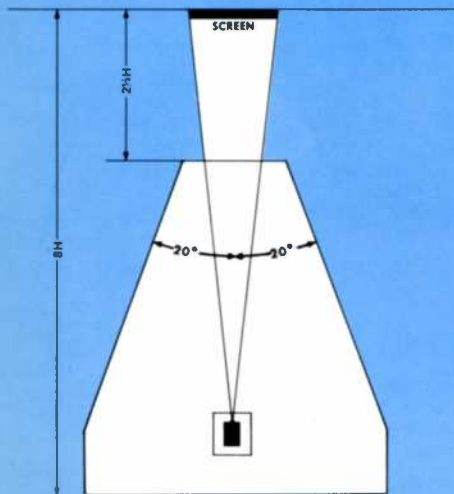
Seating Arrangements



Matte, Lenticular, or KODAK EKTALITE Projection Screen*

The diagram directly above shows the best viewing area for matte, lenticular, and KODAK EKTALITE Screens.

The seats nearest the screen should not be closer than twice the height of the picture ($2H$); the rear seats should not be farther than eight times the height of the picture ($8H$).



Beaded Screen

The diagram above shows the best viewing area for beaded screens.

The seats nearest the screen should not be closer than $2\frac{1}{2}$ times the height of the picture ($2\frac{1}{2}H$); the rear seats should not be farther than 8 times the height of the picture ($8H$).

Accessories

KODAK EKTALITE Projection Screen, Model 3 (40 x 40)

The double-curved aluminum surface of this rigid screen will reflect approximately five times the light that a conventional screen will return. In addition, the EKTALITE Screen will reject stray light that originates from outside the projection area. The result is a brilliant projected image with excellent color saturation and contrast, even in brightly lighted areas.

*For additional information about projection screens, refer to Kodak Pamphlet No. S-18, *Reflection Characteristics of Front-Projection Screen Materials*.



KODAK Projection EKTANON Lenses

Three EKTANON Lenses are available for KODAK PAGEANT Sound Projectors: $1\frac{1}{2}$ -inch $f/2.0$, 3-inch $f/2.0$, and 4-inch $f/2.5$. A 2-inch $f/1.6$ KODAK Projection EKTANAR Lens is standard equipment with the projector. Consult the chart on page 13 to determine the relationship of screen width and projector-to-screen distance.



KODAK Microphone, Model PA-8

This microphone, equipped with a 0.250-inch (6.3 mm) diameter standard phone plug on the end of an 8-foot (2.4 m) cord, is easily held in the hand. It may be used for commentary with films or to convert the projector to a public-address system.



CINE-KODAK Bifocal Converter (for KODAK Projection EKTANAR Lens, 2-inch $f/1.6$)

Shortens the effective focal length of the projector lens to $1\frac{5}{8}$ inches or lengthens it to $2\frac{1}{2}$ inches, depending on which end of the converter is placed next to the lens.



Replacing Projection Lamp and Cleaning Projection Lens

Projection Lamp: Loosen the lamphouse cover screw and lift off the lamphouse cover. (See Figures 11 and 12.)

WARNING: Projection lamps get very hot in use. Make sure the lamp is cool before you handle it. Cooling can be accelerated by running the projector without film (with the lamp off).

To remove the LAMP, grasp it just in front of the LAMP SOCKET and pull upward to release the lower rim from the two retaining hooks at the front; lower the lamp from the RETAINING SPRING, but do not unhook the spring. Then pull the socket from the back of the lamp.

To insert the new lamp, reverse the procedure given above. Be certain that the socket is pushed completely onto the connecting pins at the back of the lamp and that the rim of the lamp is fully seated on both of the retaining hooks on the mounting plate. Avoid touching the small bulb inside the lamp reflector. If it is touched accidentally, clean it with alcohol and a clean cloth.

It is recommended that a SPARE PROJECTION LAMP be carried in the projector lamphouse at all times.

