SUPPLEMENT TO THE ESL/SSL Series
OWNER'S INSTRUCTION MANUAL

16mm Sound Projector

AUTO-REPEAT
AUTO-REWIND
PROJECTOR

EIKI

When the show must go on.

SUPER SLIM SLOT LOAD

MODEL	OPTICAL SOUND	MAG. SOUND	FRONT COVER SPK.	LAMP TYPE	HI-LO LAMP SWITCH	FUNCTION CONTROL	AMP POWER	WEIGHT LBS	WEIGHT KG	SIZE/INCHES	SIZE/MM
ESL-3AR	•			ELC/EJL 250W/24V	•	electronic push button	25W	31.5	14.3	14.4 × 11.8 × 8.1	365 × 300 × 206
ESL-1AR	•		•	"	•	"	"	33.3	15.1	14.4 × 11.8 × 9.1	365 × 300 × 233
ESL-24R	•	•	•	"	•	"	"	"	"	"	"

Simple Operation
Easy Maintenance
Trouble-Free Use

This Operator's Manual is easy to read, informative and helpful.

Please read it carefully. Before you try it your way, please try it our way.

CONTENTS

EIKI MODEL ESL-0AR (-1AR, -2AR)
AUTO-REPEAT & AUTO-REWIND PROJECTOR
INSTRUCTIONS

INTRODUCTION:

The Eiki Auto-Repeat & Auto-Rewind Projector is basically an ESL-0 (or ESL-1, -2) Projector with additional automatic repeat and stop, automatic rewind and stop features. It is recommended that the user be thoroughly familiar with the operation of the ESL-0 (-1, -2) Projector. Before proceeding, see ESL-0 (-1, -2) Instruction Manual.

1. PROGRAMMING A FILM FOR AUTO-REPEAT :

1-1. Set up the projector as described in the ESL/SSL Instruction Manual.

1-2. Load the film in the projector and advance the film to the desired starting frame. (Fig. #1)

1-3. For reliable performance, select a film in a good condition without any damaged perforations. For long continuous operation, high quality Estar* or Mylar* based films are more durable. See CAUTION of page 5 for the suitable film length.
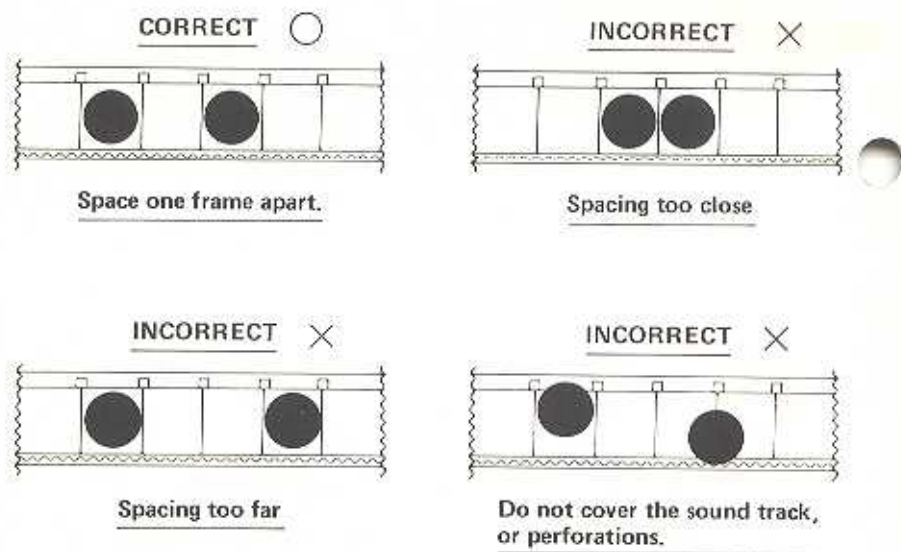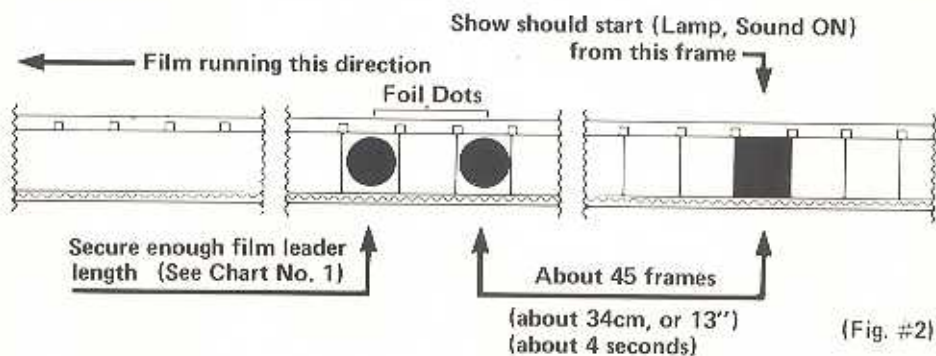
   Note: *Estar and *Mylar are registered trade marks of Eastman Kodak and Dupon Inc.

