

# Film-Tech

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LIGHT DIMMER

MODEL LD-35

ELECTRONICS DIVISION  
Drive-In Theatre Mfg. Co.  
709 North Sixth St.  
Kansas City, Kansas

## INTRODUCTION

The LD-35 light dimmer provides automatic controlling of the light level in a theatre or similar installation. When used in conjunction with an automatic controller, such as the ATS-2 manufactured by Drive-In Theatre Mfg. Co., the level of brightness will be raised and lowered to preset levels at preset rates without human intervention. Thus, the projectionist is free to perform other tasks as may be required.

By means of simple initial adjustments, a consistent, professional-quality performance will be exhibited to the audience at every showing, in a manner desired by the theatre owner.

Due to the use of electronic technology and due to the use of the highest quality of components and workmanship, the LD-35 will provide trouble-free operation throughout its life.

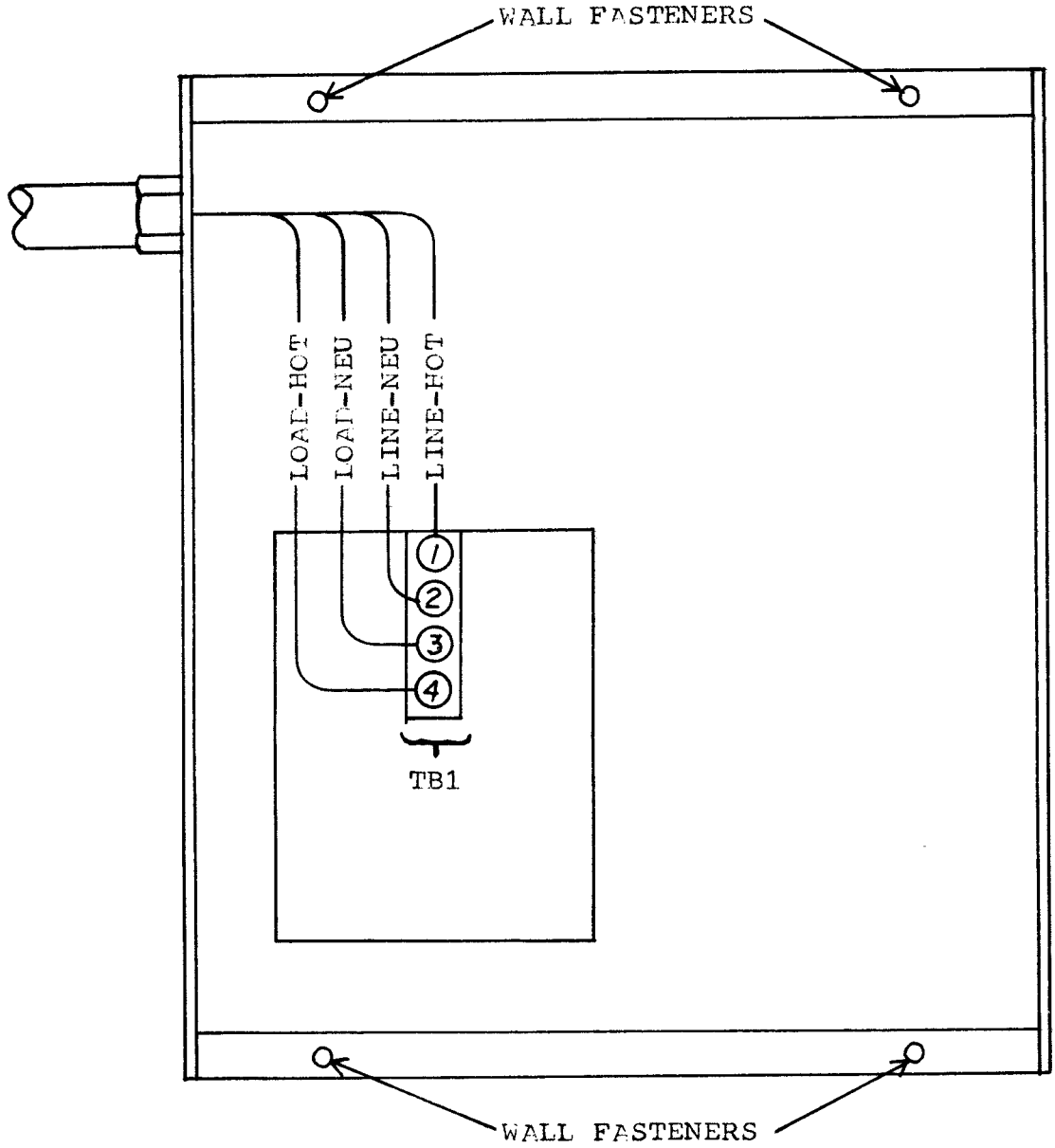
## APPEARANCE

The LD-35 light dimmer is housed in a red-textured, aluminum enclosure in which all components are contained for the control of the light level within the auditorium. Easy access to the unit, either for hook-up or adjustment, is provided by means of a hinged control panel.

The unit has been designed to be mounted vertically on a wall, with all of the wiring entering the enclosure through the upper left side of the unit. The physical dimensions are 10" W x 5" D x 12" H.

A screened trim panel is attached to the front of the enclosure that identifies all of the control panel functions clearly and legibly.

PRIMARY POWER CONNECTION



NOTE: Front panel removed for clarity only.

FIGURE 1

## INSTALLATION

A suitable location for the mounting of the LD-35 light dimmer must be selected. This location should be readily accessible to the operator. To prevent the possible interaction with the sound system, it is recommended also that this location be isolated from the sound installation. Of course, individual theatres may have circumstances that require a less than ideal location.

After the correct location has been determined, fasten the LD-35 enclosure to the wall in an upright position, using a suitable fastener. Four holes (on a 6" x 11" grid) are provided on the rear of the enclosure for this purpose. These holes will clear a  $\frac{1}{4}$ " screw.

Provision has been made for the entry of the wiring at the upper left side of the unit. CAUTION: The installer must be sure that the wiring within the enclosure will not interfere with the circuitry or components on the control panel when it is closed.