Cleaning Lens: The projection lens should be cleaned with care. Remove the projection lens by drawing it out of the lens holder. With a soft, lintless cloth or KODAK Lens Cleaning Paper, carefully wipe the front and rear lens surfaces. Do not use a wet cloth; if moisture is required, breathe on the lens or use a drop of KODAK Lens Cleaner.

WARNING: The use of treated papers or cloths can harm the LUMENIZED surface of the lens.



FIGURE 11

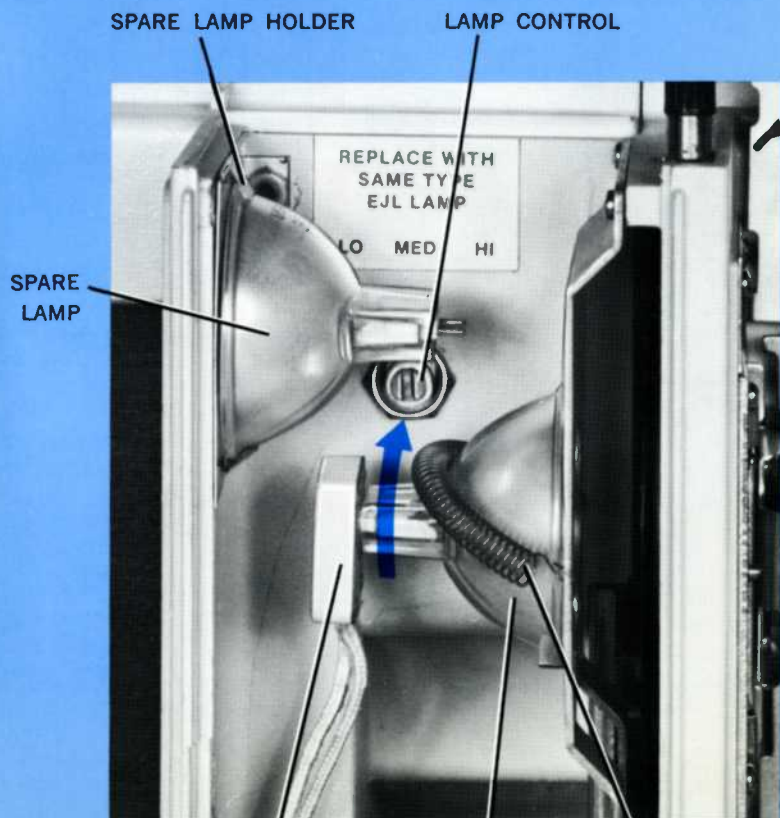


FIGURE 12

Cleaning Film Gate

The film gate (Figure 13) should be cleaned at frequent intervals. Because of the rapid stop-and-go motion of the film, particles of the emulsion lubricant are eventually rubbed off the edges of the film and lodged on the gate; this can damage film.

Use care in removing or replacing the gate; force is not necessary.

To retract the pulldown claw, turn the thread knob until its white line is toward you. Remove the projection lens.

Open the gate and insert a clean CARD or piece of paper to protect the polished surfaces of the gate; then withdraw the gate.

Use a soft, damp, lintless cloth to clean the gate. If necessary, wrap the cloth around a toothpick or matchstick to clean the film track.

To clean the aperture, reach through the projection-lens holder with a small, soft brush and dust off the edges of the aperture. Be careful not to chip off the black coating on the edges.

Before replacing the gate, make sure the pulldown claw is retracted. Then guide the upper notched part of the gate so that it bears against the under part of the top hinge-retaining SPRING. Push in on the gate tab to engage the top and bottom hinges.



FIGURE 13

Cleaning Sound Optics

Occasional cleaning of the sound optics is recommended.

Be sure that the power cord is not plugged in. Remove the three master control cover screws (Figure 14) and the spacer that is on the screw nearest the sound focus lever. Remove the master control cover for access to the sound optics and exciter lamp. With a soft brush, dust the top and bottom sound optics lenses. (Pull them out slightly for easy access.) The sound pickup (Figure 15) is just above the upper lens and directly behind the sound drum. The lower surface of this pickup should be kept clean by using a soft brush. Be sure the optics unit is properly seated. Replace the master control cover.