Unplug the Auto-Repeat Dummy Plug when programming a film.

(Fig. #1)

1-4. During the film programming operation, "The Auto-Repeat Dummy Plug" should be removed from the projector. (See Sec. 2-1-a)

1-5. "START" Cue Marking: To select the location of the starting marks "Foil Dots", count back approximately 45 frames or about 34cm (13") from the desired starting frame. Affix 2 foil dots on the film side toward the lens exactly one frame apart (See Fig. #2). Care should be taken not to cover the sprocket holes or the sound track.
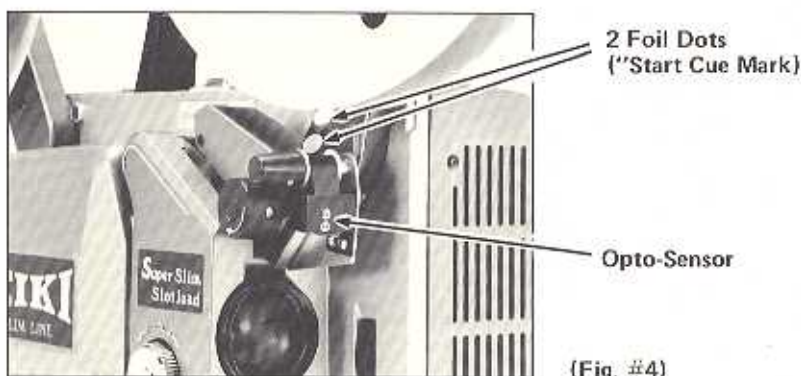
Show should start (Lamp, Sound ON) from this frame

◄──── Film running this direction

Foil Dots

Secure enough film leader length   (See Chart No. 1)

About 45 frames

(about 34cm, or 13")
(about 4 seconds)

(Fig. #2)

CORRECT ○

Space one frame apart.

INCORRECT ✕

Spacing too close

INCORRECT ✕

Spacing too far

INCORRECT ✕
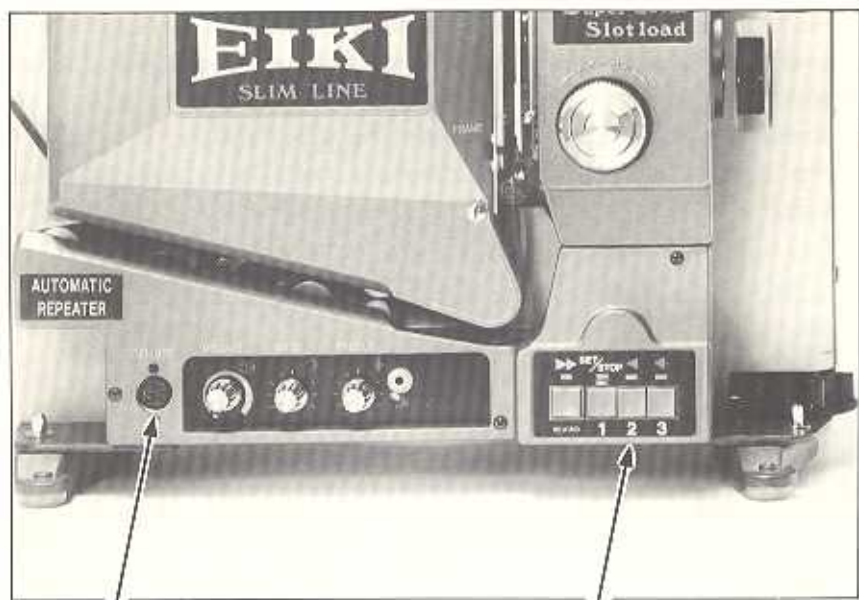
Do not cover the sound track, or perforations.