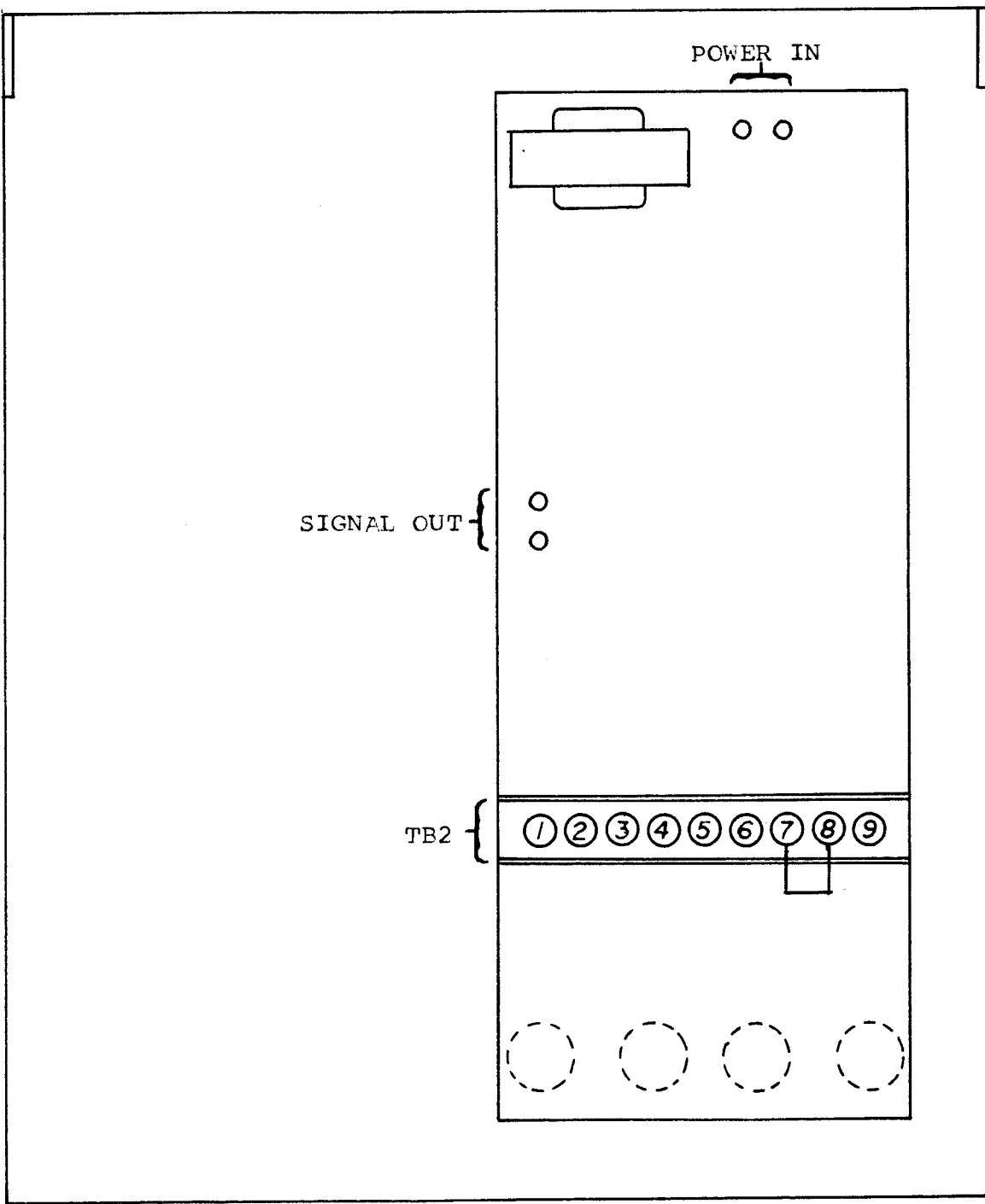
Primary power is to be attached to terminals 1 & 2, while the load is to be connected to terminals 3 & 4. This is shown in Figure 1. Polarity of these connections must be observed as well as the sequence of termination. Use of a suitable wiring terminator is recommended. Do not disturb the other connections already made at these points.

The automation unit is to be connected to terminals 1, 2, & 3 of the control terminal board. Small gauge wiring is suitable due to the low level of signals on these terminals. The automation must provide a momentary, dry contact closure for the raising or the lowering of the light level. If the unit is used in conjunction with the ATS-2 unit, the sequencer tabs must be adjusted for momentary operation. See Figures 2 & 3.

Other special control wiring is described in the appendices in the rear of this manual.

NOTE: Do not install the unit above other heat-producing devices. Free ventilation must be assured.