Cleaning Sound Drum

The sound drum, sprocket-clamp rollers, and other rollers that come in contact with the film should be wiped occasionally with a soft, lintless cloth to keep them clean. Dirt particles on the inner edge of the sound drum will interrupt the light beam and cause blips and hum. To check for this condition, remove the film and run the projector in reverse.

Oiling

All bearings are self-lubricating and require no oiling.

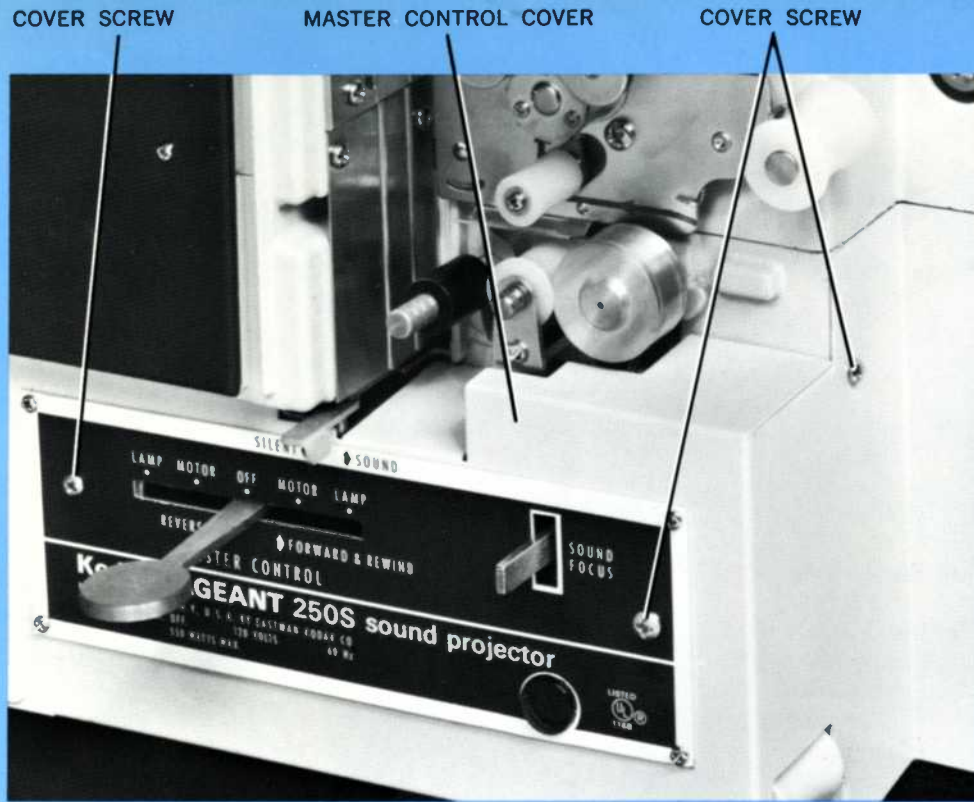


FIGURE 14

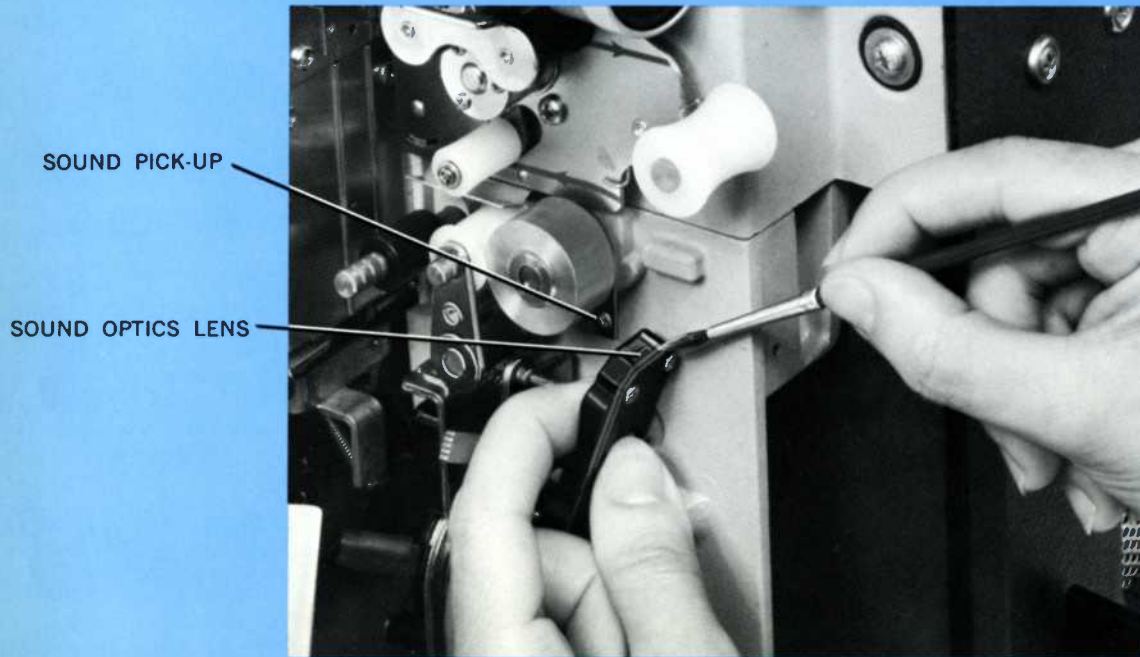


FIGURE 15

Replacing Belts

Rewind Belt—Disconnect the two ends of the worn belt; connect one of these ends to an end of the new belt, and pull the new belt through. If the old belt is not in position, feed the new belt into the opening in front of the supply reel arm. Guide the belt between the flanges of the pulley until the end protrudes from the opening in the top of the housing. If the end of the belt hits the housing, use a bent paper clip to guide it. The belt should go through the **BELT GUARD** (Figure 16).

Take-Up Belt—If possible, this belt should be replaced by your service representative. If such service is unavailable, use the following procedure carefully. Remove the two upper sprocket-plate retaining **SCREWS** and the **SPACER** that is located behind the retaining screw nearest the front of the projector. Lift off the upper sprocket and plate assembly. Remove the old belt. Hold the new belt as shown in Figure 17, and push the looped end of the belt into the opening in the mechanism. Make sure that the **STUD** is inside the loop. Continue to push the belt downward until the looped end is in the **GROOVE** next to the sprocket drive gear. The belt should be flat in the groove. With the belt in this position, replace the upper sprocket and plate assembly, holding it firmly in a downward direction to engage the gears until the retaining screws are tight.

Drive Belts—These belts seldom need replacing. If replacement is necessary, the work should be done by your projector service representative.