(Fig. #3)

1-6. Measure the film from the foil dots to the front end of the film leader. Depending upon the type and size of reels used, it may be necessary to add additional leader. (See Fig. #2 and the chart below) (Insufficient leader will not allow the projector to coast to a stop after rewind without losing the film's attachment to the take-up reel).

CHART NO. 1

Length of film	Type of Reel		Proper Length of film leader
	Supply Reel	Take-Up Reel	
2000Ft	Plastic	Plastic, or Aluminium	12m (40')
		Metal	9m (30')
2000Ft	Aluminium	Plastic	9m (30')
		Aluminium	11m (36')
		Metal	15m (49')
2000Ft	Metal	Plastic	8m (26')
		Aluminium	12m (40')
		Metal	16m (53')
1200Ft	Plastic, or Metal	Plastic, or Metal	7m (23')
400Ft	Plastic, or Metal	Plastic, or Metal	2m (6-1/2')

1-7. With the film loaded, and the function control in "STOP" position (Red L.E.D. on), manually advance the film by rotating the film reels until the two leading foil dots are just ahead of the opto-sensor located near the No. 1 guide roller. The film must be loaded between the No. 1 guide roller and the opto-sensor. (See Fig. #4 & 5)
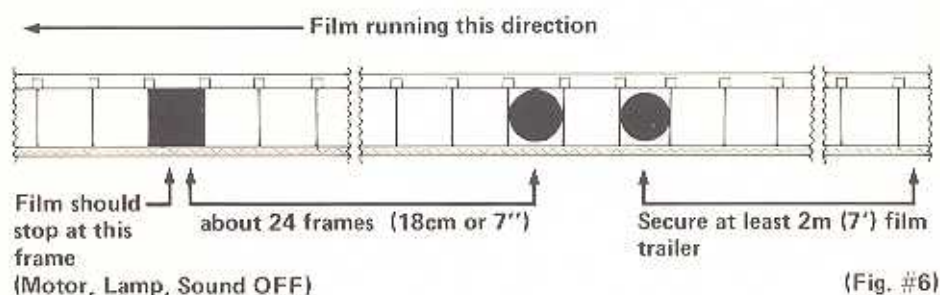

2 Foil Dots
("Start Cue Mark)

Opto-Sensor

(Fig. #4)

Remote Socket   Push Button Function Switch

1-8. Manually start the projector by pushing the "LAMP ◀ " switch. The film gate will automatically close and advance the film. Approximately 4 seconds or 45 frames (34cm or 13") after the Starting Cue Marks (2 foil dots) have been sensed, the lamp and sound will come on.

1-9. When the end of the film is reached, or the desired place to stop, or the desired place to start rewinding is reached, push the "Stop" switch. (See Fig. #5)
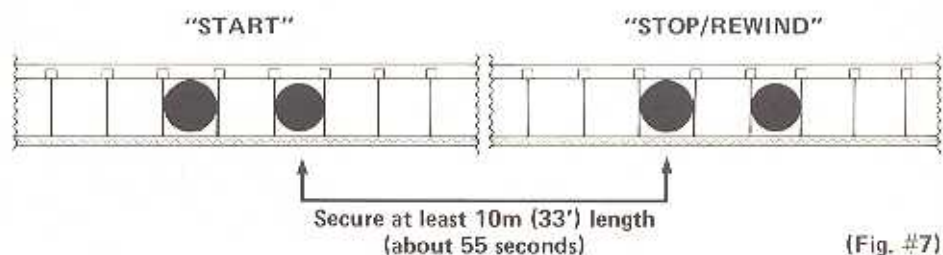
1-10. "STOP" Cue Marking: Locate the desired frame where the film is to stop. Count ahead about 24 frames (18cm or 7") and affix two foil dots exactly one frame apart on the side of the film toward the lens. Make sure there is at least 2m (7') of trailer left on the supply reel. (Fig. #6) If necessary, add additional trailer.