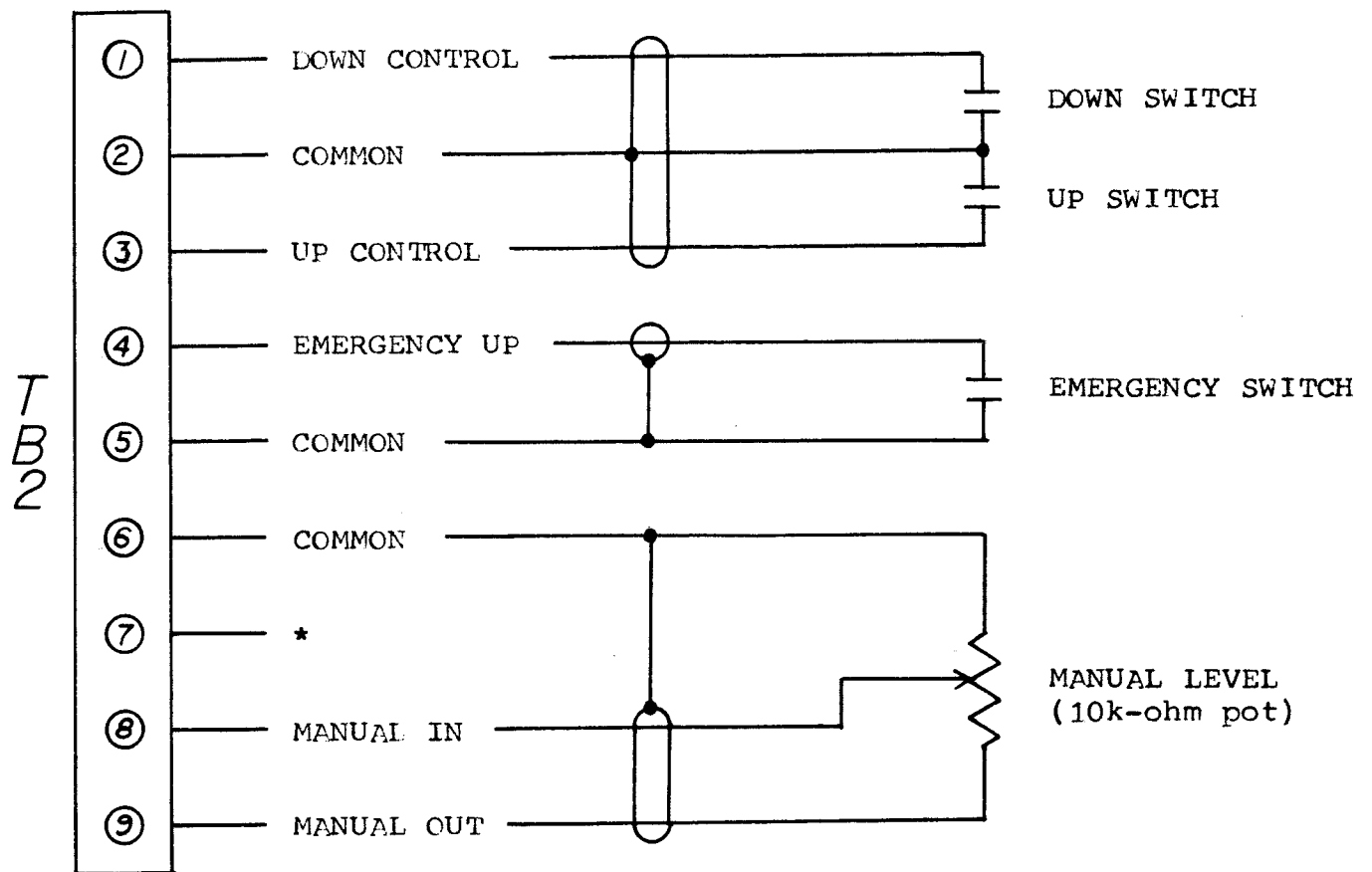
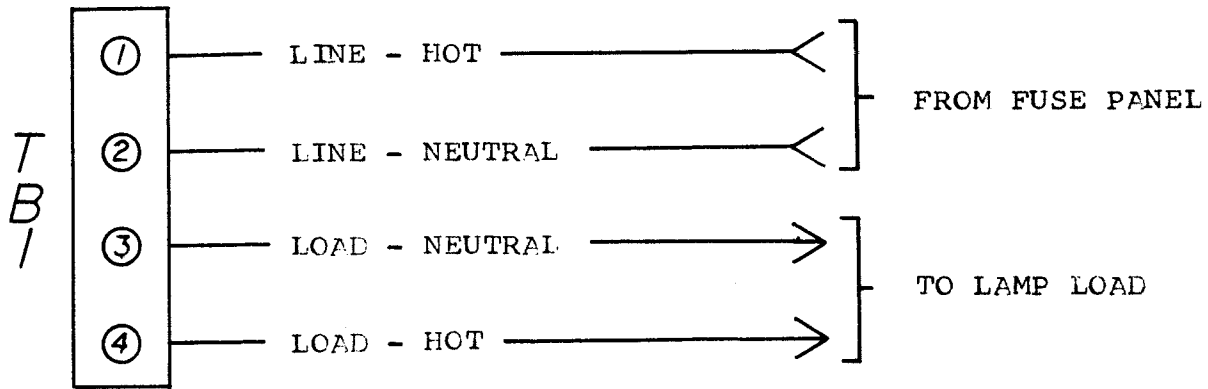
# CONTROL CONNECTIONS



NOTE: Cabinet removed for clarity only.