FIGURE 16

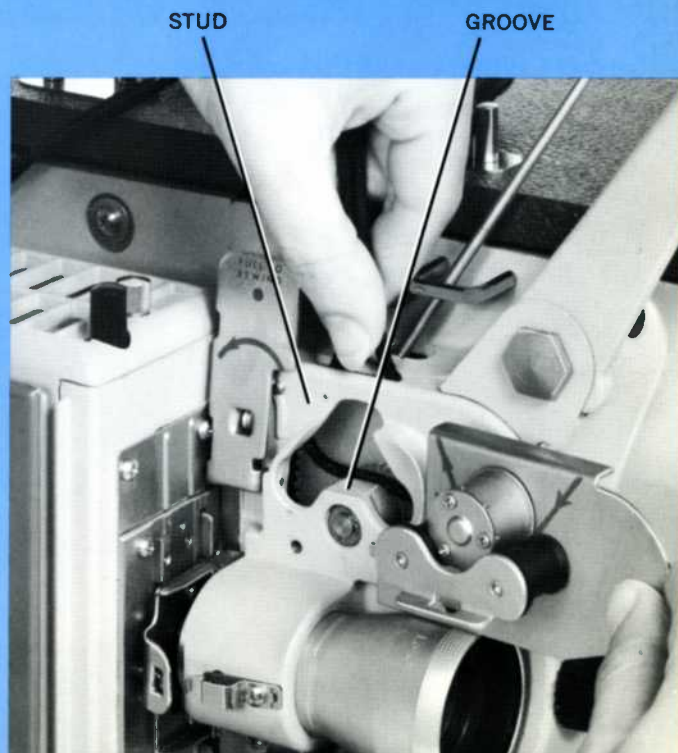


FIGURE 17

Replacing Exciter Lamp

The exciter lamp (Figure 18) in this projector operates at less than its rated voltage. It should, therefore, have extremely long life and should seldom need to be replaced.

If the lamp must be replaced, remove the master control cover as described on page 16. Be sure that the power cord is *not* plugged in. Push the exciter lamp **RELEASE LEVER** down as far as it will go. Turn the lamp counterclockwise and remove it.

Place the new lamp in the socket and turn it until the large ends of the key slots in the lamp base fit over the three locating studs. The lamp will fit only one way. Turn the lamp clockwise as far as it will go. To lock the lamp in position, raise the exciter lamp release lever. Replace the master control cover.

Replacing Fuse

The fuse may be blown if the indicator light (exciter lamp) fails to glow.

To remove the fuse, disconnect the power cord, turn the fuse holder counterclockwise by using a small screwdriver, and withdraw the holder. Replace the blown fuse with a fuse of the value stamped on the amplifier plate and replace the holder. If the indicator light (exciter lamp) still fails to glow, the problem could be in the amplifier system. Consult a qualified service representative to have the amplifier repaired.

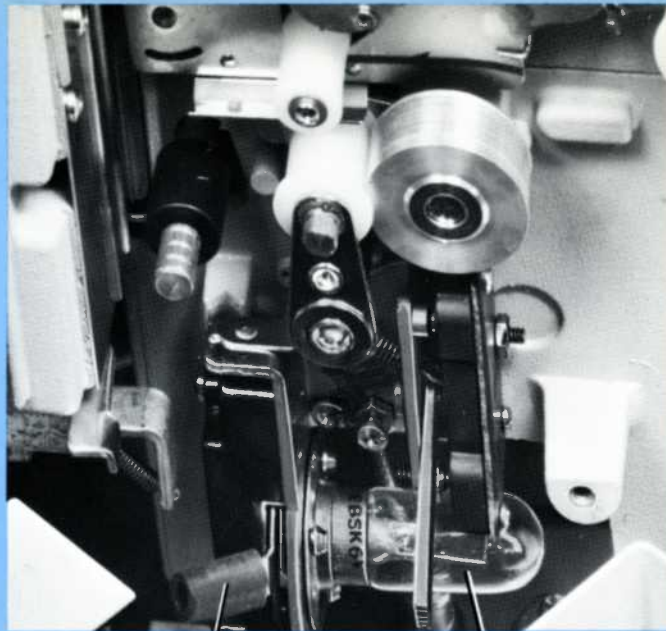


FIGURE 18

RELEASE LEVER

EXCITER LAMP

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SERIAL NUMBER

The serial number is stamped on the nameplate on the amplifier control panel. Make a record of this number and keep it in a safe place. The serial number should be included in any correspondence about the projector.

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KODAK PAGEANT 250S Sound Projector

Kodak warrants this KODAK PAGEANT 250S Sound Projector to function properly for one year from date of purchase. Kodak makes no other warranties, express, implied, or of merchantability, for this equipment.

Carefully follow all instructions in this manual to get the best results and to prevent damage to your projector. If this projector does not function properly within one year after purchase, Kodak will repair or replace the projector, at its option and at no charge, except for worn-out projection lamps, unless damaged by misuse or other circumstances beyond Kodak's control.

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