← ———————— Film running this direction

Film should stop at this frame (Motor, Lamp, Sound OFF)

about 24 frames (18cm or 7")

Secure at least 2m (7') film trailer

(Fig. #6)

1-11. Push "REWIND ►► " switch. The projector will now rewind back to the beginning position, and when the "START" cue dots are sensed, the projector will slowly coast to a stop, and after an 8 seconds pause, the projector will automatically advance forward to the beginning two foil dots and stop. This is the end of program-ming, and the film is now ready for the repeat show, either by automatic or manual command.

Now, Proceed to Section 2.

CAUTION: When a short program film is used, for reliable performance, it is always suggested to allow at least about 55 seconds (10m or 33') film length between "START" and "STOP/ REWIND" cue marks. (Fig. #7)

"START"   "STOP/REWIND"

Secure at least 10m (33') length
(about 55 seconds)

(Fig. #7)

2. AUTOMATIC OR MANUAL REPEAT OPERATION :

Load a film which has been previously programmed with "Start" and "Stop" Cue dots. Manually rotate the film reels until the Start Cue Mark (2 foil dots) are positioned in front of the No. 1 guide roller. Film must be between the No. 1 guide roller and the Opto-Sensor. (See Fig. #4)

(Fig. #8)

Auto-Repeat Dummy Plug
(086-08721)

2-1. AUTOMATIC REPEAT OPERATION:

a. Plug in the "Auto-Repeat Dummy Plug" to the remote socket. (See Fig. #8, #1, & 5)(Jumper between pins 1 & 5.)(See Fig. #14)
   (**Caution:** When plugging or unplugging the "Auto-Repeat Dummy Plug", make sure the projector is set at "STOP" position observing RED LED of "SET/STOP" switch on and the film gate open to prevent the erroneous cue signals.

b. To start, push "LAMP ◀ " switch. The film will run, and about 4 seconds later, the lamp and the sound will come on.

c. At the end of the show when the "STOP" Cue Mark is sensed by the opto-sensor, the film stops.

d. The projector automatically starts rewinding the film.

e. When the "START" Cue Mark is sensed by the opto-sensor, rewinding is stopped (Observe RED Rewind LED flashing for 7 ~ 8 seconds). The film reels will slowly coast to a stop.

f. The film stops completely. After an 8 seconds pause, the film advances automatically to the "START" Cue Mark position to repeat the show.

g. The opto-sensor senses the "START" Cue Mark, and 4 seconds later, the lamp and the sound are turned on, the show is re-started automatically.

h. During the Automatic Repeat Operation, if required, the show can be interrupted by pushing "MOTOR ◀ " or "SET/STOP" switch. To restart the Auto-Repeat show push "LAMP ◀ " switch.
   If the show should be stopped in the middle of the reel, simply push "REWIND ▶▶ " switch. The projector will operate as described in Sec. 2-1-d, e, f. Push "SET/STOP" switch.

2-2. MANUAL REPEAT OPERATION:

When required, manual repeat, re-start of the show may be initiated from the projector's local controls or by means of an operational remote control. The film should be correctly programmed as described in Sec. 1.
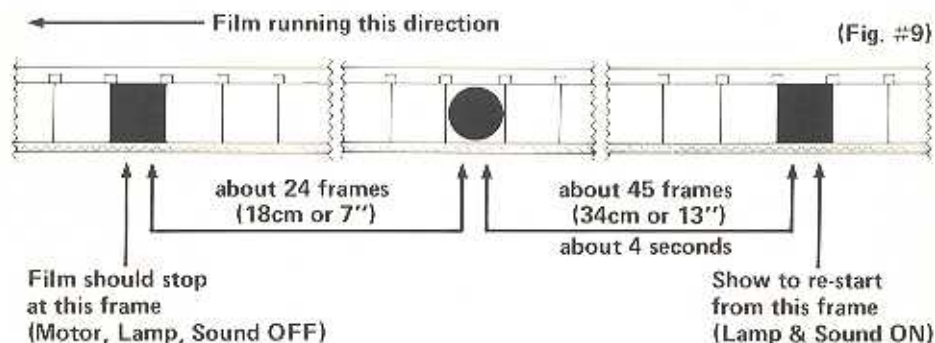
a. Make sure that the "Auto-Repeat Dummy Plug" is unplugged.
b. To start, push "LAMP ◀ " switch. Follow the same sequences b − f as described in Sec. 2-1.
c. When the "START" Cue Mark is sensed by the optical sensor, the film stops.
d. To re-start the show, push "LAMP ◀ " switch, and the projector operates as sequences b − f described in Sec. 2-1.