FIGURE 2

# EXTERNAL CONNECTIONS



\*Terminal 7 must be jumped to terminal 8 only if the remote level control is not used. Otherwise, leave open.

CAUTION: Do not apply any external power to TB2.

FIGURE 3

## CALIBRATION

Calibration of the LD-35 light dimmer consists of setting the desired bright and dim light levels, and the desired rate of light change. These adjustments may be done through calibration openings in the front control panel.

It is recommended that for ease of adjustment that the rate control is set to the zero position (full CCW) during adjustment of the level control. This is done so that one does not have to wait for the relatively slow action of the dimmer to determine what the light level is.

An ordinary screwdriver, either straight or phillips, may be used to make these adjustments.

With the switch in the AUTO position, and the DOWN switch momentarily actuated, set the DOWN LEVEL to the desired light level. Then, activate the UP switch momentarily and set the UP LEVEL to the desired light level. Clockwise rotation on these controls increases the level of lighting.

After the above calibration, then adjust the UP RATE control and the DOWN RATE control while activating the UP/DOWN switch until the desired rate of change is achieved. Clockwise rotation of these controls increases the length of time to change from one light level to the new light level.

All four of the above controls act independent of each other and adjustment of one control will not affect the setting of the other controls.

This completes the calibration procedure.



## FRONT PANEL CONTROLS

The following controls are provided on the front panel of the LD-35 light dimmer:

- 1) Power off/on switch - This switch turns the power on to the unit. In the off position, the lights will be off irrespective of any other control setting.
- 2) Emergency Up switch - This switch will increase the light level to its maximum in less than one second. This switch may be used either for an emergency situation or at any other time that maximum illumination is desired, such as for cleaning the theatre. Operation of this switch does not alter the settings of any other control. This switch should be in the NORMAL position at all other times.
- 3) Auto/Manual switch - This switch enables either the automatic functions of the light dimmer or the manual level control.
- 4) Manual control - This knob sets the level of lighting manually. The Auto/Manual switch must be in the manual position. This control operates with essentially no delay.
- 5) Up/Down switch - This switch, when activated, will change the light level to the previously set level at the previously set rate.

The Manual control and the Up/Down switch may be remoted to other locations. Electrical connections for this operation is described in the appendices.

## APPENDIX I

### Remote Up/Down Control

The installation of this unit may require a remote Up/Down control. As many Up/Down controls may be connected in parallel as required by connecting the Up switch to terminals 2 & 3 and connecting the Down switch to terminals 1 & 2. The switches used must be of the momentary type.

Refer to Figure 3 for the schematic of these connections.

Since the signal level in these wires are low-level, 20-gauge wiring is suitable.

NOTE: Do not apply any external signals to these terminals. All required power is derived from the light dimmer.

## APPENDIX II

### Remote Emergency Switch

The installation of this unit may require a remote Emergency switch. As many Emergency switches may be connected in parallel as required by connecting the switch to terminals 4 & 5. The switches used must be of the maintained closure type.

Refer to Figure 3 for the schematic of these connections.

Since the signal level in these wires are low-level, 20-gauge wiring is suitable.

NOTE: Do not apply any external signals to these terminals. All required power is derived from the light dimmer.

### APPENDIX III

#### Remote Manual Level

The installation of this unit may require a remote Manual Level control. One remote control may be connected to terminals 6, 8, and 9. The control should be a 10,000-ohm potentiometer.

If this remote control is used, the jumper between terminals 7 & 8 must be removed. Installation of this control disconnects the front panel Manual Level control.

The remote Manual Level control will function only if the Auto/Man switch is in the Manual position.

Refer to **Figure 3** for the schematic of these connections.

Since the signal level is these wires are low-level, 20-gauge wiring is suitable.

NOTE: Do not apply any external signals to these terminals. All required power is derived from the light dimmer.