3. MULTIPLE STOPS PROGRAMMING

3-1. If short programs are to be repeated, it may be desirable to have duplicate films spliced on the same reel. The show may be stopped at the end of each film segment by placing a single cue foil dot on the film frame about 24 frames (18cm or 7") ahead of the frame where the stop should occur. (See Fig. #9)

3-2. The show may be resumed by pushing "LAMP ◀ " switch. Sound and lamp will come on approximately in 4 seconds, or about 45 frames (34cm or 13") later from the stop frame. (See Fig. #9)

3. Film "STOP" cue dots may be programmed as many times as required. For reliable operation, it is recommended that there is at least 35 seconds or 6.5m (21') of film between each "STOP" cue mark.

← Film running this direction   (Fig. #9)

about 24 frames
(18cm or 7")

about 45 frames
(34cm or 13")
about 4 seconds

Film should stop
at this frame
(Motor, Lamp, Sound OFF)

Show to re-start
from this frame
(Lamp & Sound ON)

4. PROGRAMMING A FILM FOR AUTO-REWIND :

This projector has the "AUTOMATIC REWIND & STOP" feature as well as the automatic repeat & stop.

4-1. Follow the same sequences as described in Sec. 1.

5. AUTO-REWIND OPERATION :

5-1. Plug in the "Auto-Rewind Dummy Plug" (086-08731) to the remote socket, (jumper between pins 2 & 5.) (Fig. #15) See Caution in Sec. 2-1-a.

(Fig. #10)

"Auto-Rewind Dummy Plug"
(086-08731)

NOTE: The Auto-Rewind operation is quite identical with the Auto-Repeat operation except that the Auto-Rewind operation uses the "Auto-Rewind Dummy Plug" while the Auto-Repeat operation uses the "Auto-Repeat Dummy Plug".

5-2. To start, push "LAMP ◄ " switch, and follow the sequence as described in Sec. 2-1-b ~ 2-1-e.

5-3. If desired, the projector can be interrupted by pushing "Motor ◄ " or "SET/STOP" switch.
To re-start the show, push "LAMP ◄ " switch.
If the show should be stopped in the middle of the reel, simply push "REWIND ►► " switch.
When the rewind is completed and the "STOP" Cue Mark is sensed, the projector will stop automatically.
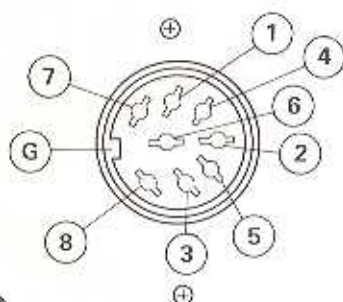
6. REMOTE CONTROL

6-1. The projector may also be remotely controlled using the optional Remote Control (086-08501). Plug the remote control plug into the remote socket. (See Fig. #11 & #5) Functions are "SET/STOP", "LAMP" "MOTOR" "REWIND".
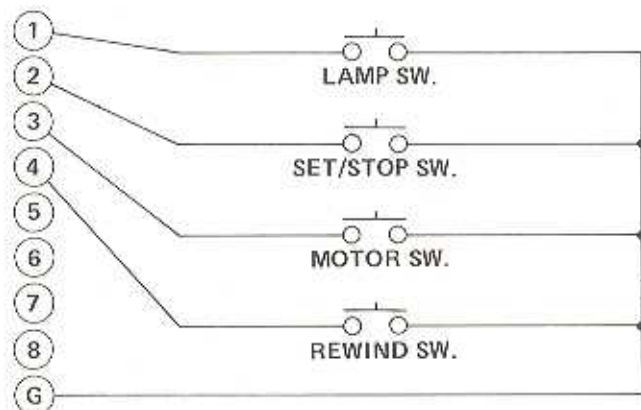
086-08501 (5m cable) (Fig. #11)

6-2. The projector can also be remotely controlled from any custom installed push button switches wired accordingly to the diagrams below;
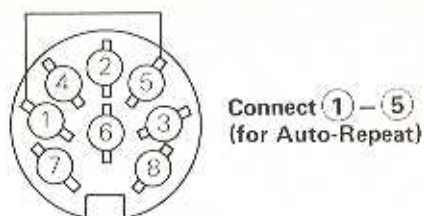
REMOTE SOCKET

(1) Lamp Sw. ◄
(2) Set/Stop Sw.
(3) Motor Sw. ◄
(4) Rewind Sw. ►►
(5) KEY Control Signal
(6) Stand-by or Ready Cue Signal
(7) Active or Busy Signal
(8) +5V Supply Voltage
(G) Ground

(Fig. #12)

LAMP SW.

SET/STOP SW.

MOTOR SW.

REWIND SW.

(Fig. #13)

6-3. Auto-Repeat can be remotely activated by connecting pins 1 & 5 of the remote control socket. (Fig. #14)
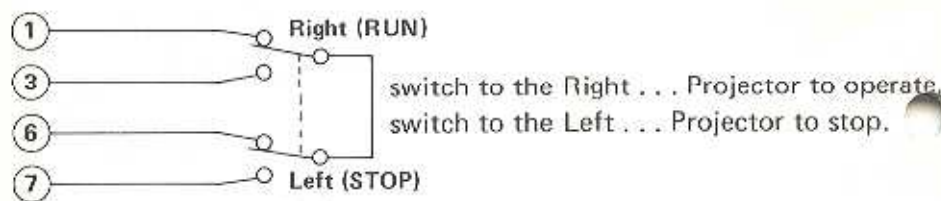

Connect (1) – (5)
(for Auto-Repeat)

Dummy Plug Soldering Side (Fig. #14)

6-4. Auto-Rewind can be remotely activated by connecting pins 2 & 5 of the remote control socket. (Fig. #15)

Connect (2) – (5)
(for Auto-Rewind)

Dummy Plug Soldering Side (Fig. #15)

6-5. With a single Double Pole/Double Throw (DPDT) switch, the projector may be operated with only RUN/STOP controls. (Fig. #16)

switch to the Right . . . Projector to operate.
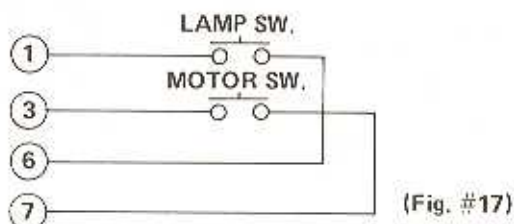switch to the Left . . . Projector to stop.

(Fig. #16)

6-6. Optional +5V logic output control signals can be obtained from the remote connector.

Pin #6:   0 volts Ready Mode (Stop)
          +5 volts Operating Mode (Run)

Pin #6:   0 volts Operating Mode (Run)
          +5 volts Ready Model (Stop)

6-7. To restart from intermediate stop or after Auto-Repeat, momentarily connect pin #1 to Shield or Ground.

6-8. Connection as in Fig. #17 makes LAMP switch activate only when the drive motor is off, and MOTOR switch activates only when projector is in operation.

```
         LAMP SW.
①———————o o—
         MOTOR SW.
③——————————o o—
⑥———————————————
⑦———————————————          (Fig. #17)
```

ADDITIONAL FEATURES AND PRECAUTIONS :

7-1. "Safety Film Guard Switch" is provided, the same as the standard ESL/SSL Projectors. When damaged film causes a loss of the upper loop, the "Film Guard" switch will automatically stop the projector. The ESL-AR projector will re-set the upper and lower loops and automatically re-start the show.

7-2. Power Interruption Indicator is provided in the event of temporary electrical power loss. Should this occur, the projector will stop and all function control switch indicator L.E.D.'s will flash indicating a previous loss of power. To reset, push the "SET/STOP" switch and re-start the projector.

7-3. Emergency Shut Down Procedure;
    (1) Push "SET/STOP" switch to stop the projector, and turn off the lamp.
    (2) Unplug the AC power cord from the wall outlet and correct the problem.
    (3) Wait at least 5 seconds and reconnect the AC power.
    (4) Follow the procedure as in power interruption.

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